

## **FOREIGN EVALUATORS**

Stuart J. McKelvie, Professor Emeritus

Department of Psychology, Bishop's University, Sherbrooke,

Quebec J1M 1Z7, Canada

Lawrence H. Gerstein, Ph. D

Fulbright Scholar, The Chinese University of Hong Kong

Director, Center for Peace and Conflict Studies (Ball State University)

Fellow, American Psychological Association

Steven R. Shaw, Ph.D., NCSP

Director, Resilience, Pediatric Psychology, and Neurogenetics Connection Lab

Department of Education and Counseling Psychology

McGill University, Montreal, QC Canada

## **Certificate**

Certified That Ph.D Dissertation Titled, “**Positive and Negative Outcomes of Active and Passive Procrastination among Pakistani Adolescents,**” prepared by Ms. Saadia Aziz has been approved for submission to the Quaid-i-Azam University, Islamabad, Pakistan.

**Prof. Dr. Naeem Tariq**

**Supervisor**

**POSITIVE AND NEGATIVE OUTCOMES OF ACTIVE  
AND PASSIVE PROCRASTINATION AMONG  
PAKISTANI ADOLESCENTS**



BY

**SAADIA AZIZ**

*Dr. Muhammad Ajmal*  
**NATIONAL INSTITUTE OF PSYCHOLOGY**  
Centre of Excellence  
Quaid-i-Azam University, Islamabad

**2016**

**POSITIVE AND NEGATIVE OUTCOMES OF ACTIVE  
AND PASSIVE PROCRASTINATION AMONG  
PAKISTANI ADOLESCENTS**

**By**

**SAADIA AZIZ**

**A dissertation submitted to the**

*Dr. Muhammad Ajmal*

**NATIONAL INSTITUTE OF PSYCHOLOGY**

**Centre of Excellence**

**Quaid-i-Azam University, Islamabad**

**In partial fulfillment of the requirement for the  
DEGREE OF PHILOSOPHY OF DOCTORATE**

**IN**

**PSYCHOLOGY**

**2016**

## CONTENTS

<b>List of Tables</b>	i
<b>List of Appendices</b>	v
<b>List of Figures</b>	vi
<b>Acknowledgments</b>	vii
<b>Abstract</b>	ix
<b>CHAPTER I: INTRODUCTION</b>	
Theoretical Perspectives on Procrastination	2
Biological Perspective	2
Psychodynamic Perspective	3
Social Learning Perspective	3
Behavioral Perspective	5
Cognitive Behavioral Perspective	6
Defining Procrastination	7
Prevalence of Procrastination	21
The Causes and Correlates of Procrastination	26
Outcomes of procrastination	38
Procrastination: A Cross-Cultural Perspective	47
Rationale	49
<b>CHAPTER II: METHOD</b>	52
<b>CHAPTER III: TRANSLATION, CROSS LANGUAGE VALIDATION AND PSYCHOMETRIC PROPERTIES OF NAPS AND PPS</b>	60
<b>CHAPTER IV: PILOT STUDY</b>	93
<b>CHAPTER V: MAIN STUDY</b>	130
<b>CHAPTER VI: GENERAL DISCUSSION</b>	229
Future Directions	246

Limitations	252
Conclusion	259
<b>REFERENCES</b>	261
<b>APPENDICES</b>	-

## LIST OF TABLES

<b>Table 1.</b>	Retest-Reliabilities of English and Urdu Version of New Active Procrastination Scale ( $N = 40$ )	75
<b>Table 2.</b>	Retest-Reliabilities of English and Urdu Version of Passive Procrastination Scale ( $N = 40$ )	76
<b>Table 3.</b>	Alpha Reliability Coefficients of NAPS, PPS, TMBS, and SWLS ( $N = 80$ )	81
<b>Table 4.</b>	Item-Total Correlation of New Active Procrastination Scale ( $N = 80$ )	82
<b>Table 5.</b>	Item-Total Correlation of Passive Procrastination Scale ( $N = 80$ )	82
<b>Table 6.</b>	Item-Total Correlation of Time Management Behavior Scale ( $N = 80$ )	83
<b>Table 7.</b>	Item-Total Correlation of Satisfaction With life Scale ( $N = 80$ )	84
<b>Table 8.</b>	Correlation of NAPS and its Factors with PPS, TMBS, and SWLS ( $N = 80$ )	88
<b>Table 9.</b>	Correlation of NAPS with TMBS Subscales ( $N = 80$ )	88
<b>Table 10.</b>	Correlation of PPS with TMBS Subscales ( $N = 80$ )	89
<b>Table 11.</b>	Psychometric Properties of the Major Study Variables ( $N = 70$ )	114
<b>Table 12.</b>	Item Total Correlation of New Active Procrastination Scale ( $N = 70$ )	115
<b>Table 13.</b>	Item Total Correlation of Passive Procrastination Scale ( $N = 70$ )	116
<b>Table 14.</b>	Item Total Correlation of Time Management Behavior Scale ( $N = 70$ )	117
<b>Table 15.</b>	Item Total Correlation of General Self-Efficacy Scale ( $N = 70$ )	118
<b>Table 16.</b>	Item Total Correlation of Brief COPE Scale ( $N = 70$ )	119
<b>Table 17.</b>	Item Total Correlation of Mini Marker Set ( $N = 70$ )	119
<b>Table 18.</b>	Item Total Correlation of Depression, Anxiety, Stress Scale ( $N = 70$ )	120

<b>Table 19.</b>	Item Total Correlation of SWLS ( $N = 70$ )	121
<b>Table 20.</b>	Correlation Coefficient among all the study Variables ( $N = 70$ )	124
<b>Table 21.</b>	Psychometric Properties of the Major Study Variables ( $N = 201$ )	140
<b>Table 22.</b>	Inter Correlations for Scores on NAPS, PPS, DASS Subscales, and SWLS ( $N = 201$ )	141
<b>Table 23.</b>	Mean, Standard Deviation and F values, and Hochberg's GT2 test for Nonprocrastinators, Active Procrastinators, and Passive Procrastinators on Depression, Anxiety, and Stress ( $N = 201$ )	145
<b>Table 24.</b>	Psychometric Properties of Major Study Variables ( $N = 500$ )	158
<b>Table 25.</b>	Confirmatory Factor Analysis: Factor Loading/Completely Standardized Regression Weights for Four Correlated Factors ( $N = 500$ )	162
<b>Table 26.</b>	Confirmatory Factor Analysis of NAPS (Indices of Model Fit) ( $N = 500$ )	163
<b>Table 27.</b>	Correlation Coefficient between traditional procrastination and all the Study Variables for Active Procrastinators ( $N = 165$ )	164
<b>Table 28.</b>	Correlation Coefficient between traditional procrastination and all the Study Variables for Passive Procrastinators ( $N = 176$ )	167
<b>Table 29.</b>	Mean, Standard Deviation, F values, and Hochberg's GT2 Test for Nonprocrastinators, Active Procrastinators, and Passive Procrastinators on Time Management Behavior Subscales ( $N = 500$ )	173
<b>Table 30.</b>	Mean, Standard Deviation, F values, and Hochberg's GT2 Test for Nonprocrastinators, Active Procrastinators, and Passive Procrastinators on Brief Cope, General Self-Efficacy Scale, Anxiety, Stress and Life Satisfaction ( $N = 500$ )	178
<b>Table 31.</b>	Mean, Standard Deviation, F values, and Hochberg's GT2 Test for Nonprocrastinators, Active Procrastinators, and Passive Procrastinators in Personality Traits on Mini Marker Set ( $N = 500$ )	181
<b>Table 32.</b>	Mean, Standard Deviation, F values, and Hochberg's GT2 Test for Nonprocrastinators, Active Procrastinators, and Passive Procrastinators on Procrastination as a Problem ( $N = 500$ )	184



<b>Table 33.</b>	Gender-Wise Differences in level of Active and Passive Procrastination ( $N = 500$ )	185
<b>Table 34.</b>	Mean, Standard Deviation, F Values, and Hochberg's GT2 Post hoc Test for Early, Middle, and Late Adolescents on Active and Passive Procrastination ( $N = 500$ )	187
<b>Table 35.</b>	Academic Level-Wise Differences in Active and Passive Procrastination ( $N = 500$ )	188
<b>Table 36.</b>	Descriptive Statistics of Personal-Social Variables ( $N = 500$ )	190
<b>Table 37.</b>	Gender-Wise Differences in Time Management Behavior and Self-Efficacy ( $N = 500$ )	191
<b>Table 38.</b>	Gender-Wise Differences in Coping Strategies ( $N = 500$ )	192
<b>Table 39.</b>	Gender-Wise Differences in Personality Traits ( $N = 500$ )	192
<b>Table 40.</b>	Gender-Wise Differences in Depression, Anxiety, and Stress ( $N = 500$ )	193
<b>Table 41.</b>	Gender-Wise Differences in Life Satisfaction and Procrastination as a Problem ( $N = 500$ )	193
<b>Table 42.</b>	Mean, Standard Deviation, F values, and REGWQ Post hoc Test for Parents' Level on Active Procrastination of Adolescents ( $N = 1000$ )	195
<b>Table 43.</b>	Mean, Standard Deviation, F values, and REGWQ Post hoc Test for Parents' Education Level on Passive Procrastination of Adolescents ( $N = 1000$ )	196
<b>Table 44.</b>	Mean, Standard Deviation, F values, and Hochberg's GT2 Post hoc Test for Grades Achieved on Active Procrastination, TMBS, and SWLS of Adolescents ( $N = 500$ )	198
<b>Table 45.</b>	Grade-Wise (Academic Achievement) Differences in Depression, Anxiety, and Stress ( $N = 500$ )	200
<b>Table 46.</b>	Summary of logistic Multiple Regression Analysis for Variables Predicting Procrastination ( $N = 341$ )	205
<b>Table 47.</b>	Linear Regression Analysis of Different Groups of Procrastinators as Predictors for Depression ( $N = 500$ )	207

<b>Table 48.</b>	Linear Regression Analysis of Different Groups of Procrastinators as Predictors for Anxiety ( $N = 500$ )	208
<b>Table 49.</b>	Linear Regression Analysis of Different Groups of Procrastinators as Predictors for Stress ( $N = 500$ )	209
<b>Table 50.</b>	Linear Regression Analysis of Different Groups of Procrastinators as Predictors for Life Satisfaction ( $N = 500$ )	210
<b>Table 51.</b>	Linear Regression Analysis of Different Groups of Procrastinators as Predictors for Procrastination as a Problem ( $N = 500$ )	211

## LIST OF APPENDICES

- Appendix A.** Instructions and Demographic Information Sheet
- Appendix B.** New Active Procrastination Scale (NAPS-E)
- Appendix C.** New Active Procrastination Scale-U
- Appendix D.** Passive Procrastination Scale (PPS-E)
- Appendix E.** Passive Procrastination Scale-U
- Appendix F.** Back Translation of NAPS and PPS
- Appendix G.** Time Management Behavior Scale
- Appendix H.** General Self-Efficacy Scale
- Appendix I.** Brief Cope Scale
- Appendix J.** Mini Marker Set
- Appendix K.** Depression, Anxiety, Stress Scale-E
- Appendix L.** Depression, Anxiety, Stress Scale-U
- Appendix M.** Satisfaction With Life Scale-E
- Appendix N.** Satisfaction With Life Scale-U
- Appendix O.** Procedure of website development
- Appendix P.** About Survey
- Appendix Q.** Purpose of the research-U
- Appendix R.** Purpose of the research-E
- Appendix S.** Demographic Information for Web data
- Appendix T.** Permission to use back translation of NAPS and PPS  
for online data collection
- Appendix U.** Permission to use translated scales (TMBS, GSES,  
Brief Cope, Mini Marker Set, DASS, and SWLS)

## LIST OF FIGURES

<b>Figure 1.</b>	Process of website development	135
<b>Figure 2.</b>	Gender-Wise Participation Ratio	137
<b>Figure 3.</b>	City-Wise Participation Ratio	137
<b>Figure 4.</b>	Confirmatory Factor Analysis of the New Active Procrastination Scale	160
<b>Figure 5.</b>	Second-Order Confirmatory Factor Analysis of the New Active Procrastination Scale	161
<b>Figure 6</b>	Mean Scores of Nonprocrastinators, Active Procrastinators, and Passive Procrastinators on Procrastination as a Problem	182

## ACKNOWLEDGEMENTS

All thanks to Almighty Allah, the most gracious and beneficent Who enabled me to complete this dissertation. I am thankful to Him for His countless blessings. I have many people to thank for the fact that this experience has been on the whole quite positive. This dissertation would not have been possible without the guidance and the help of several individuals who in one way or another contributed and extended their valuable assistance in the preparation and completion of this study.

I feel deeply indebted to my supervisor Prof. Dr. Naeem Tariq for giving me an opportunity of carrying out this research under his supervision. I am most thankful for his multifaceted support and never-ending interest in progress of this research. The amount of knowledge and confidence I gained from him during these years is immense. A special acknowledgement goes to Dr. Anila Kamal, who as a Director provided every possible support during this research, and all my teachers who have developed my research expertise.

I am thankful to HEC for providing me the opportunity to attend 7<sup>th</sup> Biennial Conference on procrastination, 2011, Amsterdam to present paper on procrastination among executives, and for their financial assistance during this Ph.D program.

I am obliged to Dr. Jameel and Mr. Usman for showing huge interest to answer my questions seriously and for satiating my queries. My Special thanks to the entire NIP faculty for their guidance, support, and encouragement at every step.

I would like to thank all those institutions who generously provided me an opportunity for data collection. I am also indebted to several students who voluntarily

participated in the study. I have too many to thank here for the many generative conversations of which I have been lucky to have such active participants.

I would like to thank my research colleagues for their invaluable suggestions for the project and answering my questions without any hesitation. I am grateful to all my friends and well wishers who always motivated me whenever I was in low morale. I am unable to put in words about their support and encouragement throughout the good and bad times.

Finally, I would like to thank my family who generously allowed me to pursue doctoral studies. A loving thank to my parents who were proud of me unconditionally and were my biggest support. They have been unwavering in their support of my academic studies along with everything else I have done in my life. A special thanks to my bhabi Kalsoom who always offered her support whenever I required, I am grateful for all they have done and continue to do for me.

I am grateful to my husband Afrasiab for his tremendous care, support, motivation and understanding throughout this program. Last but not least, my gorgeous kids, Ahsan-e-Taqweem, Muhammad Mustahsan, and Rida Fatima who have not only been a source of immense pleasure but also great motivation in all my pursuits. I am thankful to them for making my life immeasurably rich.

SAADIA AZIZ

## ABSTRACT

*Present study intended to explore the positive and negative outcomes of procrastination among Pakistani adolescents. Procrastination has generally been viewed in negative connotations but in this study researcher followed Chu and Choi's (2005) perspective of procrastination; active vs. passive to see if there is any positive type of procrastination and does it also exist in our cultural setting. To meet this objective, the study was carried out in three parts. Part I was completed in three phases; try out; translation, adaptation, and cross language validation; and determining psychometric properties of New Active Procrastination Scale and Passive Procrastination Scale. The results of part I indicated sound alpha reliability coefficients of the scales. In part II (i.e., pilot study) psychometric properties of all the measures likely to be used in main study were determined and correlation coefficients among study variables were also computed to have an insight into the nature of relationship among variables.*

*As the ultimate objective of the study was to explore the phenomenon of procrastination indigenously that will add valuable findings for researchers and counselors in helping adolescents to curb procrastination tendencies so in part III (i.e., main study) data was collected in two phases. In Phase I (N =201), online mode of data collection was adopted to establish psychometric properties of procrastination measures and expand the implications of the study for online population. As today is an age of globalization and advancement in technology. Results revealed sufficient alpha coefficient of scales and revealed significant main effect of procrastination*

types in level of depression, anxiety, stress, and life satisfaction of nonprocrastinators, active procrastinators and passive procrastinators.

Phase II of main study was conducted on a larger sample ( $N = 500$ ) to test the formulated hypotheses. Findings indicated sound reliability of all the measures and confirmed the four factor structure of NAPS. Significant main effect of procrastination type was observed in differences regarding time management behavior, coping strategies, self-efficacy, personality traits, depression, anxiety, stress, life satisfaction, procrastination as a problem and academic achievement. Results revealed significant gender, grade, and academic level-wise differences in active and passive procrastination but with reference to age groups this difference was significant only on active procrastination. Moreover significant gender difference in time management, self-efficacy, emotion-focused coping, personality traits of extraversion, agreeableness, conscientiousness, and in level of anxiety, stress, life satisfaction and procrastination a problem were also noted. Findings also revealed grade wise difference in time management and life satisfaction of adolescents. Multiple Logistic Regression analysis revealed emotion-focused coping, self-efficacy, emotional stability, intellect/openness to experience and conscientiousness as significant predictors of active and passive procrastination. As regards to outcome variables category of procrastinators significantly predicted the respondents' level of depression, anxiety, stress, life satisfaction and his/her perception of procrastination being problematic for him. Practical implications of the study are highlighted for teachers, counselors, psychologists and practitioners while dealing with adolescent procrastinators. Future recommendation and limitations of the study have also been discussed.



# **INTRODUCTION**

**Chapter I****INTRODUCTION**

Research in area of procrastination has demonstrated that procrastination not only affects individual's academic achievement but also deteriorates mental health, and social behavior. Procrastination has been defined as the intentional postponement or delay in performing a task or making of a decision (Ferrari, 2001; Milgram, Mey-Tal, & Levison, 1998). It has also been viewed as a self-regulatory failure that lingers the start or completion of a project to be undertaken (Ferrari & Tice, 2000). The phenomenon of procrastination has existed throughout the history. James (1890) highlighted the psychological effects of procrastination almost one hundred and twenty years back while Steel (2007) in his metaanalytic study has traced procrastination references back to 800 B.C.

Milgram (as cited in Steel, 2007) made the first actual historical analysis on procrastination and argued that usually technically advanced societies have to meet number of commitments and deadlines that leads to procrastination. Therefore, undeveloped agrarian societies are not so much affected. Ferrari, Johnson, and McCown (1995) offered a lenient perspective and contended that phenomenon of procrastination is not new rather it is the advent of industrial revolt due to which it acquired truly negative connotation. Steel (2007) viewed procrastination neutrally and thought it as a wise course of (in) action despite being a commonly observed phenomenon and potentially damaging factor that often leads to stress and illness (e.g., Dewitte & Schouwenburg, 2002; Fritzsche, Young, & Hickson, 2003; Tice & Baumeister, 1997).

Procrastination being a complex phenomenon requires further investigation as Steel (2009) suggested that in order to explore some phenomenon in depth one should have theoretical and conceptual understanding of the construct and its measurement related issues. As defining a construct and its relation to other related constructs not only explain the nature of construct but also amplifies its uniqueness in a theoretical space (Cronbach & Meehl, 1955). There are different theoretical orientations that explain the phenomenon of procrastination; some of them are as following:

### **Theoretical Perspectives on Procrastination**

**Biological perspective.** Most researchers recognize the role played by nature and nurture in shaping human behavior but some of them focus primarily on variables that are biological/physiological in nature and do not include the role of learning in development. To explore the biological or genetic component in procrastination Arvey, Rotundo, Johnson, and McGue (as cited in Steel, 2007) explored the level of procrastination among male twins (118 identical and 93 fraternal) nurtured in the same family and found that roughly 22% of the variance was explained by genetic factors. Strub (as cited in Ferrari, Johnson, & McCown, 1995) discussed that neurological syndrome characterized by procrastination, is a permanent tendency to put off major life activities. Etiologically the syndrome may appear due to damage in dominant frontal and prefrontal lobe. The role of certain neuropsychological deficits in executive functioning had also been speculated. Therefore the previous findings regarding direct biological differences between procrastinators and nonprocrastinators are simply speculative.

**Psychodynamic perspective.** Freud (as cited in Ferrari et al., 1995) and his followers discussed the concept of avoidance related to specific tasks. They considered anxiety as a warning signal to the ego of unconscious material which is repressed and could be disruptive as well. Freud believed that tasks that are not completed are primarily avoided due to being threatening to the ego. The major drawback of psychoanalytic perspective of procrastination lies in its limited capacity to be empirically tested. On the other hand psychodynamic theorists refuse to accept the rigid, inflexible psychoanalytic perspective. Misildine (as cited in Ferrari et al., 1995) while approaching child development from a psychodynamic perspective identified a term ‘chronic procrastination syndrome’ marked by ‘slow, day dreaming paralysis’ about task achievement. He was of the view that those parents who over emphasize achievement, set unrealistic standards for their children and link it to parental love and approval, foster such trait called procrastination. In short psychoanalytic perspective highlights the role of unconscious impulses and psychodynamic view focus on the interactive forces of id and ego in developing procrastinating tendencies. Moreover while critically evaluating the psychodynamic theories the empirical limitations cannot be ignored as they provide intriguing interpretations of the events that happened in the past and lack power to predict how people are likely to behave in new situations (Bandura, 1971).

**Social learning perspective.** Social learning perspective highlights the role of immediate family dynamics in developing maladaptive behavior and authoritarian parenting in procrastination tendencies (Ferrari & Olivetti, 1993; Rosario, Mourao, Nunez, Gonzalez-Pienda, & Solano, 2006; Scher & Ferrari, 2000). Clinical

observations and empirical studies have provided sound evidence for the role of parental influence and self-worth in the development of procrastination. Perhaps what separates out more regarding the role of family in developing procrastination tendencies according to social learning perspective is the interaction of personality with the environment and focus on environmental contingencies and reinforcing circumstances that control behavior whereas psychodynamic perspective highlights the role of internal processes and past experiences in shaping procrastination tendencies (Gerrig & Zimbardo, 2010). Ferrari and Olivette (1993, 1994a) found that procrastination was significantly related to father authoritarianism among young girls and authoritarian parenting style had the greatest influence on daughters who develop chronic indecision tendencies. They also reported that scores on fathers' authoritarianism accounted for approximately 10% of the variance in both decisional and avoidant procrastination (e.g., Burka & Yuen, 1983; Lay, 1986).

Flett, Hewitt, and Martin (1995) pointed out that, “procrastination may be a response to the expectation that parents will respond to self-characteristics in a harsh and controlling manner” (p. 128). The influence of parenting styles on adolescent school-based outcomes have also been explored and positive relationship was found between authoritative parenting styles and adolescent school outcomes such as poor performance and low attendance percentage (e.g., Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, as cited in Spera, 2006). MacIntyre (as cited in Ferrari et al., 1995) also pointed out that child rearing practices can lead to procrastination in adults.

Contrary findings emerged regarding parental control and procrastination as with reference to Pakistani context Fatemah (2001) found no significant relationship between perceived parental control (authoritative, authoritarian, and permissive) and

procrastination especially in case of maternal authoritative control. Above cited findings might be attributed to differences in cultural settings in which the phenomenon of parental control operate. The possibility of an indirect relationship between parenting and procrastination mediated through self-concept cannot be ignored as there is an established relation between procrastination and measures of the self-system (e.g., Beswick, Rothblum, & Mann, 1988; Effert & Ferrari, 1989; Ferrari, 1991a, 1991b; Flett, Hewitt, & Martin, 1995). The role of modeling and observation in developing procrastination is endorsed in social learning theories (Bandura, 1971).

**Behavioral perspective.** Behavioral perspective viewed procrastination as a result of past experience (Ferrari et al., 1995) such as Solomon and Rothblum (1984) observed that the students procrastinate on those tasks they find as aversive or for which they have been punished, whereas contemporary learning theories explain the phenomenon of procrastination in a more complex manner rather than a simple analysis of rewards and punishments such as it completely ignores the continuous reciprocal interaction between behavior and its controlling conditions (Bandura, 1971). They focus on active and passive aspects of behavior responsible for procrastination tendencies. It represents escape when an individual initiates a task and leaves it incomplete whereas it represents avoidance when behavior is either not undertaken or task is completely ignored (Ferrari et al., 1995). Ainsle (1992) provided another line of thought regarding specious rewards and speculated that people had a strong tendency to prefer short term incentives over long term rewards as short term rewards are more tangible and immediately pleasurable than long term rewards. The role of reinforcement, reward and punishment, escape and avoidance explained

through behavioral perspective seems to be an intuitive aspect relevant to an explanation for procrastination. However it is less effective in explaining and predicting the individual differences in procrastinating behavior. Moreover individual factors of the person may also be emphasized (Ferrari et al., 1995).

**Cognitive behavioral perspective.** Ellis and Knaus (1977) highlighted the cognitive behavioral dimensions of procrastination. They proposed that procrastination is an outcome of irrational beliefs. On the basis of observations in clinical settings, they concluded that procrastination not only related to fear of failure but also with self-criticism. Dysfunctional cognitions appear in multiple forms and at various stages in the counseling process (Sampson, Peterson, Lenz, Reardon, & Saunders, 1996) and these cognitions play their role in client's frustration and indecision (Lewis & Gilhousen, 1981).

Solomon and Rothblum (1984) indicated that experience of anxiety due to persistent delay on academic tasks contribute in academic procrastination whereas Lay and Silverman (1996) emphasized that depression rather than anxiety is the key motivator for procrastination. Regarding metacognitive beliefs and procrastination among Pakistani university students Zafar (2013) observed that positive beliefs about worry and negative beliefs regarding uncontrollability of thoughts, cognitive confidence, need to control thoughts and cognitive self-consciousness had a positive relationship with procrastination. A small but statistically significant correlation was found between irrational thinking and procrastination (Rothblum & Mann, 1988; Solomon & Rothblum, 1984) as Greco (as cited in Ferrari et al., 1995) reported that procrastinators usually engage themselves in negative talk, especially regarding

excuse making. Above mentioned findings lend partial support regarding the relationship between procrastination and irrational cognitive processes. Future research in this regard may prove to be fruitful.

Moreover keeping in view the different theoretical paradigms it may be extracted that the role of nature and nature-nurture interaction has yet to be specified. Previously discussed different theoretical perspectives highlight that procrastination is a multifaceted phenomenon with cognitive, affective and behavioral components (Rothblum, Solomon, & Murakami, 1986) so no single perspective fully explains its nature and implications. Keeping in view the multifaceted nature of procrastination present study borrows support from cognitive and behavioral perspective to have thorough understanding of the construct. The major issue while studying, understanding and treating procrastinating behaviors is its subjective definitions. Unlike other constructs such as depression, or anxiety, the construct of procrastination has subjective assessment that does not result in substantial agreement. One's feelings of putting off some task may be else version of not being priority at the moment. To have better understanding of a construct it must be defined in terms of its operations as in early stages of any construct it is necessary to have operational definitions for in depth knowledge of the construct.

### **Defining Procrastination**

The term procrastinate comes from the Latin word 'procrastinare' and means to put off, or to postpone until another day (DeSimone as cited in Ferrari et al., 1995). Knaus (2010) viewed procrastination as an automatic problem habit marked with



putting off an important and timely task to another time, and that has probable consequences too. Van Eerde (2000) defined procrastination as the “avoidance of the implementation of an intention” (p. 374), whereas Sheeran (2002) viewed procrastinators as inclined abstainers who have all the intentions to act but are unable to follow through them. Chronic procrastination is viewed as a tendency to defer in a variety of situations that seem indispensable to reach certain goals (Ferrari et al., 1995; Schouwenburg, Lay, Pychyl, & Ferrari, 2004).

Procrastination is not identical to idleness rather it implies performing an alternative activity to the intended one (Schouwenburg, 2004). Ellis and Knaus (2002) viewed it as an interactive dysfunctional and behavior avoidance process, characterized by the desire to avoid an activity, the promise to get to it later, and the use of excuse making to justify the delay and avoid blame. It involves knowing that one needs to carry out a task or undertake an activity yet unable to motivate one to do so within the desired or expected time frame (Ackerman & Gross, 2005). It can be temporary or permanent, such as behavioral and cognitive—putting off the action—or putting off making a decision (Dewitte & Lens, 2000). Another perspective contrary to popular view was forwarded by Chu and Choi (2005) that identified two different types of procrastination, active versus passive. Passive procrastination is the traditional negative view of procrastination characterized by putting off the tasks until last minute and incapable of managing things timely whereas active procrastination is marked by the ability to make intentional decision to procrastinate, preference for time pressure, meeting deadlines and achievement of satisfactory outcomes.

Basco (2010) observed that procrastination has its roots and is tough to change; it isn't something that one decides to give up and then get rid of it. He

considered procrastination as a road block on life's path that slows down the progress, and sometimes also gives pleasure and relief from stress. Most of the conceptualizations regarding procrastination recognize that procrastination involves postponement, delay, or deferring a task or decision. The term procrastination has emanated from Latin, combining "pro", meaning "forward, forth, or in favor of," and "crastinus", meaning "of tomorrow" (Klein, as cited in Steel, 2007). One may conclude that the crux of procrastination behavior is not performing an activity at its proper time. Seeing the construct in the light of above quoted definitions, it seems that procrastination is not merely an issue of time management rather it is a multifarious phenomenon that entails cognitive, affective, and behavioral mechanism (Fee & Tangney, 2000). From the above cited definitions one may extract that if the time for optimal beginning point for completion of some task needing completion has passed is dysfunctional or irrational procrastination whereas if the task is being pended due to being low in priority and cost associated with it, is functional or rational procrastination.

Furthermore, phenomenon of procrastination is quite widespread in the general population which is not only affecting adults but also university students (Blunt & Pychyl, 1998; Harriott & Ferrari, 1996). For example, Tice and Baumeister (1997) found that those university students who reported high level of procrastination received low grades and experienced more stress and health related issues. Most of the procrastination related literature has contrasted nonprocrastinators with procrastinators and considered it a self-handicapping behavior that may lead to wastage of time, elevated stress, and bad performance. Researchers like Ferrari (2001) viewed procrastinators as self-indulgent or lethargic individuals who are unable to

self-regulate whereas nonprocrastinators had been described as being efficient, organized, productive, superior performers, and extremely motivated people (e.g., Bond & Feather, 1988; Ellis & Knaus, 1977). Procrastination has different characteristics, appears in various styles and has different types. To have better understanding about procrastination, thorough knowledge about its styles, types, and characteristics is essential.

### **Types of Procrastination**

There are six different kinds of procrastination that have been investigated. These are as follows: (1) academic procrastination (2) task-aversive procrastination (3) trait procrastination (4) avoidant procrastination (5) decisional procrastination, and (6) active vs. passive procrastination. All types of procrastination except active procrastination badly affect individual's intra- and inter-personal functioning (Ferrari et al., 1995), whereas the first two types are related to behavioral inefficiencies (Milgram & Arad, as cited in Milgram, Sroloff, & Rosenbaum, 1998). Most of empirical studies have primarily focused on first three kinds of procrastination and recognized several causes and correlates of task avoidance procrastination (Ferrari et al., 1995). In the following section, these six types of procrastinations have been described in somewhat more detail.

*Academic procrastination.* Academic procrastination refers to the postponement of academic goals to the extent where optimal performance becomes highly unlikely (Ellis & Knaus, 1977). Academic procrastination can best be

explained as knowing that what one is supposed to do, and probably willing to complete but failing to perform the activity within the expected or desired time frame (Senecal, Koestner, & Vallerand, 1995). This behavior is fairly common among adults as well as students at the high school and college levels and may have important negative impacts on learning and achievement (Clark & Hill, 1994; Harriott & Ferrari, 1996; Solomon & Rothblum, 1984; Wesley, 1994). In students' lives, procrastination can cause delay in studying behaviors (Rothblum et al., 1986; Tice & Baumeister, 1997), skipping classes (Scher & Osterman, 2002), missing deadlines or delay in handing over of papers, in drafting works or reports, and postponement of administrative tasks related to academic life, such as registering for an exam, return of library books, and so forth (Rothblum et al., 1986; Scher & Ferrari, 2000).

Previous literature highlights the negative relationship between academic procrastination and self-related constructs such as self-efficacy for self-regulation and learned resourcefulness, whereas positive relationship was observed between procrastination and self-handicapping, test anxiety, various anxiety-related symptoms, depression, stress, guilt, neuroticism, lack of assertion, learned resourcefulness, indecision, irrational thinking, low self-esteem, delayed writing behavior, cheating, poor time management, lower grades, and to external attributions of academic success (Akinsola, Tella, & Tella, 2007; Beck, Koons, & Milgram, 2000; Beswick et al., 1988; Ferrari, 1992, 2000; Klassen, Krawchuk, & Rajani, 2008; Lahmers & Zulauf, 2000; Lay, Knish, & Zanna, 1992; Lay & Schouwenburg, 1993; Milgram, Dangour, & Raviv., 1992; Pychyl, Lee, Thibodeau, & Blunt, 2000; Roig & DeTommaso, 1995; Rothblum et al., 1986; Tan et al., 2008; Tice & Baumeister, 1997; Watson, 2001; Wesley, 1994). Kagan, Cakır, İlhan, and Kandemir (2010) accentuated the role of

personality factors and perfectionism in explaining the academic procrastination. Above cited researches substantiate that procrastination has negative implications however it is not clear whether these effects are temporary or permanent. Moreover to what extent these effects vary across different age groups is worth exploring.

Procrastination is also viewed as a self-protective strategy with a fragile sense of self-esteem and influenced by self-concept (Steel, Brothen, & Wambach, 2001). Ferrari and Tice (2000) characterized procrastination as a self-handicap and found it related to evaluation of students (Senecal, Lavoie, & Koestner, 1997). Among all of the variables that have been investigated in previous studies on academic procrastination, self-related constructs such as self-regulation, self-esteem, and self-efficacy have been the focus of researchers attention (e.g., Beck et al., 2000; Cassady & Johnson, 2002; Chu & Choi, 2005; DeRoma, Young, Mabrouk, Brannan, Hilleke, & Johnson, 2003; Ferrari, 2001; Ferrari, Parker, & Ware, 1992; Haycock, McCarty, & Skay, 1998; Howell & Watson, 2007; Howell, Watson, Powell, & Buro, 2006; Naz, 2013; Senecal et al., 1995; Steel, 2007; Tuckman, 1991; Wolters, 2003) and were found to have significant inverse relationships with procrastination (e.g., Klassen, 2007; Pajares, 1996; Steel, 2007; Wolters, 2003). With reference to Pakistan Saleem and Rafique (2012) explored the procrastination and self-esteem among university students and found a significant negative correlation between procrastination and self-esteem. The study has limited generalizability due to small sample size and recommends replicating the findings with a larger sample size.

Writing is a complex cognitive activity that cannot be managed successfully in hurry (Boice; Britton, Burgess, Martin, McLeod, & Rosen as cited in Fritzsche et al., 2003). Incomplete assignments, test and social anxiety, cramming, use of self-

handicapping strategies, fear of failure, and under-achievement are some of the ultimate outcomes of procrastination among university students (Dewitte & Schouwenburg, 2002; Ferrari & Scher, 2000; Fritzsche et al., 2003; Lay & Schouwenburg, 1993; Lee, 2005; Midgley & Urda, 2001

Regarding measures to overcome procrastination tendencies among students Murray and Wren (2003) suggested that high schools and universities must take an initiative to offer support programs to students in completing their assignments and reducing these types of attitudes and behaviors among youth. Receiving feedback on writing may help in two of the main reasons identified for procrastination: fear of failure and task-aversiveness (Ferrari & Tice, 2000; Fritzsche et al., 2003; Solomon & Rothblum, 1984). The feedback given to them may facilitate high fear-of-failure procrastinators by reducing their perfectionism.

Van Eerde (2003b) emphasized on identifying the role of social influences on students' academic procrastination whereas Onwuegbuzie (2000) concluded that viewing academic procrastination from a broad social perspective may prove beneficial in overcoming procrastination among students.

***Trait procrastination.*** Trait procrastination is a tendency to put off some activity which is important for achievement of some goal (Lay, 1986). Findings of previous studies indicate that chronic procrastination is complex and comprised of distinct personality traits (Watson, 2001). In recent years the research interest on procrastination has been constantly growing (Ferrari et al., 1995). The relation between trait procrastination and dilatory behavior is as trait anxiety is to state

anxiety. A number of findings and theory suggest that trait procrastination will be most negatively related to the Big-five factor labeled conscientiousness.

Recent investigations have applied Costa and McCrae's (1992) facets of the five-factor model to academic procrastination. With five-factor model, procrastination has been found to be positively related to low conscientiousness and neuroticism (Schouwenburg & Lay, 1995). Moreover it was negatively related to each of the six facets of conscientiousness (competence, order, dutifulness, achievement-striving, self-discipline, and deliberation). Altogether, these findings were also supported by other studies (e.g., Ferrari et al., 1995; Lay, Kovacs, & Danto, 1998) reporting that low conscientiousness, specifically low self-discipline (Johnson & Bloom, 1995) strongly predicted chronic procrastination.

Some relations to neuroticism have also been observed mainly on tentativeness or impulsiveness facets of neuroticism. For instance, McCown, Petzel, and Rupert (1987) noted positive correlation between self-reported procrastination and extraversion, and observed a curvilinear relationship with neuroticism (with high and low scores positively related with higher procrastination scores).

***Task-avoidance procrastination.*** With reference to research on procrastination, task-aversiveness is defined as how much a task is unpleasant to perform (e.g., Lay, 1990; Milgram, Marshevsky, & Sadeh, 1995; Solomon & Rothblum, 1984). People have the tendency to linger on those tasks which are perceived as unpleasant or unenjoyable than others. Different task-characteristics work behind initiating and completing tasks such as departmental norms, competing deadline pressures, perceived difficulty of the task, and clarity of instructions for ensuing (Ackerman & Gross, 2007).

Regarding long term projects with multiple stages O'Donoghue and Rabin (2008) found that usually inexperienced people make costly effort to begin projects but are unable to complete. Findings of their study indicate that procrastination create problems when projects are perceived as boring, less meaningful and less structured, frustrating, aversive, done resentfully, are generally more stressful, and forced upon them by others. Aversiveness is one of the underlying reasons in task-avoidance procrastination which can be minimized by using tangible rewards, establishing a deadline, and through counseling via addressing the various aspects of aversiveness for instance personal meaning assigned to a particular project, its structure and associated stress (Blunt & Pychyl, 2000; Pittman, Tykocinski, Sandman-Keinan & Matthews, 2008).

*Avoidant procrastination.* Avoidant procrastination is viewed as a maladaptive coping mechanism in which individual disengages in case of adverse tasks or show low level of persistence by postponing preferred activities that in turn protects his/her self-esteem (Diaz-Morales et al., 2008; Ferrari, 1991b; Ferrari et al., 1995; Ferrari & Tice, 2000; Lee, Kelly, & Edwards, 2006). Procrastination correlates positively with high self-consciousness due to an underlying fear of exposing one's own weaknesses, and negatively with self-esteem variables (Ferrari, 2001; Ferrari, 1992). Diaz-Morales, Cohen, and Ferrari (2008) in a study found that avoidant procrastination is positively predicted by a passively accommodating motivational style, gregarious/outgoing and unconventional behavioral styles but negatively predicted by a conforming behavioral style. It has been found that nonprocrastinators experience less life regrets than arousal and avoidant procrastinators in fields of



education, social relationship (such as parenting, family and friend interactions), health and wellbeing, and finance (Ferrari, Barnes, & Steel, 2009).

Millon's model (1990) has an important implication in the field of procrastination because the purposive delay of a task is also a maladaptive coping strategy to adjust to one's environment (Ferrari et al., 1995). Research findings support the presence of avoidance as a major motive for chronic procrastination (Ferrari, 1992; Ferrari & Diaz-Morales, 2007a; Ferrari & Diaz-Morales, 2007b; Ferrari & Patel, 2004). The above mentioned studies highlight that procrastination may be a response to protect the self from negative evaluations emanating from perfectionism and leading to maladjustment. The important point for future is to explore the role of underlying factors such as the nature of evaluative situation and the type of task required to perform.

***Decisional procrastination.*** In case of taking a decision or carrying out a task individuals judge whether they have sufficient resources to handle the situation or not, and if they perceive their resources as inadequate, they try to cope with the perceived anxiety that ensues and avoid the situation by delaying the task or decision-making. Kuhl's Action Control Theory (1984) provides us with another interpretation, which states that decisional and behavioral procrastination call different higher meta-control processes into play. People higher in decisional procrastination are more systematic and deliberate rather than being unsystematic and are easily sidetracked yet prefer to search for more information about chosen alternatives (Ferrari & Dovidio, 2000). They may face greater difficulty in making choices regarding their academic or career future (Di Fabio, 2006).

Most of the researchers (e.g., Bond & Feather, 1988; Ellis & Knaus, 1977; Ferrari, 2001; Ferrari et al., 1995; Knaus, 2000; Tice & Baumeister, 1997) have explained procrastination in pessimistic behavioral perspective with relatively negative consequences, whereas another line of thought considered procrastination in a positive sense. Several writers viewed it as a functional delay or as avoiding rush (e.g., Choi & Moran, 2009; Chu & Choi, 2005; Ferrari, 1993). Lay (1988) distinguished between optimistic and pessimistic procrastination. Optimistic procrastinators are characterized as invulnerable to adjustment problems, whereas pessimistic procrastinators as highly susceptible to adjustment difficulties. Many people think that they can finish their work in time and can work better and sooner or come up with more innovative ideas even when they initiate their work at last moment, and have time pressure. This point of view indicates that there is an optimistic view of procrastination that in some cases leads to positive outcomes as well. The critical question in this regard is why some procrastinators develop this sense of optimism and have self related biases, whereas others are overwhelmed with pessimism.

According to van Eerde (2003b) procrastination may not always be dysfunctional. Chase (2003) also refused to accept this approach and considered it as impractical and advocated that viewing procrastination as a bad habit is an out dated view and irrelevant in today's world. He made a differentiation between putting off doing something because someone is not willing to do it, and putting off doing something because it is not being important at the moment, the latter he says "is a highly desirable time management skill" in today's business climate (p. 60). Ferrari (2009) advocated that for the past 30 years researchers had their focus towards

studying the causes and outcomes of procrastination and viewed procrastination from wrong lenses, and had an inappropriate focus. He suggested a need to do a paradigm shift and adopt strength based approach (focusing on persistence and “stick-to-it-ness” borrowing from positive psychology rather than highlighting the negative aspects of procrastination.

*Active vs. passive procrastination.* Chu and Choi (2005) forwarded and illustrated an alternative view of procrastination which is contrary to popular notion that not all types of procrastination behaviors are damaging and lead to negative consequences. There are people who do not procrastinate and try to manage their tasks in timely and befitting manner. They are nonprocrastinators and are good at managing their time in an orderly and efficient manner (Ellis & Knaus, 1977; Knaus, 2000). In comparison to nonprocrastinators Chu and Choi (2005) proposed two other types of procrastinators. Passive procrastinators are traditional procrastinators who put off their tasks until the last minute because of being incapable to make timely decisions and to act accordingly. Cognitively, they do not intend to procrastinate, but they often end up postponing tasks due to their inability to make timely decisions to thereby act on them quickly. While active procrastinators make intentional decisions to procrastinate due to their strong motivation to work under time pressure, they are well capable to complete projects before deadlines and achieve satisfactory results. Active procrastinators plan their tasks/activities in an organized way on emergent basis though they do not develop or adhere to a rigid schedule or time structure.

Chu and Choi (2005) viewed that active procrastination has much positive implications for individuals in terms of self-efficacy, depression, stress coping, and

performance. By relaxing themselves from a rigid time schedule and shifting attention from routine to effective accomplishment of the goal, active procrastinators experience less stress and get involved in more constructive responses to work-related stress, and induce higher performance and greater life satisfaction. They suggested that active procrastination being a multidimensional construct encompass following features as their typical characteristics: (a) preference for time pressure, (b) intentional decision to procrastinate, (c) ability to meet deadlines, and (d) satisfaction with outcomes.

Procrastination leads to time pressure that ultimately causes stress. Some people feel challenged while being under time pressure and are not engendered by negative psychological states (Freedman & Edwards, 1988). Active procrastinators enjoy the feeling of being challenged whenever they are confronted with last-minute time pressure and that in turn leads to increased motivation (Choi & Moran, 2009; Deci & Ryan, 1985). Nonprocrastinators and active procrastinators are well capable in managing their time orderly and efficiently (Ellis & Knaus, 1977; Knaus, 2000) but passive procrastinators drift from one activity to another without prior planning, prioritizing their activities, and organizing the time (Bond & Feather, 1988). Active procrastinators on the other hand intentionally procrastinate and do not preplan their activities in an organized manner and avoid adhering to a rigid schedule. So, instead of being fixated on their routine or prescheduled activities, they freely and intentionally reschedule plans according to changing external demands (Choi & Moran, 2009; Dawson, 2007). Passive procrastinators are often unable to complete tasks on time that leads to disappointment (Chu & Choi, 2005; Ferrari, 2001; Knaus, 2000; Lay, 1990; Lay & Schouwenburg, 1993; Tice & Baumeister, 1997).

Macan (1994) viewed that perception of time is truly a subjective experience and cultural differences in norms and values regarding time perception may affect a person's ability to foresee long-term consequences, avoid risks, live in the here and now, and his/her focusing on short-term perspectives (Brislin & Kim, 2003). With this line of thought active procrastinators are somewhat similar to nonprocrastinators as active procrastinators are well capable of motivating themselves under taxing conditions, making intentional decisions to procrastinate, and completing tasks on time. They usually obtain satisfactory outcomes even though they procrastinate (Choi & Moran, 2009; Dawson, 2007). On the other hand passive procrastinators go for immediate gratification of their needs, which can lessen the stress for the time being but may lead to self-defeating outcomes (Harriott & Ferrari, 1996; Knaus, 2000). Despite the consistency of Chu and Choi's findings with previous studies still there are certain limitations regarding the generalizability of the results to populations engaging in other types of tasks. Moreover cross-sectional nature of the study has possible limitations of insensitivity to temporal changes of variables.

Some other recent findings also lend support to Chu and Choi (2005) and Choi and Moran's (2009) results such as Seo (2013) while comparing academic motivation of active and passive procrastinators also confirmed the distinct nature of active and passive procrastination in form of delay. In another study Seo (2012) observed a significant difference between active procrastinators and passive procrastinators in their academic achievement. To extend the existing research findings on active procrastination Eunkyung and Seo (2013) explored the relationship of flow, self-regulated learning to active procrastination and identified self-regulated learning as significant predictors of active procrastination. Though these findings substantiate the

distinctiveness of active and passive procrastination yet much research is needed to enhance the validity of the constructs.

Choi and Moran (2009) established a nomological network of active procrastination being a nascent construct, and ascertained its relationship with other theoretically related variables. Though the study paved the way and set the directions for future research in area of procrastination specifically active procrastination still people with cultural dissimilarities may have different views regarding time structure and temporal reference points of past, present, and future that any influence their time-related perceptions. As according to Cronbach and Meehl (1955), demonstrating the construct's relationship with other relevant constructs not only clarify what the construct is but also increase its distinctiveness in a theoretical space, and these interpretations of the construct in relation to other related constructs is a critical component of construct validation (Chen, Mathieu, & Bliese, 2004; Hinkin, 1998). In order to have perspicacity of the construct, knowledge about its occurrence in a society, its causes and repercussions, help researchers to manage it effectively.

### **Prevalence of Procrastination**

Regarding prevalence of procrastination it has been observed that it is quite prevalent and recurrent behavior in modern societies (Dewitte & Schouwenburg, 2002; Ferrari et al., 1995; Ferrari et al., 2005). According to Marano (2003) generally procrastination is not considered a problem even though research has indicated procrastination is widespread in general population that chronically affects 15%–20% of adults in a way that 20-25% of nonclinical adult men and women label themselves

as “chronic procrastinators” (Essau, Ederer, O’Callaghan, & Aschemann, 2008; Ferrari et al., 2005; Ferrari, Diaz-Morales, O’Callaghan, Diaz, & Argumedo, 2007; Hammer & Ferrari, 2002; Harriott & Ferrari, 1996). In addition these percentages are constantly on the rise (Kachgal, Hansen, & Nutter, 2001) such as increase in other forms of self-regulatory failure like obesity, gambling, and excessive debt (Griffiths & Parke, 2002; Wadden, Brownell, & Foster, 2002).

Though procrastination occurs in all kinds of everyday tasks (Alexander & Onwuegbuzie, 2007) yet its prevalence is high in academic context and regarded as harmful to academic progress and success. Studies conducted in academic context indicated that procrastination affects 46% to 95% of undergraduate students (Ellis & Knaus, 1977; Janssen & Carton, 1999; Kachgal et al., 2001; Ozer, Demir, & Ferrari, 2009; Rothblum et al., 1986; Steel, 2007). Bilkis and Duru’s (2009) study explored the prevalence of academic procrastination behavior among pre-service teachers and analysis of responses showed that 23% of prospective teachers exhibited high level of procrastination behavior and 27% showed an average level of procrastination behavior. Although above mentioned findings offer valuable contribution yet cultural dimensions such as collectivism and familial loyalty were ignored, so one has to be cautious while drawing the conclusions based on presumed cultural beliefs. Mancina and Ferrari (2009) reported that prevalence rates of chronic procrastination were found to be relatively similar across eleven different cultures.

Since adolescence is a time when young people move from dependence on parents to independent functioning. This stage is accompanied by a greater affinity for peers and an increase in novelty seeking and risk taking (Rey & Birmaher, 2009). It has been observed that usually adolescents tend to avoid difficult and unpleasant tasks

that require effort, put them at high stake, and for which they feel unprepared (Blunt & Pychyl, 2005; Ferrari, Harriott, Evans, Lecik, & Wegner, 1997; Ferrari & Scher, 2002). The above cited findings of the study are more generalizable to the female population due to over representation of females in the sample.

Previous researches (e.g., Ferrari et al., 2005; Steel, 2007; Yong, 2010) support the existence of two possible demographic moderators of procrastination such as age and gender. Earlier research findings indicated that people tend to procrastinate less with growing age and repeated practice, and learn to avoid procrastination (Baumeister, Heatherton, & Tice, 1994) not because of intrinsic self-control, but because they have developed schemes to overcome procrastination (O'Donoghue & Rabin, 1999). Till graduate level many students have not acquired the adaptive approach or coping skills that may help them to alleviate procrastination in certain academic areas (Kariv & Heiman, 2005). Exploring indigenously Khan, Arif, Noor, and Muneer (2014) found that younger adolescents tend to procrastination more as compared to elder ones, and procrastination level was also high among college students (low academic level; juniors) than university students (high academic level; seniors). Whereas a contrary finding of Yong (2010) revealed that older students procrastinated more than their younger fellows in academic context. In order to be more certain regarding the role of gender and age further studies may prove beneficial. On account of previous findings it is worth exploring whether with growing age and rising academic level, adolescents tend to more actively procrastinate and less passively procrastinate or vice versa. Present study intends to investigate above mentioned assumptions.



While indicating the reasons, the maximum number of respondents attributed delay to indecisiveness, low self-esteem, poor time management, dependency, task-aversiveness, perfectionism, and laziness. Previously most of the researches were carried out on college students' sample ignoring young adolescents and offering little knowledge regarding severity of procrastination in children and younger adolescents (Ferrari et al., 1995). Even though the research exploring the implicit reasons behind adolescent procrastination is quite limited, still the initial results indicate that low self-esteem and self-efficacy, in addition to poor self-regulation, contribute to academic procrastination, although there is variation according to sex (e.g., Pychyl et al., 2002). Sirois and Pychyl (2013) argued that as form of self-regulation failure procrastination is linked with short mood repair and emotional regulation.

Previously carried out researches (e.g., Flett, Blankstein, & Martin, 1995; Howell & Watson, 2007) in western settings revealed mixed results and contradictory support for sex-related procrastination and self-control (Feingold, 1994), indicating no gender differences in procrastination (Bilkis & Duru, 2009; Essau, et al., 2008; Ferrari, 1991b; Ferrari & Diaz-Morales, 2007a; Haycock et al., 1998; Hess, Sherman, & Goodman, 2000; Sirin, 2011; Watson, 2001). Steel (2007) in a meta-analytic review of procrastination research found males having more tendency to procrastinate than females (e.g., Klassen et al., 2009; Ozer et al., 2009; Prohaska, Morrill, Atilas & Perez, 2000; Senecal et al., 1995), whereas some other findings showed that it is more pervasive among female students (Nazish, 2003; Washington, as cited in Bilkis & Duru, 2009; Haycock et al., 1998). With reference to local context Zafar (2013) while exploring the relationship between metacognitive beliefs and procrastination among Pakistani university students, did not find any significant difference between males

and females in their procrastination tendencies. While on the other hand, Khan et al. (2014) observed significant difference between Pakistani boys and girls with reference to their tendency to procrastinate, as boys procrastinated more as compared to girls. Though the above mentioned findings enhance our knowledge regarding the role of gender in procrastination but these are not free from limitations. One major limitation of these studies is its self-reported nature and the other is lack of emphasis on cultural dimensions that may contribute in development of procrastination tendencies. On the basis of previous findings present study also aims to investigate whether there is a significant difference between boys and girls regarding their active and passive procrastination tendencies or not.

Adolescent boys usually miscalibrate and exaggerate their capabilities in some domains which may be due to over confidence in estimating their academic capabilities (Klassen, 2007). While procrastinating boys spend more time on electronic media, like web surfing, emailing, online chatting, and watching TV whereas girls procrastinate more with traditional (print) media, like books and magazines. Both, boys and girls were more prone to procrastinate on writing assignments, which is consistent to findings with university students (Solomon & Rothblum, 1984). An interesting finding by Ferrari's (1991c) revealed that those men and women who indulge in chronic procrastination behaviors avoid any type of self-relevant diagnostic information, but recommend severe reprimands for other procrastinators who perform poorly (Ferrari, 1992). Procrastination being a multifaceted phenomenon has number of reasons and related variables so it seems plausible to study these correlates in detail to have better insight of the construct.

Present study mainly focuses on the correlate variables of procrastination such as time management, self-efficacy, coping strategies, and personality traits.

### **The Causes and Correlates of Procrastination**

Johnson and Bloom (1995) mentioned two different lines of research that have investigated the phenomenon of procrastination, one relating procrastination to more situationally determined factors and less stable trait (e.g., Blunt & Pychyl, 2000; Milgram et al., 1992; Pychyl et al., 2000; Saddler & Buley, 1999; Tice & Baumeister, 1997; van Eerde, 2000), such as fostered by context-specific factors that promote students' fear of failure, evaluation anxiety, feelings of incompetence, or task-aversiveness (Ferrari et al., 1992; Ferrari & Tice, 2000; Lay, 1992; Schouwenburg, 1992; Senecal et al., 1997; Solomon & Rothblum, 1984) and low frustration tolerance (Ellis & Knaus, 1977).

The second line examining the relationship between one or more fairly stable personality traits that cause individuals to procrastinate across various contexts or situations (Milgram, Dangour; Raviv; as cited in Wolters, 2003; Saddler & Buley, 1999), such as identity style, perfectionism, and self-consciousness (Berzonsky & Ferrari, 1996; Ferrari, 1992; Ferrari, Wolfe, Wesley, Schoff, & Beck; Saddler & Buley as cited in Wolters, 2003; Saddler & Sacks, 1993), low self-confidence, self-esteem, self-awareness, neurosis, forgetfulness, disorganization, social anxiety, noncompetitiveness, dysfunctional impulsivity, behavioral rigidity, maladaptive life style, depression, anxiety and lack of energy (Brownlow & Reasinger, 2000; Burka & Yuen, 1983; Ferrari, 1994; Ferrari & Diaz-Morales, 2007a; Ferrari & Emmons, 1995;

Flett et al., 1995; Lay, 1986; Lay, Edwards, Parker, & Endler, 1989; Schouwenburg & Lay, 1995; Senecal et al., 1995; Steel, 2007; Sumner & Ferrari, 2009; Tuckman, 1991; van Eerde, 2003; 2004).

Moreover review of procrastination literature showed that procrastination is also positively related to slipping off the lesson (Rothblum et al., 1986), poor academic performance (Beswick et al., 1988; Fritzsche et al., 2003; Tice & Baumeister, 1997; Tuckman, 2002), lack of punctuality (Lay, 1986; Rothblum et al., 1986; Solomon & Rothblum, 1984), lack of motivation (Senecal, et al., 1995), low effort for success (Saddler & Buley, 1999), weak self-efficiency (Haycock et al., 1998), low capacity (Milgram et al., 1995), low consciousness level (Johnson & Bloom, 1995; Lay & Brokenshire, 1997; Schouwenburg & Lay, 1995), high level of perfectionism (Saddler & Sacks, 1993), and neuroticism (Beswick et al., 1988; Johnson & Bloom, 1995; Lee et al., 2006; Schouwenburg & Lay, 1995; Watson, 2001). Although number of researches has found link between self and procrastination behaviors in adults and undergraduates, little attention has been paid to levels and correlates of procrastination outside the university environment despite being a common and troubling psychological phenomenon. This may limit the generalizability of the findings to the adolescent sample. Following are some of the major correlates of procrastination:

**Task characteristics.** While procrastinating one voluntarily choose a behavior or task over other options, and this delay cannot be irrational as one favors some tasks over others. The nature and type of the task itself has some effect on the decisions people make. Briody (as cited in Steel, 2007) found that about 80% of the respondents reported occasional procrastination whereas 50% of people who responded,

procrastinate due to some task characteristic. Task-aversiveness is a dysphoric affect associated with the task that one finds unpleasant (Milgram et al., 1988). Timing of rewards and punishments, and task-aversiveness are the two predictable environmental factors that contribute in procrastination.

It has been found that the impact of an event depends on how much farther away it is temporally, more it is, the less impact it has upon people's decisions (McCrea, Liberman, Trope, & Sherman, 2008). Sirois (2014) in a meta-analytic review with 14 samples on link between procrastination and future and present time perspective found that procrastination has a moderate significant negative association with future time perspective but significant positive association with present time perspective. Chronic procrastinators as compared to nonprocrastinators, avoid such activities that may reveal information about their abilities, permit lower autonomy (Steel, 2007), create frustration, resentment, and boredom (Ackerman & Gross, 2005; Blunt & Pychyl, 2000; Haycock, 1993; Strongman & Burt, 2000), and would prefer to work on tasks that are easy, interesting, pleasant, require variety of skills, offer rewards for starting promptly, are unchallenging and for which the instructor provided clear instructions (Ackerman & Gross, 2005; Ferrari as cited in Ferrari & Tice, 2000; Lay & Brokenshire, 1997). Researches related to task aversiveness and procrastination are not free from limitations due to exploratory nature, small sample size, reliance on recollections of past assignments and the difference between remembered and actual procrastination behavior. Moreover ignoring the role of age and work related experience can limit the generalizability of the findings.

**Time management.** Time is a universal feature of human experience and perception of time is truly subjective (Macan, 1994). People from varied nations are apt to behave on the basis of their perceived time lines and the lifestyles they follow (Brislin & Kim, 2003). Time management can be defined as the ability to prioritize, schedule and execute responsibility to personal satisfaction (Seaward, 2002). Time management comprises of three basic elements such as setting goals, making to do lists, and setting up a schedule (Sarafino, 2008). It has been found that ability to manage time effectively can improve one's grades, help him to keep check on stress and be competitive in the career one would undertake in his/her education (Misra & McKean, 2000; Lahmers & Zulaut, 2000).

Passive procrastinators incorporate less structure in their time use so they may drift aimlessly from one activity to another (Bond & Feather, 1988; Chu & Choi, 2005; Lay, 1990) whereas active procrastinators are different from passive procrastinators in having more time structure and a better sense of purpose in their time use. They are better able to make intentional decisions regarding their time use on urgency or priority basis. Active procrastinators are similar to nonprocrastinators as they take charge of their time and maximize their efficiency of time use. Byrne (2008) suggested that by managing one's time person not only feel happier but it also enhances accomplishments. Prioritizing goals keeps the person on track by ensuring that focus is on the right things at the right time. Students who had more sense of purpose and were structured in their time use reported greater psychological well-being and more effective study habits (Dipboye & Phillips, 1990). van Eerde (2003b) suggested that time management training reduces the procrastination as she observed the impact of time management training on self-reported procrastination among 37

employees and after one month training noted a significant decline in procrastination at work. Somehow the study has its limitations due to its research design and leave room for establishing the efficacy of such training programs and internal, external validity of the study.

Interaction of different cognitive pathways and affective responses produce different behavioral outcomes such as, active procrastinators are more determined and are able to manage the things timely, on the other hand passive procrastinators are more likely to give up and fail to complete tasks. Active procrastination is considered a multifaceted phenomenon that incorporates cognitive (decision to procrastinate), affective (preference for time pressure), and behavioral (task completion by the deadline) components as well as the positive outcomes and satisfaction with them. Due to these fundamental differences in terms of time use and its perception, self-efficacy beliefs, motivational orientation, and stress-coping strategies, active and passive procrastinators possess distinct psychological characteristics and achieve different outcomes. Documenting the previous research findings current study intends to explore the difference in time management behaviors of active, passive, and nonprocrastinators.

**Self.** Procrastination has long been viewed in relation to number of self related constructs such as self-regulation (e.g. van Eerde, 2000), self-handicapping (Ferrari & Tice, 2000), self-esteem (Pychyl et al., 2002) and many other aspects of self. Previous findings (Ferrari & Diaz-Morales, 2007a; Ferrari et al. 1995) indicate that procrastinators' self-concept is related to their task-completion. Earlier studies showed that due to frequent delays procrastinators are not liked by others and both

men and women who tend to procrastinate try to improve their social standing by exaggerating their accomplishments (Ferrari & Diaz-Morales, 2007a; Ferrari & Petal, 2004; Ferrari & Tice, 2000).

*Self-efficacy*, the belief that one has the ability to perform certain tasks plays a central role in causal structures as this not only affects human functioning directly but also through other important classes of determinants such as individual's motivation, well-being, and personal accomplishment, goal aspirations, incentives and disincentives embedded in outcome expectations, perceived barriers and opportunity structures (Bandura, 2000; Pajers, 2005). Vuong, Brown-Welty, and Tracz's (2010) study revealed the effects of self-efficacy on academic success with a sample of 1,291 college students. These results showed that self-efficacy beliefs had a significant and positive effect on the academic achievement of students. Previous findings revealed an inverse relationship between self-efficacy belief and academic procrastination among college students (Ferrari et al., 1992; Lay, 1992; Martin, Flett, Hewitt, Krames, & Szanto, 1996; Milgram et al., 1995; Tuckman, 1991). Most of the above cited self related studies on procrastination limit the generalizability of their findings due to self reported nature of measures used. The validity of the findings is also questionable to different age groups other than university students. With reference to Pakistan Nazish (2003) observed a significant difference between high and low self-efficacious groups in their level of procrastination. Findings of Chu and Choi (2005) and Choi and Moran (2009) highlighted that due to multi-tasking ability active procrastinators have higher level of self-efficacy than passive procrastinators which may be attributed to their active approach towards approaching the targets they set for



themselves. These findings lend support to presume that active procrastinators have higher level of self-efficacy than nonprocrastinators and passive procrastinators.

**Coping strategies.** The process of coping suggests the strategies used by individuals to deal and cope with the stressors. Coping is a very important mechanism and has been focus of recent literature on health psychology (Kraaij, Garnefski, & Schroevers, 2009; Park, Edmondson, Fenster, & Blank, 2008; Perez et al., 2009; Schwartz et al., 2008). Constantly changing cognitive and behavioral attempts to regulate specific external or internal demands that are appraised as strenuous or exceeding the capacity of individual are viewed as coping (Braun-Lewensohn et al., 2009; Brown & Ireland, 2006; Bolgar, Janelle, & Giacobbi, 2008; Dimmatteo & Martin, 2002; Gould, Hussong, & Keeley, 2008).

Different researchers have conceptualized coping styles differently (e.g., Carver, Scheier, & Weintraub, 1989; Moos & Holahan, 2003). Problem-focused coping, emotion-oriented coping, and avoidance-oriented/dysfunctional coping are the three most commonly employed coping strategies (Carver et al., 1989; Endler & Parker, 1990, 1994; Kosic, 2004). Problem-focused coping strategies lessen the stress by focusing on most immediate problems. Emotion-oriented coping strategies focus on reducing the emotional distress caused by the stressors. In dysfunctional coping strategies either a problem is ignored or one tries to distract oneself from it. Though in most of the stressful situations, a combination of coping strategies are employed but problem-focused/task-oriented coping strategies dominate when individuals are confident of managing the situations, while emotion-focused and dysfunctional strategies predominate when people feel that they lack sufficient resources and cannot tackle with the stressors (Folkman & Lazarus, 1980). Though the above cited coping

styles are the most commonly employed strategies, still findings indicate that there is room for empirical research to explore latent constructs and possible dimensions of coping (Sveinbjornsdottir & Thorsteinsson, 2008).

The relationship of situational and dispositional coping with personality, cognitive appraisals, psychological distress and some dispositional traits such as self-esteem, self-concept clarity, problem-solving style, and emotion regulation determine the preferred/typical coping styles (Bouchard, Guillemette, & Landry-LeGer, 2004; Smith & Dust, 2006). Flett et al. (1995) viewed procrastination as a coping style, and observed positive correlation between procrastination and avoidance-oriented coping. They concluded that procrastinators are usually unable to focus on the root cause of the problem as opposed to its effects and as a result, tend to use an emotion-oriented rather than a task-oriented approach (Berzonsky, 1992).

Seiffge-Krenke, Aunola, and Nurmi (2009) and Garcia (2010) studied how developmental changes influence the stress and coping during adolescence period and noted that the level of perceived stress decreases with growing age, whereas active and internal coping is more incessantly used during 12 to 19 years of age. Coping strategies employed by adolescents interact with their well-being and adjustment, success at school, and physical and mental health (Sveinbjornsdottir & Thorsteinsson, 2008). The rising concern for adolescents who face adjustment problems highlights the need for recognition of protective and risk factors, and development of evidence-based preventions (Li, DiGiuseppe, & Froh, 2006; Lubell & Vetter, 2006; Rew, 2005; Sveinbjornsdottir & Thorsteinsson, 2008; Zimmer-Gembeck & Skinner, 2008).

The role of coping strategies in adolescents' attachment and externalizing behaviors (Cooper, Owen, Katona & Livingston, 2008; Dawson, 2009), self-efficacy

(Litman & Lunsford, 2009), depression (Saleem, 2004) and stress (Hayat, 2007) has been determined. Most of the findings of coping related studies have limitation of using self-report measures to study the variables. Moreover it is not possible to determine whether the coping strategies described by the subjects reflect their actual coping behavior or not, as researchers can rely on only what subjects indicated they did, or usually they do when coping behavior was required in their lives. These limitations restrict to draw the firm conclusions related to data. These limitations can be tackled through daily journals and behavioral observation to determine the degree of overlap between self-reported and actual coping behavior.

Akhtar (2005) with reference to Pakistan explored the relationship between students' stress, time management, and coping strategies and noted that religion was the most used and substance use was the least employed coping strategies by Pakistani students. These findings may be attributed to the role and importance of religion and culture in our routine life. People who often experience stress and feel under pressure because they are running late or believe that they do not have enough time to manage tasks of the day need to organize their worlds and prioritize the things for functioning efficiently, which may reduce their frustration, lessen time wastage, and the potential for stress (Sarafino, 2008). Findings of Chu and Choi (2005) indicated that active procrastinators more incessantly use problem-focused coping than avoidant and emotion-focused coping styles while passive procrastinators more frequently use emotion-focused coping and avoidant coping strategies. Keeping in view the cultural milieu, present study also focuses on exploring the coping strategies employed by active, passive, and nonprocrastinators.

**Personality traits.** In order to specify the relationship between procrastination and individual differences researchers have followed trait-based approach that clustered traits into the traditional five-factor model (Digman, 1990) and viewed it as a perpetual personality trait or disposition that is unwavering across different task domains, contexts, and time (Ferrari et al., 1995; Schouwenburg, 1995; van Eerde, 2000). In order to investigate the consistency in procrastination tendencies, nine short-term studies verified test–retest reliability of an average span of 42 days between assessments, and found the average correlation of .73, indicating the stability of the trait. Elliot (as cited in Steel, 2007) obtained long-term test–retest data for 281 participants who took the Adult Inventory of Procrastination with a gap of 10 years and found that the correlation between two administrations was .77, indicating procrastination to be a sufficiently stable trait.

Steel's (2007) meta-analytic review of possible causes and effects of procrastination based on 691 correlations revealed that neuroticism, rebelliousness, and sensation seeking have weak connection to procrastination, whereas task-aversiveness, task delay, self-efficacy, and impulsiveness, as well as conscientiousness and its facets of self-control, distractibility, organization, and achievement motivation were strong and consistent predictors of procrastination. The relation between procrastination and five factors is further discussed in somewhat more detail.

*Neuroticism* that is close to worry, trait anxiety, or negative affect and its four facets of irrational beliefs, self-efficacy and self-esteem, self-handicapping, and depression have also been explored in relation to procrastination. Researchers have argued that those people who procrastinate on tasks because of its being aversive or

stressful are more susceptible to experience stress and therefore procrastinate more (e.g., Burka & Yuen, 1983; Ellis & Knaus, 1977; Renn, Allen, & Huning, 2009). Irrational beliefs or cognitions about oneself and several dysfunctional or anxiety provoking worldviews certainly hinder the pursuit of happiness (Ellis, 1973). People holding irrational beliefs doubt their abilities to do well (i.e., low self-efficacy) and believe that any sort of failure in performing up to the mark indicate inadequacy as a person (i.e., low self-esteem). Like fear of failure, self-efficacy and self-esteem have also been found to have direct links to procrastination and performance (Bandura, 1997; Burka & Yuen, 1983; Ellis & Knaus, 1977; Judge & Bono, 2001).

*Openness to Experience* is a broad and general dimension about vivid fantasy, artistic sensitivity, and depth of feeling, behavioral flexibility, intellectual curiosity, and unconventional attitudes (McCrae, 1996). It is sometimes also referred to as culture, intellect, or need for cognition. Among big-five personality traits, openness to experience has been strongly associated to intelligence and scholastic aptitude (Beier & Ackerman, 2001), whereas no such direct relationship has been found between openness or intelligence and procrastination.

*Agreeableness* indicates the quality of interpersonal orientation along a continuum that ranges from compassion to antagonism in thoughts, feelings, and actions. Clinical literature (e.g., Burka & Yuen, 1983; Knaus, 1979) suggested that people low in agreeableness and high in rebelliousness, hostility, and disagreeableness are more likely to procrastinate. Individuals with these personality traits are more likely to experience externally imposed schedules as aversive and prone to avoid them. By delaying work and starting it on one's own schedule they reassert their autonomy.

*Extraversion* refers to being sociable, optimistic, outgoing, energetic, expressive, exciting, and impulsive. Extraversion is one of the possible causes of procrastination, but also the complicated one (Brand, as cited in Steel, 2007).

*Impulsiveness* represents the behavioral activation system (BAS) whereas trait anxiety represents the behavioral inhibition system (BIS) (Pickering et al., as cited in Steel, 2007). The function of BAS is to motivate people in pursuing rewarding experiences. An overactive BAS may result in rapid decision making and shorter attention spans which in turn lead to procrastination. Impulsive people are more likely to procrastinate as they are beset with desires of the moment and focus their attention upon them (Blatt & Quinn, 1967). People high in sensation seeking are easily bored, long for excitement, and as a result they intentionally put off work in order to feel the tension of working close to a deadline. Simpson and Pychyl (2009) indicated that some individuals believe that their procrastination is provoked by heightened need of arousal. This is what Choi and Moran (2009) called as active procrastination. However, findings indicate that the overall personality of the procrastinator may play a significant role in dictating whether one has a negative impression of self or a positive self-evaluation as opposed to whether their dilatory behavior has previously been rewarded or punished.

*Conscientiousness* and self-regulatory failure is conceptually close to Procrastination. Procrastination has been found to have strong inverse relationship with conscientiousness and thought to be associated with distractibility, poor organization, low level of confidence in certain domain, achievement motivation, and an intention–action gap (Hartman & Betz, 2007; Locke & Latham, 1990; Renn et al., 2009; Steel, 2007; van Eerde, 2004). With reference to above mentioned studies one

particular concern is the data obtained through self-report measures and the other is the inclusion of representative data. Moreover most of the studies exploring the relationship between procrastination and personality traits ignored the age differences in procrastinatory behaviors that can have a significant impact. As constructs of active and passive procrastination are of distinct nature so study also intends to explore the difference in personality traits of active, passive, and nonprocrastinators.

### **Outcomes of Procrastination**

The important thing regarding the procrastination is the effects of delay. Poor individual performance is the most common outcome of procrastination which hampers the sound organizational performance (Dewitte & Schouwenburg, 2002). In general, procrastination intervenes with people's initiation and their tasks involvement, ultimately leading to an increase in stress reactions, marked by negative feelings, loss of control over their personal lives, or consequences for their physical and mental health (DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982; Senecal et al., 1995; Tice & Baumeister, 1997).

Procrastination of undergraduates has been given substantial attention. Academic procrastination is a sort of anti-motivation which leads to high levels of anxiety, depression, stress, feelings of hopelessness, poor physical health, and illness (e.g., Bond & Feather, 1988; Dipboye & Phillips, 1990; Ferrari et al., 2005; Flett, 2009; Howell, et al., 2006; Owens & Newbegin, 1997; Schraw et al., 2007; Wolters, 2003). Procrastinators face difficulty in following through with changes regarding healthy lifestyle and their health behaviors (Eren & Sirois, 2009; Sirois, Voth, &

Pychyl, 2009), whereas opposite patterns have been observed among nonprocrastinators (Sirois, 2007; Steel, 2007). Some outcomes of procrastination are further discussed in more detail as the main focus of the study is on these outcomes (i.e., depression, anxiety, stress, life satisfaction and performance).

**Depression.** Depression is an appropriate reaction to the problems such as marital discord, incompetence, discomfort, failure or pressures at work and in routine, and to the losses and unpleasant events (Seligman, 1975). Depression is an episodic or chronic disorder characterized by specific alteration in mood, loss of enjoyment in everyday activities, irritability, boredom, apathy, a negative self-concept, desire to escape, hide or die, vegetative changes, such as insomnia, loss of libido, changes in activity and associated symptoms such as negative thoughts, lack of energy, and difficulty in concentration (Beck, 1993; Rey & Brimaher, 2009).

American Psychiatric Association (1994) characterized depression as difficulty in concentration and decision making. It has been found that depression, low energy, learned helplessness, and pessimism all are closely associated to each other and to neuroticism, irrational beliefs, and low self-efficacy or self-esteem (Nawaz, 2004; Ruiz-Caballero & Bermudez, 1995; Saklofske, Kelly, & Janzen, 1995). Depressed adolescents are more prone to anxiety and have the tendency to withdraw from academic pursuits (Beswick et al., 1988; Bunevicius, Katkute & Bunevicius, 2008; Sadock & Sadock, 2009). Some of the major theories that explain the phenomenon of depression are, cognitive theories, psychodynamic theories, learning theories, biological, and psychosocial theories.

Findings of Chu and Choi (2005) also revealed that passive procrastinators are significantly more depressed than active procrastinators and nonprocrastinators due to



their passive approach. Specifically in case of a deadline, passive procrastinators feel more under pressure and become pessimistic in their outlook due to their inability to achieve satisfactory results (Ferrari, Parker, & Ware, 1992).

**Anxiety.** All of us experience anxiety at some moment in our life. It is characterized most commonly as a diffused, unpleasant, vague sense of apprehension often accompanied by autonomic symptoms such as headache, perspiration, palpitations, and tightness in chest, mild stomach discomforts, and restlessness, indicated by an inability to sit or stand for long. The particular constellation of symptoms present during anxiety tends to vary among persons (Sadock & Sadock, 2008). Anxiety is an understandable response in the context of uncertainty which dominates many individuals. The responses of other people whether real or anticipated, misinterpretation of the context can result in individual feeling socially anxious, lessen the opportunity to go out, fear of embarrassment or diminished self-confidence (Zoe, 2009).

Previous studies have found sound relationships between procrastination and some form of anxiety, neuroticism or negative effect (McCown, Petzel, & Rupert, 1987), low levels of self-esteem, self-regulation, academic self-efficacy, and heightened stress, and stress-related illnesses (Beswick et al., 1988; Lay, 1992; Schouwenburg & Lay, 1995) and perfectionism (Pascal, Claude, & Jean, 2010; Walsh & Ugumba-Agwunobi, 2002), yet there are number of studies that have found only a slight association between procrastination and anxiety (Haycock et al., 1998; Howell et al., 2006; Johnson & Bloom, 1995; Lay & Silverman, 1996; Milgram, Batori, & Mowrer, 1993; Sirois, 2004).

Anxiety plays a major role in interfering with children's and adolescents' academic performances by hampering their abilities to perform adequately and in public speaking (Sadock & Sadock, 2008). Findings of Fritzsche, Young, and Hickson (2003) revealed that the tendency to procrastinate on writing tasks was related to general anxiety and anxiety about writing the paper. Several studies support the findings that the procrastination of university students results in incomplete assignments, cramming, test and social anxiety, use of self-handicapping strategies, fear of failure, under-achievement, and can result in damaging mental health outcomes such as depression and anxiety (Blunt & Pychyl, 2005; Dewitte & Schouwenburg, 2002; Ferrari & Scher, 2002; Fritzsche et al., 2003; Lay & Schouwenburg, 1993; Lee, 2005; Midgley & Urdan, 2001).

Locker and Cropley (2004) noticed gender differences in depression and anxiety level of secondary school students as females displayed greater levels of anxiety and negative affect immediately before the examinations, whereas males reported higher positive affect and self-esteem and lower depression and anxiety, even within the week prior to the examinations. However, the study did not cater any subsequent measure of academic success that would have provided further interesting analysis in relation to the pattern of affect and outcome of the examinations. Keeping in view the previous research findings present study also intends to see the difference in perceived anxiety level of active, passive, and nonprocrastinators as it is presumed due to certain characteristics (e.g., intention to procrastinate, ability to meet deadlines, preference for pressures, and outcome satisfaction) active procrastinators experience lesser level of anxiety than passive procrastinators.

**Stress.** Stress is a part of normal human existence, it is necessary and unavoidable---necessary because without it we would be lazy and lethargic and will go into sloth, and unavoidable because it relates to many external events and may be anxiety producing. Stress plays a significant role in development of adolescents. It indicates an imbalance between the individual and environment and signifies that something is at stake (Insel & Roth, 2002; Skinner & Zimmer-Gembeck, 2007). It upsets the normal physiological and psychological functioning of an individual (Lovallo, 2005; Sadock & Sadock, 2008). Adolescents daily come across with mild stressful situations though many of them are universal in nature and had also been found in diverse cross-cultural samples yet some are context specific (Gelhaar et al., 2007). Shaikh, Kahloon, Kazmi, Khalid, Nawaz, Khan and Khan (2004) explored the stress and coping strategies used by Pakistani medical students and found that more than 90% of the students experience stress and females reported more symptoms than their counterparts and senior students were more stressed than junior students (Shah, Hassan, Malik & Sreeramareddy, 2010; Yasmin, Asim, Ali, Quds, & Zafar, 2013). Though the findings provide a wealth of information still these studies are not free from limitations such as use of self-report measures, length and language of questionnaires, small sample size, and cross-sectional nature of data limit the generalizability.

Procrastination has been found a positive correlate of stress (Wyk Van, 2004), moreover Chu and Choi (2005) observed a significant negative correlation between active procrastination and stress, and a significant positive relationship was found between passive procrastination and stress. Their findings revealed that due to multi-tasking approach of active procrastinators they do not feel stressed whereas passive

procrastinators due to their inability to manage things timely remain under stress and pressure while deadline approaches. Previous research literature lends support to formulate the assumption for present study that active procrastinators experience lesser level of stress than active procrastinators and nonprocrastinators.

Depression and anxiety are very common mental health issues, occurring in every society. Along with other aspects of mental health, it plays a very important role in the development of stress related with modern life. Satisfaction with one's life is strongly related to better physical and mental health (Beutell, 2006). Koivumaa et al. (2004) examined life satisfaction and depression in nine thousands six hundred and twenty nine healthy adults. Findings revealed strong linear relationship between life satisfaction and depression in healthy adults. Perera (2007) viewed that life satisfaction is not a matter of money and material things rather it comes from what you have and what you do. It is the result of a person's nature of evaluation of his or her self.

**Life satisfaction.** Considering life satisfaction from psychological perspective highlights it as a feeling of subjective well being, and sometimes also referred as quality of life, sense of happiness and satisfaction reflecting a global assessment of all aspects of individual's life (Goodwart & Zatura, 1990). Ferrans and Powers (1992) viewed life satisfaction as the most important indicator of the quality of life. Heller, Watson, and Ilies' (2006) study of temporal process of life satisfaction in a natural context divulged that approximately 18% of the variance in life satisfaction lays within-individual level that had been completely ignored in previous research.

Among contextual and personality factors, job or daily activities, social contacts, family, health, income, marital status, self-efficacy beliefs, self-assertiveness, self-esteem and adolescent health status were found as determinants of life satisfaction (Bradley & Corwyn, 2004; Diener & Diener, 1995; Kapteyn, Smith, & Soest, 2009; McCullough & Huebner, 2003; Zahid, 2002). Life satisfaction seems to be more meaningful during adolescence due to advancement in cognitive abilities that enable adolescents to more accurately appraise and forecast their fulfillment of basic needs (Cummins & Nistico, 2002).

Mehmood and Shaukat (2014) while studying the life satisfaction and psychological well-being of female university students in Pakistan found self-esteem and depression as predictors of life satisfaction. Though the study offer an indigenous perspective but the nature and small sample size restricts the generalizability of findings to other population. Hassan, Malik, and Khan (2013) explored the relationship between life satisfaction and motivation of secondary students and noted that teacher's performance, facilities, discipline, and infrastructure were the critical factors in students' motivation and satisfaction. Among Big five factors, extraversion and neuroticism and their facets of positive emotions/cheerfulness and depression were the strongest and most consistent predictors of life satisfaction (Schimmack, Oishi, Furr, & Funder, 2004). An important limitation of the cited studies is use of SWLS for the assessment of life satisfaction, in case of using some other measure of life satisfaction different results could have emerged. However, there are plausible reasons to support that the findings of these studies generalize to other measures of life satisfaction such as, high correlation of different life satisfaction measures with each other (Andrews &

Withey, 1976) and high face validity. Findings of Chu and Choi (2005) noted a significant difference in life satisfaction of active, passive, and nonprocrastinator this may be due to ability of active procrastinators' to achieve positive outcomes. These findings support the formulation of hypothesis regarding the difference of active, passive, and nonprocrastinators in their level of life satisfaction.

**Performance.** Research in this specific area has not only explored the relationship of procrastination to performance but also the underlying causes. People who leave tasks closer to the deadline simply have less time for preparation, and this may badly affect their work. Research on this point has yielded mixed results, some of the studies have found no relation (Babadogan, 2010; Ferrari, 1992; Howell & Watson, 2007; Pychyl, Morin, & Salmon, 2001), whereas others found a very weak relationship (Rothblum et al., 1986; van Eerde, 2003a), but most of the studies indicate a moderate to strong correlation between procrastination and performance (Beswick et al., 1988; Steel et al., 2001; Tice & Baumeister, 1997; Wesley, 1994). Previous studies indicated inverse relationship between procrastination and performance (Beswick et al., 1988; Michinov et al., 2011; Moon & Illingworth, 2005; Romano et al., 2005; Rotenstein, Davis, & Tatum, 2010). Like other studies above cited studies are also not free from some weaknesses such as, nature of sample and its size, choice of measure used for assessment of procrastination which actually measures task-avoidance rather than postponement, and cultural context .

Chu and Choi (2005) observed that level of depression and stress was less among nonprocrastinators and active procrastinators as compared to passive procrastinators, whereas high level of life satisfaction and better grades were found

among nonprocrastinators and active procrastinators. Greater discrepancies have been observed between procrastinators' intentions and action than nonprocrastinators (Beswick & Mann, 1994; Blunt & Pychyl, 1998; Lay & Schouwenburg, 1993). Procrastination does not result only from intended laziness but from failing to act upon one's intentions to work. Wolters (2003), and McGregor and Elliot (as cited in Howell & Watson, 2007) found positive associations between procrastination and performance-avoidance goal orientations. Students who frequently procrastinate are bleak in their performance in contrast to self-regulated learners.

Ferrari & Pychyl (2008) reported that students procrastinate more when they cannot set a pace of their learning to come up to high performance expectations within a due course of time. Hussain and Sultan (2010) observed procrastination among Pakistani adolescent students and found that procrastination also affect the academic performance of students such as classroom learning and participation, assignments submission, preparation for examinations and academic achievement. Viewing multifaceted nature of procrastination and following cognitive and behavioral perspective, present study focused on variables of time management, self-efficacy, coping strategies, and personality traits as correlate variables. Moreover depression, anxiety, stress, life satisfaction, and academic performance were explored as outcome variables. The rationale behind selection of these variables was the complexity of the construct as it involves cognitive, affective, and behavioral components. Variables like self-efficacy explain the role of cognitions in procrastination, while time management, coping strategies, and academic performance highlight the behavioral component of procrastination. In addition variables of depression, anxiety, stress, and life satisfaction entails affective component of procrastination. Role of personality

traits in procrastination tendencies was also explored to see the extent to which trait approach explains the phenomenon of procrastination.

Whether procrastination is a universal phenomenon or a concern only for contemporary societies is a query for researchers. Previously it was considered only the problem of industrialized societies (e.g., Milgram, as cited in Steel, 2007; Ferrari et al., 1995) and was thought that developing societies are not much afflicted by this menace but recently few studies carried out in East Asian setting present a different scenario and food for thought for probing into universal nature of the construct. As today is an era of globalization which is a process of international integration due to interchange of world views, trends and different aspects of culture. Advances in telecommunications, infrastructure, including the rise of internet are the major factors in globalization. So it is worth exploring whether procrastination affects the performance in the same way as it does in western settings.

### **Procrastination: A Global Perspective**

The phenomenon of procrastination has not been studied globally. With reference to cross-cultural framework, and only few researches have explored procrastination in East Asian contexts (e.g., Klassen et al., 2009; Zhang & Zhang, 2007). Klassen, Karawchuk, and Rajani (2008) in a study pertaining to Western cultural context found that self-efficacy for self-regulation enhance the knowledge about self-regulation strategies which is important in task initiation and completion. Dietz, Hofer, and Fries, (2007) indicated that procrastination is influenced by culturally oriented values. In 2007, Ferrari, Diaz-Morales, O'Callaghan, Diaz, and



Argumedo explored adult procrastination across six different countries (i.e., Australia, Peru, Spain, United Kingdom, United States, and Venezuela), and found cross-cultural similarities in each of the settings regarding arousal and avoidant procrastination patterns.

Klassen et al. (2010) also substantiated previous research and showed that the correlates of procrastination were similar across two contrasting cultural contexts (i.e., Eastern and Western). The differences were observed in impact of procrastination and in substitute activities performed while procrastinating. Klassen et al. (2009) elucidated that procrastination operates in a same manner among adolescents from both Western and East Asian settings. They may procrastinate at same level, and endure the negative consequences of task avoidance or postponement, but the main factor in timely task completion is their belief to manage the learning environment (Klassen et al., 2010). Bandura (1997) stressed that belief in one's ability, self-worth, and academic anxiety may be related to procrastination and promotes accomplishments in all cultures.

Chu and Choi's (2005) evidence for an adaptive type of procrastination characterized by those who intentionally postpone their activities and keep their focus on other important tasks at hand, opens the new vistas of research on procrastination. Researchers are still focusing on an adaptive type of procrastination while interpreting their findings (e.g., Alexander & Onwuegbuzie, 2007; Howell & Watson, 2007) and due to promising developmental stage of the construct empirical research using active procrastination as a measured variable is still lacking. Future research may aggrandize our knowledge by exploring the cognitive, affective, and behavioral correlates of this form of procrastination in relation to goal orientation and learning strategies usage

(Howell & Watson, 2007). So a need exists to explore this new type of procrastination among Pakistani adolescents and to establish its construct validity.

### **Rationale of the Present Study**

Present study was carried out to explore the phenomenon of procrastination in depth with reference to Pakistani context so it may prove beneficial for passive procrastinators in managing their procrastination tendencies and foster positive trait of multitasking, like active procrastination in their daily routines. Though procrastination has been studied extensively but mostly in western settings and a few studies viewed procrastination from universal perspective specifically East Asian settings (Zhang & Zhang, 2007).

Previous studies indicate that students from collectivist cultures may perceive the cost of procrastination greater than those from individualistic cultures because of family expectations and closely knitted social groups (Klassen et al., 2007). Cultural background and values not only influence procrastination but also effect persistence, effort, and the value of academic performance (Chong, 2007; Dietz Hofer, & Fries, 2007; Boekaerts, 2003). Procrastination is no more a problem of only industrialized societies as today's world is marked with number of deadlines and challenges. Regardless of whether one is the member of industrialized society or nonindustrialized, everyone runs short of time and is under pressure for timely pursuits of actions. The reasons and interpretation of procrastinatory behavior might be different across Western and Asian cultures but the ultimate behavior and the outcomes associated with it are the same.

So a need exists to explore the pattern of procrastination indigenously. With reference to Pakistani context few researches have been conducted but the main focus of those studies was on the passive (negative) view of procrastination (e.g., Fatemah, 2001; Hussain & Sultan, 2010; Nazish, 2001). None of the study in local context has explored the positive view of procrastination which was initially forwarded by Chu and Choi (2005) and is contrary to traditional view of procrastination, has positive implications in terms of time use, self-efficacy, coping, depression, anxiety, stress, life satisfaction, and academic and routine performance. They posit two different types of procrastinators, active and passive procrastinators.

Keeping in view the uniqueness and significance of the construct and findings of previously carried out studies, need is there to explore the phenomenon of procrastination in both aspects, positive and negative (i.e., active and passive procrastination). Procrastination being a complex and multifaceted phenomenon is explained by different perspectives in their own context. Keeping in present study intends to adopt an eclectic approach based on cognitive, behavioral and trait perspective to study the procrastination indigenously. Study also intends to investigate whether underlying causes, correlates (e.g., self-efficacy, coping strategies, personality traits, time-management), and outcomes (e.g., depression, anxiety, stress, life satisfaction, and academic performance) are same and have similar repercussions in local context in terms of health, wellbeing, and performance.

Since adolescence is marked by a greater affinity for peers and an increase in novelty seeking and risk taking (Rey & Birmaher, 2009), so they tend to have more interest in global media—music, movies, television, and internet (Schlegel, 2001). Due to progression in technology, the impact of globalization, and rapidly growing

interest of Pakistani population in use of internet within all age groups, it is essential to introduce new mode of data collection (i.e., online data collection) besides traditional in-person data collection and to approach the sample without distance barriers. Unlike children, adolescents are mature and have freedom to pursue information and experience novelties, yet not committed to a definite way of life due to which they try to avoid difficult and unpleasant tasks requiring effort for which they feel unprepared, and put them at high stake. This not only leads to wastage of time, energy, and resources but also damaging to their health (Sirois, 2007). So keeping in view the vulnerabilities of adolescents/teenagers, present study intends to focus on identifying the underlying reasons and outcomes of procrastination among Pakistani adolescents. Through identifying the underlying reasons behind different types of procrastination, researchers and counselors can help the adolescents to encounter the challenging tasks.

As maximum number of the respondents attribute procrastination to indecisiveness, low self-esteem, lack of time management, dependency, task-aversiveness, perfectionism, and laziness (Yong, 2010) therefore it seems imperative to work on a counseling for adolescents who tend to passively procrastinate which will help them to figure out causes and remedies of their procrastinatory behavior. So present research will not only be useful in identifying the positive type of procrastinators (i.e., active procrastinators) who carry a positive trait which Chase (2003) considers a desirable time management skill, but would also prove ultimately beneficial in counseling for overcoming procrastination by taking into consideration all the indigenously explored reasons behind procrastinatory behavior.

## **METHOD**

**Chapter II****METHOD**

This chapter deals with objectives of the study, hypotheses, operational definitions of study variables, research design, measures, procedure adopted for the present research and analyses carried out to draw the findings. The details of each section are given below.

**Objectives of the Study**

The study was carried out to meet the following objectives:

1. To explore the relationship of active and passive procrastination with other study variables and to determine the construct validity of the New Active Procrastination Scale.
2. To explore the effect of procrastination category and differences among various types of procrastinators in terms of their time management, self-efficacy, coping strategies, personality traits, depression, anxiety, stress, life satisfaction, academic achievement and the extent to which they consider procrastination a problem for them.
3. To see the positive and negative effects of active and passive procrastination on Pakistani adolescents.
4. To identify the predictors of active and passive procrastination.

5. To see the role of active and passive procrastination in predicting various outcomes such as depression, anxiety, stress, life satisfaction, and academic achievement.
6. To see the gender-wise differences on all the study variables (i.e., time management, coping strategies, self-efficacy, depression, anxiety, stress, life satisfaction and personality traits).
7. To explore the differences in active and passive procrastination with reference to age, academic level, parents' education level, and academic achievement (grades) of adolescents.
8. To explore the grade level-wise differences in adolescents' time management behavior, life satisfaction, and depression, anxiety, and stress.

### **Hypotheses**

To meet the objectives of the research following hypotheses covering six major variables (i.e., time management, self-efficacy, coping strategies, personality traits, depression, anxiety, stress, and life satisfaction) were formulated to test them in local context. As per previous research findings discussed in literature review most of the studies are conducted in western settings and no such study carried out in Pakistan that has explored the positive and negative view of procrastination so all directional hypotheses are stated on the basis of previous findings in Western context.

**Time management.**

1. Passive procrastinators will score high on setting goals and priorities than nonprocrastinators as well as active procrastinators.
2. Both nonprocrastinators and active procrastinators will report high level of time management than passive procrastinators.
3. Passive procrastinators will score high on variable of organization than nonprocrastinators as well as active procrastinators.
4. Both nonprocrastinators and active procrastinators will report greater perception of time control than passive procrastinators.

**Coping strategies.**

5. Both nonprocrastinators and active procrastinators will report high level of problem-focused coping whereas passive procrastinators will report greater level of emotion-focused coping and dysfunctional coping.

**Self-efficacy.**

6. Both nonprocrastinators and active procrastinators will report greater level of self-efficacy than passive procrastinators.

**Depression, anxiety and stress.**

7. Both nonprocrastinators and active procrastinators will report low level of depression, anxiety and stress as compared to passive procrastinators.



**Life satisfaction.**

8. Both nonprocrastinators and active procrastinators will report a greater level of life satisfaction than passive procrastinators.

**Personality traits.**

9. Both active procrastinators and nonprocrastinators will report high level of emotional stability, extraversion and openness to experience as compared to passive procrastinators.
10. Both nonprocrastinators and passive procrastinators will report greater level of conscientiousness than active procrastinators.
11. Passive procrastinators will report high level of agreeableness than nonprocrastinators as well as active procrastinators.

Present study also add some new and exploratory findings about different types of procrastinators with reference to age, gender, academic level, and their perception of procrastination as a problem. Hypotheses for these person-social variables were not formulated due to their exploratory nature.

**Conceptual and Operational Definitions of the Variables**

**Active procrastination.** Active procrastination is a multidimensional construct that has observable behavioral features marked with individual's affective preference for time pressure, intentional decision to procrastinate, ability to meet the targets, and achieve positive outcomes (Choi & Moran, 2009).

**Passive procrastination.** Passive procrastination is traditional negative view of procrastination marked by postponement of tasks until the last minute because of an inability to make decision and act in a timely manner (Choi & Moran, 2009). Passive procrastinators are less structured in their time use and may drift in a meaningless way from one activity to another (Bond & Feather, 1988).

**Nonprocrastinators, Active procrastinators, and Passive procrastinators.**

In present study three groups were formed on the basis of New Active Procrastination Scale (NAPS) and Passive Procrastination Scale (PPS) median scores to see the differences in their procrastinatory behavior and related outcomes. This procedure was followed on the basis of Chu and Choi's (2005) study and their personal guidance regarding the scoring of scale. Nonprocrastinators were those who were low on both the scales, meaning below the median (i.e., NAPS & PPS), passive procrastinators were those who were high on PPS and low on NAPS, whereas active procrastinators were those who scored low on PPS and high on NAPS.

**Time management.** The concept of time management is generally defined in terms of clusters of behavior that are deemed to facilitate productivity and alleviate stress (Lay & Schouwenburg, 1993). For present study Time management skill was measured through Time Management Behavior Scale (Macan, Shahani, Dipboye, & Phillips, 1990).

**Self-efficacy.** Self-efficacy refers to beliefs that play an influential role in mediating the impact of environmental conditions. People's beliefs influence their

choices, aspirations, how much effort they mobilize in a given endeavor, how long they persevere in case of difficulties and setbacks, their given thought patterns whether self-hindering or self-aiding, the amount of stress they experience in coping with taxing environmental demands, and their vulnerability to depression (Bandura, 2000). In present research General Self-Efficacy Scale was used to judge self-efficacy of respondents (Schwarzer & Jerusalem, 1995).

**Coping strategies.** Lazarus and Folkman (as cited in Blonna, 2007) defined coping as the constantly shifting cognitive and behavioral efforts to manage potential stressors that are appraised as threatening. The three most commonly employed coping strategies are problem-focused coping strategies, emotion-focused coping strategies, and dysfunctional coping strategies (Cooper, Katona, Livingston, 2008). In present research Urdu version of Brief Cope (Carver, 1997) was used to assess the coping strategies employed by respondents. The factor structure of Cooper, Owens, Katona, and Livingston (2008) for Brief Cope was used for scoring purpose.

**Personality traits.** Hittner (1999) defined personality traits as the characteristic or dimensions of personality on which people vary along a continuum that ranges from desirable to undesirable. For present study Mini Marker Set (Saucier, 1994) which is an abbreviated version of 100-adjective markers (Goldberg, 1992) was used to measure the personality traits of individuals.

**Extraversion.** Extraversion is marked with the quantity of interpersonal attraction, activity level, and capacity for joy. Person high on extraversion would have

more positive emotions and the tendency to seek out stimulation and companying others than low on extraversion.

***Agreeableness.*** Agreeableness is marked with the quality of interpersonal orientation along a continuum from compassion to antagonism in thoughts, feelings, and actions. A person high on agreeableness would be altruistic, sympathetic, and cooperative than the one low on agreeableness.

***Conscientiousness.*** Conscientiousness is characterized by a tendency to show self-discipline, act dutifully, and aim for achievement. An individual high on conscientiousness shows a preference for planned rather than spontaneous behavior and regulates his/her impulses.

***Emotional stability.*** Emotional stability refers to the tendency to remain calm, composed, emotionally stable, and free from persistent negative feelings and emotions, such as anger, anxiety, or depression. Individual low on emotional stability is more reactive and vulnerable to stress than the one high on emotional stability.

***Intellect/openness.*** Openness is marked by creativity, originality, general appreciation for art, emotion, adventure, unusual ideas, imagination, curiosity, and variety of experience. Person high on intellect/openness is intellectually curious, creative, appreciative of art, and sensitive to beauty than person low on openness.

**Depression.** Depression is feeling of dysphoria, hopelessness, devaluation of life, self-deprecation and lack of interest/involvement, and inertia. For present study depression will be measured through Depression, Anxiety, and Stress Scale (DASS; Lovibond & Lovibond, 1995).

**Anxiety.** Anxiety is an autonomic arousal, skeletal muscle effects, situational anxiety and subjective experience of anxious effects. In present study it was assessed through scores on Anxiety scale of DASS (Lovibond & Lovibond, 1995).

**Stress.** Stress is a form of chronic nonspecific arousal which creates difficulty in relaxing. It is marked by nervous arousal and easily upset/agitated, irritable/over-reactive and being impatient. In present study it was measured through scores on Stress scale of DASS (Lovibond & Lovibond, 1995).

**Life satisfaction.** Diener and Diener (1995) has defined life satisfaction as global satisfaction with individual lives and satisfaction with specific life domains such as work, recreation, friendship, marriage, health and the self. In current study scores on Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin., 1985) were indicative of high and low level of life satisfaction.

## **Research Design**

The research was carried out in three parts with each part employing an independent sample and focusing on specific objectives.

## **Part I: Try Out, Translation and Cross Language Validation, and Psychometric Properties of NAPS and PPS**

Part I was carried out to have more conceptual understanding regarding content of the scales and was completed in three phases. Phase I was tryout, phase II was about translation and cross language validation of NAPS and PPS. Phase II was carried out in three steps; forward translation, backward translation, and cross language validation. Phase III focused on determining the psychometric properties of the scales and for this purpose Cronbach's alpha coefficient, item-total correlation and convergent and discriminant validity were established. Each phase and each step of part I employed independent sample. Sample in all the phases was selected through convenience sampling (for details see Chapter III).

## **Part II: Pilot Study**

A pilot study was aimed at pretesting of the complete set of scales on a relatively small but independent sample of adolescents ( $N = 70$ : 50% girls, 50% boys:  $M_{age} = 15.57$  years,  $SD = 1.17$ : age range = 13-19 years) selected through convenience sampling. The main objective behind pilot testing of the scale was to identify any ambiguity in comprehension of the content of all the scales likely to be used in main study and to avoid any possible hazards that may come to surface in main study. Psychometric properties of all the measures and relationship among all the study variables were also explored in pilot study (for details see Chapter IV).

Although all parts of the study have their due significance but part III is the main study as it's the clinically most relevant part of research and highlights the major findings of study.

### **Part III: Main Study**

This part of the research was carried out in two phases and aimed for online and in-person data collection. The reason for collecting data via mixed-mode method was to enhance the validity of findings and determining reliability via two different modes. In phase I, to collect online data, a website [www.procrastination-research.edu.pk](http://www.procrastination-research.edu.pk) was developed with the help of a qualified web developer (see Appendix-O). The sample in this phase was not actively recruited as participants who were intrinsically motivated to participate in the study were included ( $N = 201$ : 40% girls, 60% boys:  $M_{age} = 18.5$  years,  $SD = 1.17$ : age range = 13-19 years). The website consisted of procrastination scales and outcome measures such as, Depression, Anxiety, and Stress Scale, and Satisfaction With Life Scale (Chapter V).

In phase II, a sample of 500 adolescents (47.4% girls, 52.6% boys:  $M_{age} = 15.77$  years,  $SD = 1.87$ : age range = 13-21 years) was selected through convenience sampling to participate in the study. Besides exploring the relationship among variables, hypotheses' testing was done in this part of the research. In addition one way MANOVA followed by univariate ANOVA was also run in this part as it focused on exploring the effect of procrastination type on time-management skills, self-efficacy, coping strategies, depression, anxiety, stress, life satisfaction and personality traits, of nonprocrastinators, active procrastinators and passive procrastinators and

their perception about procrastination being problematic for them. Some more complex statistical analyses such as confirmatory factor analysis using Analysis of Moment Structures Version 18 (AMOS; Abruckle, 2007) and regression analysis with Statistical Package for Social Sciences (SPSS; Meulman & Heiser, 2004) were also conducted.

More over role of some demographic aspects which included, personal, educational, and social variables (such as gender, age, education level of respondents, and parents' education level) in procrastination tendencies of adolescents was also explored in this phase. Gender-wise differences on all the study variables and differences regarding active and passive procrastination with reference to age, academic level, parents' education level, and academic achievement of adolescents were also explored. Grade-wise differences in adolescents' time management behavior, life satisfaction, and depression, anxiety, and stress were also focus of this part of the study (see Chapter V for details).

## **Procedure**

In order to explore the phenomenon of procrastination among Pakistani adolescents, researcher personally contacted the heads of different government educational institutions for purpose of data collection, and after seeking their permission to administer the measures, approached the adolescents studying in different classes with an age range of 13-21 years. Permission was sought only from heads of institutions. Participants and heads of their institutions were thoroughly briefed about nature and purpose of study. Parental permission was not sought in any



phase of the research, as the information gathered via different measures was not so personal or confidential. Similarly they were given the choice to share their names if they want to, anyone having reservations was allowed to keep it confidential. Sample in part I, part II, and phase II of part III was selected through convenience sampling. No monetary incentive was offered to the participants, it was just a personal request for cooperation and participation in the study. Sample in phase I of part III (i.e., online data collection) was not actively recruited as it was based on intrinsic motivation of the participants which Coon and Mitterer (2010) defined that when we act without any obvious external rewards and perceive that activity as an opportunity to explore, learn, and actualize our potentials. Participants were given set of measures along demographic information sheet (see Appendix-S) and were briefed about purpose of the study (see Appendix-Q & R). Participants were told that survey is about study and work styles of people and their personality characteristics. Otherwise there is no hidden purpose of this study. Researcher is only interested to know your opinion regarding your own study and work style, and how it is influenced by different personality traits. They were also instructed regarding how to respond on questionnaires. After data collection their participation in the study was acknowledged. Administrative staff of the institutions was also appreciated for their cooperation and support in facilitating the researcher in collection of data.

## **Measures**

The measures selected to assess the active and passive procrastination and related outcomes among Pakistani adolescents, included New Active Procrastination

Scale (Choi & Moran, 2009, see Appendix-B & C for English and Urdu versions), Passive Procrastination Scale (Chu & Choi, 2005, see Appendix-D & E for English and Urdu versions), Time Management Behavior Scale (Macan, et al., 1990, for validity of see Shahani, Weiner & Streit, 1992, see Appendix-G for Urdu version), General Self-Efficacy Scale (Schwarzer & Mathias, 1993, see Luszczynska, Gutierrez-Dona, Schwarzer, 2005 for validity of the scale and see Appendix-H for Urdu version), Brief Cope (Carver, 1997, for validity of the scale see Cooper, Katona, and Livingston, 2008 and see Appendix-I for Urdu version), Mini Marker Set (Saucier, 1994, see Dwight, Cummings & Glenar, 2010 for validity of the scale and Appendix-J for Urdu version), Depression, Anxiety, Stress Scale (Lovibond & Lovibond, 1995, for validity of DASS see Crawford & Henry, 2010; Ng, Trauer, Dodd, Callaly, & Campbell, 2007, and see Appendix-K & L for English and Urdu versions), Satisfaction With Life Scale (Diener et al., 1995, for validity of the scale see Pavot & Diener, 2008, and Appendix-M & N for English and Urdu versions).

Except measures of procrastination, Urdu versions of all other measures were used after getting permission from Testing Resource Centre of National Institute of Psychology, QAU, Islamabad, Pakistan (Appendix-U). Among above mentioned measures, excluding measures of procrastination, all the instruments were already available in translated form (i.e., Urdu) and had been extensively used in indigenous context. The reliability and validity of these measures was also established in previously carried out studies in local context. The details regarding reliability and validity of the above mentioned measures are given in the respective parts of the study. For procrastination measures Part I and Part II were carried out to establish their construct and cross language validity (details of measures used in each part are

given in respective part of the study). Respondents were also asked to report the extent to which they consider procrastination as a problematic for them on a three point rating scale ranging from 1 (*not at all problematic*) to 3 (*very much problematic*).

### **Analysis**

For purpose of analysis two statistical programs, Statistical Package for Social Sciences (SPSS; Meulman & Heiser, 2004), SPSS Analysis of Moment Structures (AMOS; Abruckle, 2007) and G.Power 3.1.2 (Faul, Erdfelder, Buchner, & Lang, 2009) was used to draw the results. Besides some preliminary analyses some other analyses like CFA, one way MANOVA, multiple logistic regression analysis, and multiple linear regression analysis were also carried out.

**TRANSLATION, CROSS LANGUAGE  
VALIDATION AND PSYCHOMETRIC  
PROPERTIES OF NAPS AND PPS**

**Chapter III****PART I: TRANSLATION, CROSS LANGUAGE VALIDATION AND  
PSYCHOMETRIC PROPERTIES OF NAPS AND PPS**

Present research was carried out in three parts and Part I of the research was aimed to see the applicability of New Active Procrastination Scale (Choi & Moran, 2009) and Passive Procrastination Scale (Chu & Choi, 2005) in Pakistani context. Part I was completed in three Phases; try out; translation and cross language validation; and determining psychometric properties of the scales. Each phase was carried out with an independent sample. In order to meet the objective of this part, a try out was done to identify any difficulties in understanding the language and meaning of the items of scales and to decide whether to use the scales in original form or to opt for translation. To achieve the maximum level of conceptual and construct equivalence, not only decentring process was used but also procedures of Grooves (2007) were followed. Further translation, cross language validation and psychometric properties of the scales were also determined to enhance the potential validity of the instruments.

**Description of the Scales**

**New Active Procrastination Scale (NAPS).** New Active Procrastination Scale was developed by Choi and Moran (2009) on the basis of 12 item scale developed by Chu and Choi (2005) considering the cognitive, affective, and behavioral components that are the underlying dimensions of active procrastination

construct. The new version comprised of 40 items related to four dimensions (i.e., intentional decision to procrastinate, preference for time pressure, ability to meet deadlines, and outcome satisfaction). Every dimension was assessed by 10 items. After pilot-testing of the questionnaire they subsequently made slight modifications in 40-item scale into 16 items (see Appendix-B).

Exploratory Factor Analysis (EFA) was done on New Active procrastination Scale due to the multidimensional nature of the construct that resulted in four dimensions of the scale which was further substantiated by confirmatory factor analysis (CFA). It is a 7-point Likert-type scale with a response format ranging from 1 (*not at all true*) to 7 (*very true*). The score ranges from 16 to 112. There are four items which are positively phrased and are positively scored whereas twelve items are negatively worded and require reverse scoring. The alpha reliability level (Cronbach's  $\alpha$ ) of NAPS for four dimensions of the scale lies between .70 and .83, providing evidence for satisfactory of internal consistency of the scale (Choi & Moran, 2009).

**Passive Procrastination Scale (PPS).** To assess the degree of traditional/passive procrastination Chu and Choi (2005) adopted six items from two already existing measures of procrastination which were Mann's (1982) Decisional Procrastination Scale (as cited in Ferrari et al., 1995; Schouwenburg, 1995) and "Academic Procrastination: Theoretical Notions, Measurement, and Research," (as cited in Ferrari, Johnson, and McCown (1995). The alpha reliability of the scale was found to be .82 (Chu & Choi, 2005). The scale is in the form of 7-point likert-type format with a response format ranging from 1 (*not at all true*) to 7 (*very true*) (see Appendix-D).

**Phase I: Tryout ( $N = 20$ )**

Before going for translation and adaptation process, a try out was done. The underlying purpose behind this phase was to check the face validity, content comprehension, and to obtain feedback of the respondents regarding the scale.

**Sample.** Sample of this phase was selected through convenience sampling and comprised of twenty adolescents ( $M_{\text{age}} = 15.5$  years old: age range = 14-18 years).

**Procedure.** Respondents were individually approached and were requested to participate in this phase. Their participation was entirely voluntary. They were told about the objective of this phase. New Active Procrastination Scale (NAPS) and Passive Procrastination Scale (PPS) were given to them individually by the researcher. They were asked to mention those words or statements in the scale which they do not understand accurately or find some ambiguity in their comprehension.

**Results.** It was observed from their comments that overall there were five statements from both the scales that were either not fully comprehended or some part of them was found as ambiguous. On query, respondents explained that due to language barrier they were unable to understand the statement accurately. On the basis of comments it was decided instead of discarding/deleting those statements, to translate the whole scales and then to check their reliability and cross language validity, so the sound comprehension of these measures may be ensured. To meet this objective phase II was carried out.

## **Phase II: Translation, Adaptation and Cross Language Validation of NAPS and PPS**

This phase was designed to achieve the Urdu versions of NAPS and PPS to facilitate the respondents in comprehension regarding content of the scales and to provide an instrument which may be conceptually equivalent in the targeted language/culture. In addition it may assist respondents to perform equally well on the basis of their command on the language irrespective of the language of the scales. The process of decentring was used which is marked by drafting a questionnaire in the source language to produce final questionnaire in both source and target language via paraphrase and translation. In this technique each item is translated into target language with the objective to produce as many paraphrases as possible, then the set of paraphrases for each item/sentence are compared and the one that seems to be closest across the two languages are selected (Werner & Campbell, 1970). This phase was completed in three steps and in each step independent sample was employed. To meet the above mentioned objective following steps were adopted:

Step I: Forward Translation (Translation of NAPS and PPS into Urdu language,  $N = 15$ )

Step II: Back Translation (Translating Urdu version of NAPS and PPS back into English,  $N = 13$ )

Step III: Cross language validation of NAPS and PPS ( $N = 40$ )



**Step I: Forward translation.** With the intention of meeting above mentioned objectives it was assured that the translators must be proficient in both languages, have familiarity with both cultures, and have expertise in subject matter being tested. As an ultimate criterion their mother tongue should be the primary language of the target culture (i.e., Urdu).

**Bilingual Experts.** Overall fifteen bilingual experts were chosen on the basis of the criterion of having clarity, understanding, and proficiency of the source and target language to produce the best level of translation which respondents can easily understand. These bilinguals belonged to different academic disciplines. Out of fifteen experts five were doing Ph.D in Psychology, five were M.Phil Urdu students from International Islamic University, three of them had done their Masters in English from National University of Modern Languages and two were those who had done their Masters both in Urdu and English.

**Procedure.** Bilinguals were individually approached for translation by the researcher and were briefed about the nature and purpose of the research. They were also explained the peripheral issues of translation as guided by Groves (2007) such as: they were asked to provide the conceptual equivalence of the word, not the literal verbatim translation, and to keep the translation as simple, clear, and concise as possible. The translation should aim for common audience, avoiding the use of jargons, technical terms, colloquialism, idiomatic phrases, and gender and applicability issues. After being through the first step and having independent translations of NAPS and PPS from fifteen bilinguals. Those translations were analyzed in terms of content by the researcher, overlapping translations were

discarded and only those were retained which were most relevant to the content and conveyed the meaning closest to the original one.

***Committee Approach.*** A team consisting of five members was called for committee approach. Among committee members three researchers belonged to a renowned research organization and had at least five years of working experience in area of research. The other two members of the committee were Ph.D psychology students, one was present researcher and the other one was a full time researcher. All the committee members were competent in understanding the source as well as target language. They were requested to analyze and scrutinize the translated items and to identify the inadequate expressions/words. After analyzing all the translations provided by the respondents for each statement in the scales, committee members reconciled the discrepancies in translations and selected the best translation for inclusion in Urdu version of the scales. The best translation was closest in terms of equivalence across the two languages with reference to the context, grammar, and wording.

**Step II: Back Translation.** The process of back translation pertains to translating the document that has already been translated, back into original language. Back translation helps the researcher to evaluate the equivalence of translations in different languages, identify the inconsistencies, loss of word, and change in meaning and compare the target text to the source text (McGorry, 2000). Back translation also rectifies the reliability and validity of the research in different languages by verifying the quality of translation through an independent translator. Back translation is not very common due to its high cost, but in high risk situation it is considered well worth

investment (Brislin, 1976). Keeping in view the added worth of back translation, same methodological approach was adopted for back translation as was done in forward translation. Considering the guidelines provided for translation in this step, the primary focus was on conceptual and cultural equivalence of the content instead of equivalence of language.

***Bilingual Experts.*** Overall thirteen bilinguals who were proficient in both languages and were unfamiliar with the original version of the scales were approached individually. Out of thirteen bilinguals seven had done their masters in different subjects, two had done their masters in English, whereas four were Ph.D scholars in psychology. They were handed over the Urdu translation of the scales and were asked to translate the scale into English language with a request to provide as much accurate translation as possible.

***Procedure.*** Keeping in view the guidelines, bilinguals who were not familiar with the source language of the scale provided the best possible translations. After getting the independent translations from bilinguals a committee approach was carried out.

***Experts Evaluation.*** A committee comprising of three members was convened. The members of the committee had M.Phil/Ph.D degree and had an expertise in area of research, and scale development and translation. Committee scrutinized the translations and compared it with the original versions to get as much accurate translation as possible. The maximally closest translation that conveyed the

meaning in a real sense was selected. The retained back translation was checked by the author (Jin Nam Choi, College of Business Administration, and Seoul National University, South Korea) of the scales and with his due permission scales were used in present research (see Appendix-C & E for Urdu versions of NAPS and PPS). To further examine the translated versions of NAPS and PPS Step III was carried out.

**Step III: Cross Language Validation of NAPS and PPS.** This part of the research was aimed to check Urdu version of NAPS and PPS. In order to strengthen the effectiveness, ensuring the equivalence and to see whether original and translated versions convey the same meaning in both languages, cross language validity was established in two subsequent phases of data collection.

*Sample.* To meet the objectives of step III, a target sample of 45 adolescents selected through convenience sampling was approached (50% boys and 50% girls:  $M_{\text{age}} = 15$  years old: age range = 13-16 years). Out of 45 respondents, researcher got response of 40 respondents. This may be due to details they were briefed as they were informed that they will be recontacted after some lapse of time and have to respond again on the said measures which may not be feasible for them. These adolescents had good command and sound comprehension of both languages (i.e., English and Urdu). These students were approached in their respective institutions (such as, F. G. Girls High School NHC, Islamabad; F.G. Boys High School Chak Shahzad, Islamabad) and following procedure was followed.

**Procedure.** The sample was divided into four equal groups. After division, two groups comprising of twenty adolescents with ten adolescents in each group were given original New Active Procrastination Scale and Passive Procrastination Scale. On the other hand remaining two groups of ten adolescents in each group were given the translated Urdu version of NAPS and PPS. They were informed about the purpose of the research in general and specifically about this part of the study. They were told that researcher is interested to know about your study and work styles. They were given the instructions regarding how to attempt the questionnaires. As respondents were not familiar with responding these types of questionnaires so they were made at ease and told that there are no right and wrong answers, they just have to select the appropriate response option which represents the best. Measures were given in counter balanced order to the respondents.

After twenty days lapse same respondents were contacted again and were requested to respond on the questionnaires again. Adolescents in the first group were given the original questionnaire again while those in second group were given the Urdu translated scale. Similarly those in the third group were given the same Urdu version of scales whereas adolescents of fourth group received the original questionnaire (i.e., English version). Respondents were given the same instructions regarding attempting the questionnaires. The underlying purpose of this activity was to mark the equivalence and discrepancies of both text languages (i.e., English and Urdu) in questionnaires.

**Results.** To establish the cross language validity, test-retest reliability of the New Active Procrastination Scale, and Passive Procrastination scales was analyzed by

computing the correlation-coefficients of the respondents' scores across two different administrations.

**Table 1**

*Retest-Reliabilities of English and Urdu Version of New Active Procrastination Scale*

(*N* = 40)

NAPS	<i>n</i>	<i>r</i>
NAPS-English-English	10	.75*
NAPS-English-Urdu	10	.86*
NAPS-Urdu-Urdu	10	.90*
NAPS-Urdu-English	10	.84*

*Note.* NAPS = New Active Procrastination Scale.

\**p* < .05.

Results shown in Table 1 indicate the test-retest reliabilities of NAPS across two administrations of four groups. It was found that there were positive correlations between two administrations of measure. The correlation between scores across Urdu-English versions ranged from .75 to .90. The highest correlation (.90) was observed between scores of translated version (i.e., Urdu) of the scale across two independent administrations which can be attributed to familiarity effect as well as an adequate understanding of the content in local language. The minimum correlation (.75) was found between two administrations of the original scale despite of having good command in English. This may be justified as even though respondents had good command in English but still they may find some ambiguity in comprehending the content of the scale. This may provide further evidence to the findings of try out phase, in which it was observed that in spite of simple wording of the scale, the deep

underlying meaning of the content was not uniformly perceived by the respondents which set the ground for translating the scale into local language (i.e., Urdu).

Findings of Table 2 indicate the correlation coefficients between scores on Passive Procrastination Scale observed during two administrations of language validation process. The correlation ranged from .62 to .86. The highest correlation was between two administrations of the translated scale (i.e., .86). Results not only show sound test-retest reliability but also provide empirical evidence for cross language validity of the scales and equivalence of the content in measuring the same construct through original and translated versions.

**Table 2**

*Retest-Reliabilities of English and Urdu Version of Passive Procrastination Scale*  
(*N* = 40)

PPS	<i>n</i>	<i>r</i>
PPS-English-English	10	.62*
PPS-English-Urdu	10	.79*
PPS-Urdu-Urdu	10	.86*
PPS-Urdu-English	10	.68*

*Note.* PPS = Passive Procrastination Scale.

\**p* < .05.

### **Phase III: Determining Psychometric Properties of NAPS and PPS**

Before using the Urdu version of the translated scales for pilot study, it was deemed essential to determine the psychometric properties of the scales. So the reliability and validity of the Urdu version of NAPS and PPS was determined. To ensure that the scale is a coherent and reliable measure of a construct it should have a

sound internal consistency (Chen et al., 2004). As reliability indicates the degree to which the scale scores are free from measurement error, it is considered as a basic requirement of a sound measure (Hinkin, 1998). For present research the minimum acceptable alpha level was decided as .50 as according to Kline (2000) alpha below this level is unacceptable for psychological researches.

Construct validity refers to the extent to which the test assesses a theoretical construct or trait and its relation with operationalization or measure (Cronbach & Meehl, 1955). So the purpose behind validating a scale is to see the extent to which operationalizations of a construct are consistent with the theoretical expectations (Chen et al., 2004). The process of construct validation entails the gradual accumulation of information from multiple sources and any data illuminating the nature of trait and its manifestations provides evidence for the validation (Anastasi & Urbina, 1997). It is always advisable to validate the translated scale before using in a new context with cultural variation to enhance its validity. This part of the research also deals with validating the translated scales of NAPS and PPS. To meet the objective of providing empirical evidence for validation of measures, internal consistency and process of convergent and discriminant validity was used. Time Management Behavior Scale (Macan et al., 1990; Akhtar, 2005-U), and Satisfaction with Life Scale (Diener et al., 1985; Zahid, 2002-U) were used for above mentioned purpose.

**Sample.** To determine the psychometric properties, scales were administered to a sample of 80 late adolescents who were approached through convenience sampling (52 girls and 28 boys:  $M_{age} = 20.23$  years:  $SD = 1.31$ : age range = 17-22



years). Response rate for this phase was 100 percent. Their education level ranged from first to fourth year of college.

**Instruments.** In order to determine the validity of NAPS and PPS, Time Management Behavior Scale (TMBS, Appendix-G), and Satisfaction With Life Scale (SWLS, Appendix-N)) were used.

***Time Management Behavior Scale.*** Time management behavior scale was originally developed by Macan et al. (1990) and was translated by Akhtar (2005). The scale assesses time management behavior of students. It is a 5-point scale comprising on 34 statements (1 = *never true* and 5 = *always true*). It has four subscales: setting goals and priorities, mechanics of time control, preference for organization, and perceived control of time. The possible score range of TMBS is 34 to 170. Alpha reliability of TMBS is .60 and for subscales it ranges from .60 to .83 (Macan et al., 1990). For present study Urdu version of TMBS was used to study the time management behavior of adolescents.

***Satisfaction With Life Scale.*** For validation of NAPS and PPS Satisfaction With Life Scale (Diener et al., 1985) was also used. SWLS is a measure of global life satisfaction. It is a short and reliable instrument. SWLS measures satisfaction in five domains such as, living situation, social relationships, work, self, and present life. The scale comprises on five statements and is in Likert type format with 5-point response options (1 = *strongly disagree* and 5 = *strongly agree*). A total life satisfaction score is obtained by summing the responses on all the items. Score of SWLS ranges from 5-

25. Low score indicates low level of life satisfaction and high score indicates high level of life satisfaction. The scale had been found with sufficient alpha reliability (i.e., .87) and with two months interval it was .82. The Cronbach's alpha coefficient for SWLS based on the responses of the Asian respondents was found .92. (Diener et al., 1985). For present research Urdu version of the SWLS (Zahid, 2002) was used.

**Procedure.** For this part of the research respondents were personally approached by the researcher in their respective institutions and were requested to participate in the study. They belonged to different educational institutions of Islamabad and Rawalpindi such as Govt. Post Graduate College (W), 6<sup>th</sup> road, Rawalpindi; F. G. Boys Higher Secondary School, No. 15, Islamabad. After having their consent they were given a set of questionnaires including demographic information, NAPS, PPS, TMBS, and SWLS. They were given some general instructions regarding how to respond on questionnaires. Then the specific instructions pertaining to each questionnaire were also made clear to them. They were requested to read each statement carefully and select the appropriate response option that they think well represents them. Any query by the respondent regarding the comprehension of words/statements in the scales was satiated by the researcher. After getting the filled out questionnaires, respondents were thanked for their voluntary participation in the research.

**Determination of Reliability and Validity of the Scales.** For the purpose of determining the reliability and validity of Urdu versions of NAPS and PPS following statistical analysis were run.

1. Cronbach's Alpha Coefficient
2. Item Total Correlation
3. Correlation Coefficient

***Cronbach's Alpha Coefficient.*** To determine the internal consistency of all the measures used in part I, Cronbach's alpha coefficient was computed.

Table 3 shows the alpha reliability coefficient of NAPS and PPS which is considerably high (i.e., .82 and .75 respectively). Alpha for four dimensions of NAPS ranges from .55 to .88 which indicates that it is a reliable measure for assessing the level of active procrastination in Pakistani sample. The other scales such as Time Management Behavior Scale and Satisfaction With life Scale used for purpose of validation of NAPS and PPS were also found to have sufficient reliability with this sample. Alpha for TMBS ranges from .64 to .81.

**Table 3***Alpha Reliability Coefficients of NAPS, PPS, TMBS, and SWLS (N = 80)*

Scale	Items	Alpha Coefficient
NAPS	16	.82
Outcome Satisfaction	4	.84
Preference for Pressure	4	.55
Intentional Decision	4	.84
Ability to meet Deadlines	4	.88
PPS	6	.75
TMBS	34	.77
Goals and Priorities	10	.64
Time Management	11	.78
Organization	8	.69
Control of time	5	.81
SWLS	5	.90

Note: NAPS = New Active Procrastination Scale; PPS = Passive Procrastination Scale; TMBS = Time Management Behavior Scale; SWLS = Satisfaction With life Scale.

***Item-Total Correlation of Scales.*** Item total correlation is an indication of the internal consistency of the scale. For this purpose all the items of the scales were correlated with their respective total scale scores.

**Table 4***Item-Total Correlation of New Active Procrastination Scale (N = 80)*

Item No.	<i>r</i>	Item No.	<i>r</i>
1	.82**	9	.79**
2	.96**	10	.90**
3	.83**	11	.65**
4	.52**	12	.86**
5	.54**	13	.77**
6	.40*	14	.79**
7	.92**	15	.85**
8	.54**	16	.91**

\* $p < .05$ . \*\* $p < .01$ .**Table 5***Item-Total Correlation of Passive Procrastination Scale (N = 80)*

Item No.	<i>R</i>
1	.93**
2	.85**
3	.89**
4	.81**
5	.85**
6	.78**

\*\* $p < .01$ .

Table 4 and 5 revealed that all the items were positively correlated with their total scores on the respective scales. The value of item total correlation of NAPS ranges from .40 to .96 ( $p < .05$  and  $p < .01$ ), for PPS the range was .78 to .93. This shows the internal consistency of the scales.

**Table 6***Item-Total Correlation of Time Management Behavior Scale (N = 80)*

Item No.	<i>r</i>	Item No.	<i>r</i>
1	.76**	18	.62**
2	.71**	19	.26**
3	.59**	20	.56**
4	.52**	21	.66**
5	.59**	22	.64**
6	.56**	23	.44**
7	.57**	24	.88**
8	.58**	25	.53**
9	.52**	26	.71**
10	.51**	27	.59**
11	.60**	28	.63**
12	.88**	29	.71**
13	.74**	30	.54*
14	.33**	31	.66**
15	.82**	32	.44**
16	.89**	33	.57**
17	.52**	34	.62**

\* $p < .05$ . \*\* $p < .01$ .

Table 6 and 7 indicate item total correlations of Time Management Behavior Scale and Satisfaction With Life Scale with current research sample approached in part I. The values shown in the tables revealed the sound internal consistency of the TMBS and SWLS.

**Table 7***Item-Total Correlation of Satisfaction With life Scale (N=80)*

Item No.	R
1	.91**
2	.86**
3	.82**
4	.69**
5	.89**

\*\* $p < .01$ .

**Validation of New Active Procrastination Scale and Passive Procrastination Scale.** This phase of research was carried out to determine the validation of Urdu version of NAPS and PPS and for providing the empirical evidence related to convergent and discriminant validity of the instruments. Convergent validity refers the extent to which a measure correlates with the other indicators of the construct because they are all converging on the same thing (Mitchell & Jolley, 2001). Time Management Behavior Scale (Macan et al., 1990; Akhtar, 2005-U) and Satisfaction with Life Scale (Diener et al., 1985; Zahid, 2002-U) were used for establishing the convergent and discriminant validity of the scales.

Procrastination has been frequently studied in negative connotations (Ellis & Knaus, 1977; Ferrari, 2001). A new form of procrastination known as active procrastination was introduced by Chu and Choi (2005) that has associated positive outcomes for individuals such as high self-efficacy, use of positive coping strategies, better performance and low level of depression, anxiety, and stress. Active procrastinators keep themselves free from a fixed time schedule and rigid time structure by shifting their attention from routine schedules to effective

accomplishment of the goal. Active procrastinators are less vulnerable to stress and take more effective steps to manage work related stress that in turn leads to better performance and high level of life satisfaction.

To demonstrate the convergent and discriminant validity of NAPS and PPS it was proposed that active and passive procrastination are two distinct types of procrastination characterized by their different attributes such as time control and outcomes of their behavior. As an evidence of convergent validity it was presumed that active procrastination will be positively related to purposeful usage of time in terms of time management and time control and will be negatively related to time structure. As active procrastinators have preference for time pressure so they frequently postpone and reprioritize their activities because they have less rigid time conceptions and are more sensitive regarding their use of time and goals that gives them a greater sense of time control. Macan (1994) noted that those who prefer having to-do lists and strictly adhere to their rigid schedules perceive less control over their time. So it was proposed that traditional or passive procrastinators perceive less control over their time and prefer to adhere to their rigid schedule.

Another defining feature of active procrastinators is cognitive decision to procrastinate. Since active procrastinators had high perception of time control so they intentionally postpone their activities and reprioritize their schedules. Therefore, instead of being fixated to the routine, they deliberately resettle their plans in response to varying external demands (Chu & Choi, 2005). On the other hand traditional or passive procrastinators are less likely to procrastinate intentionally. Further it was assumed as active procrastinators are well capable of motivating them under taxing conditions, making intentional decisions to procrastinate, and timely task completion,



as a result they experience positive outcomes such as more satisfaction with their lives despite their procrastination while passive procrastination is marked by the inability to focus on the task and to drift down to the activities which are more enjoyable than the task itself (Tice & Baumeister, 1997). Passive procrastinators go for immediate fulfillment of their desires and gratification of pleasures which alleviate stress in the shorter run but in longer run they experience low level of life satisfaction (Harriott & Ferrari, 1996; Knaus, 2000). Considering the distinct personality characteristics an orthogonal nature of relationship was expected between active and passive procrastination.

**Objectives.** The underlying objectives behind this phase of the study were to determine the convergent and discriminant validity of the scales by correlating the scores on New Active Procrastination Scale and Passive Procrastination Scale to Time Management Behavior Scale, and Satisfaction With Life Scale scores.

**Results.** Regarding the convergent validity of NAPS and PPS, which is the extent to which scale scores should correlate with other measures with which it should theoretically correlate, and for discriminant validity it is the extent to which scale scores should not correlate with other measures it should theoretically not correlate, was examined. It was expected that active and passive procrastination are two entirely different constructs so theoretically they should not correlate and their pattern of relationship with other variables will also be different from each other. In this study TMBS and SWLS were used for purpose of convergent and discriminate validity of the scale constructs (i.e., active procrastination and passive procrastination). It was

expected that NAPS and PPS scores will not correlate with each other as indicator of discriminant validity. Whereas the relationship pattern of both the constructs with other variables will also be different such as, NAPS scores will correlate positively to time management and time control subscales of TMBS and will be negatively related to setting goals/priorities and organization. In addition NAPS scores will positively correlate to SWLS as an index of convergent validity. Regarding PPS scores, negative correlation with time management, time control, and positive correlation with setting goals/priorities, and organization subscale of TMBS will be an indicator of discriminant validity. Moreover a negative correlation of PPS with SWLS will indicate the discriminant validity of the scale construct.

***Correlation of New Active Procrastination Scale and Passive Procrastination Scale with Time Management Behavior Scale and Satisfaction With Life Scale.***

To determine the relationship of active and passive procrastination with time management and satisfaction with life, correlations were computed. Findings of Table 8 revealed that NAPS total and its four dimensions scores positively correlated with TMBS, and SWLS which indicated the convergent validity of the scale. No significant correlation was observed between NAPS and its four dimensions with PPS which showed the existence of discriminant validity. Regarding Passive Procrastination Scale significant negative correlation was observed with only SWLS. The relationship pattern of NAPS and PPS with time management and life satisfaction indicates the distinct nature of both types of procrastination marked with specific features. To be more specific regarding the characteristic features of active and

passive procrastinators in their time management behavior, correlations of NAPS and PPS scores were also computed with subscales of TMBS in Table 9 and Table 10.

**Table 8**

*Correlation of NAPS and its Factors with PPS, TMBS, and SWLS (N = 80)*

Scales	1	2	3	4	5	6	7	8
1. NAPS	-	-	-	-	.-	-	-	-
2. OS	.96**	-	-	-	-	-	-	-
3. PP	.91**	.82**	-	-	-	-	-	-
4. ID	.98**	.95**	.90**	-	-	-	-	-
5. AD	.95**	.90**	.82**	.89**	-	-	-	-
6. PPS	.03	-.05	.04	.02	.02	-	-	-
7. TMBS	.29**	.28**	.29**	.27**	.24*	-.02	-	-
8. SWLS	.68**	.68**	.78**	.58**	.76**	-.13**	.22**	-

*Note.* NAPS= New Active Procrastination Scale; OS=Outcome Satisfaction; ID=Intentional Decision; PP= Preference for Pressure; AD= Ability to meet Deadlines; PPS=Passive Procrastination Scale; TMBS= Time Management behavior Scale; SWLS= Satisfaction With Life Scale.

\* $p < .05$ . \*\* $p < .01$ .

**Table 9**

*Correlation of NAPS with TMBS Subscales (N = 80)*

Scales	1	2	3	4	5
1 NAPS	-	-	.-	-	.-
2 GP	-.17**	-	-	-	-
3 TM	.22**	.13**	-	-	-
4 Org	-.19**	.22	.75**	-	-
5 TC	.21**	.14**	.92**	.81**	-

*Note.* NAPS = New Active Procrastination Scale; GP = Setting Goals and Priorities; TM = Mechanics of Time Management; Org = Preference for organization; TC= Perceived Control of Time.

\*\* $p < .01$ .

Findings of Table 9 revealed that there was a significant negative correlation of NAPS with setting goals and priorities and organization subscale of TMBS. On the other hand significant positive correlation was found between NAPS scores with time control and time management subscales of TMBS indicating that those respondents who report high level of active procrastination are more cable of managing their time and have more perceived time control.

Results shown in Table 10 revealed significant positive correlation between PPS and setting goals and priorities subscale of TMBS but no significant correlation was observed between PPS and time control, time management and organization subscale. This finding indicates that those respondents who score high on passive procrastination set their goals and priorities in advance.

**Table 10**

*Correlation of PPS with TMBS Subscales (N = 80)*

	Scales	1	2	3	4	5
1	PPS	-	-	-	-	-
2	GP	.14*	-	-	-	-
3	TM	-.05	.13	-	-	-
4	Org	.12	.22**	.75**	-	-
5	TC	-.03	-.14	.92**	.81**	-

*Note.* PPS = Passive Procrastination Scale; GP =Setting Goals and Priorities; TM = Mechanics of Time Management; Org = Preference for Organization; TC= Perceived Control of Time.

\* $p < .05$ . \*\* $p < .01$ .

**Discussion.** Part I of the research was carried out for the purpose of translation, establishing cross language validity of the New Active Procrastination Scale and Passive Procrastination Scale, and determining psychometric properties of

the measures used (such as NAPS, PPS, TMBS, and SWLS). After an initial try out, scales were translated into Urdu through forward and back translation method. Cross language validity of NAPS and PPS was also established to see the equivalence of the translated versions of the scales. Findings revealed that the highest correlation for both scales was observed between two administrations of Urdu versions. This may be due to having good understanding of the content and meaning conveyed through local language otherwise all the respondents were equally well versed in Urdu and English. Overall results of cross language validity indicated that scales are sound in terms of equivalence in meaning and effectiveness in content.

Moreover psychometric properties of the scales were also determined for use in indigenous context. To check the construct validity of the scales, its relation to the existing theoretically relevant measures was explored. For purpose of convergent validity the scale should relate with those measures with which it should theoretically correlate, and for discriminant validity it should not relate with those measures with which it does not theoretically correlate (Campbell, 1960). As the target measures (i.e., NAPS and PPS) were already translated in phase II of part I, so to keep the uniformity in the language of all the measures, it was decided to use the Urdu translated versions of TMBS and SWLS that are widely used in indigenous context, to determine the convergent and discriminant validity of NAPS and PPS.

To check the theoretically predicted relations of New Active Procrastination Scale with other existing constructs such as passive procrastination, time management and life satisfaction, correlation coefficients were computed (see Table 8). It was found that NAPS scores were not related to passive procrastination indicating active procrastination as a separate construct other than traditional or passive procrastination

which further confirms its distinct nature. This finding also supported the previous results found in Chu and Choi (2005) and Choi and Moran's (2009) study of procrastination. Results further indicate that significant positive correlation of active procrastination with time management and life satisfaction. This shows that those who actively procrastinate experience greater life satisfaction, have more time management skills. As active procrastinators are more capable of estimating the time in an accurate manner, the minimum amount of time required to complete a task, so they can sustain last minute pressures. This can be attributed to their unique way of dealing with stressful situations (Chu & Choi, 2005). Concerning passive procrastination a significant negative relationship was found between passive procrastination and life satisfaction however no significant relationship was observed between overall time management skills and passive procrastination.

In order to determine the relationship of active procrastination and time management skills more precisely, correlation coefficient between NAPS and TMBS subscales was computed. Findings reveal significant negative correlation of active procrastination with setting goals and priorities, and organization subscales of TMBS and significant positive correlation with time management and time control subscales of TMBS. These findings support the previous study of Chu and Choi (2005) and Choi and Moran (2009). As active procrastinators have distinct characteristics they find themselves capable of managing their affairs timely because of more perceived time control. Due to being capable of managing their routines timely in an effective manner, active procrastinators do not set their goals in a prior manner and are being less organized in this sense because they are flexible in their routine and can mold it accordingly. This further indicates the convergent validity of NAPS as it relates to

those subscales of TMBS positively to which it should theoretically relate. Significant positive correlation between passive procrastination and setting goals and priorities indicated that passive procrastinators set their goals in advance and if they have to shift from their routine schedule they are unable to manage the things timely, cannot reshuffle their plans according to situational demands. This was further substantiated by the absence of any significant relationship between passive procrastination, time management, and time control.

As this part of the research was aimed to translate, validate, and determine psychometric properties of the scales, some of the findings are not significant though they are in expected direction like relation of passive procrastination scale with time management, organization, and time control subscales which may be attributed to small sample size. Overall part I revealed sound internal consistency of the scales, item-total correlation and construct validity of NAPS and PPS by determining their relation with other variables. Though findings of this part enhance our understanding of the construct, yet it is not free from limitations. Small sample size in phase I and III may be potential limitation. Any future attempt to establish construct validity may employ larger sample to enhance the validity of the findings. The findings pave way to the use of scales in indigenous context and to determine their relationship with other study variables. Part II aimed at pilot testing in which psychometric properties of all the measures likely to be used in main study were determined and the relationship among study variables was also explored.

# **PILOT STUDY**



**Chapter IV****PART II: PILOT STUDY**

As discussed in research design present study was executed in three parts. The underlying objectives of Part I was to translate, establish cross language validity of NAPS and PPS, and to determine the psychometric properties of scales. Results of Part I provided sound reliability of the scales and it was observed during their administration that respondents were clear about the content of the scales and did not find any ambiguity. Therefore this chapter focuses on objectives and findings of the pilot study.

**Objectives of the Pilot Study**

Pilot testing is a tentative, small scale study done to pretest and modify study design if required in order to avoid bugs in the procedure. According to McBurney and White (2004) pilot study followed by a main study that had been run once and replicated once or twice increases the validity of findings tremendously over a single study that is not preceded by a pilot work. Pilot testing was undertaken in order to avoid any sort of flaws, irritancies, and unforeseen problems. Pilot study also provides means to identify the vague content, sentence structure, phrasing and length of all the questionnaires likely to be used in main study.

In present research pilot study was executed to gain insight regarding content appropriateness of all measures, getting feedback from the respondents and to make required amendments. Moreover it was aimed to see whether the measures being used

in the study are suitable for our indigenous population and to have general understanding regarding the nature of relationship between two types of procrastination (active vs. passive) and related variables. Part II (pilot study) was carried out on a relatively small sample ( $N = 70$ ) with all set of correlate and outcome measures to determine a personality profile of Pakistani adolescent procrastinator that has not been previously studied.

In this Part of research New Active Procrastination Scale, Passive Procrastination Scale, Time Management Behavior Scale, General Self-Efficacy Scale, Brief Cope, Mini-Marker Set, Depression, Anxiety, and Stress Scale, and Satisfaction With Life Scale were used to determine the nature of relationship among variables and to see if all the scales are indigenously applicable.

### **Participants**

A total of 70 Pakistani adolescent participants (50% girls, 50% boys:  $M_{\text{age}} = 15.57$  years old,  $SD = 1.17$ ; age range = 13–19 years) who were selected through convenience sampling technique, volunteered for the present study. Initially 80 adolescents were approached but 10 out of those did not respond due to certain factors such as lack of motivation, having some class or other commitment. The education level of participants was matriculation. Among all 43% of respondents were studying in class 9th whereas 57% were in class 10th. The researcher personally contacted the head of different educational institutions to grant permission for the purpose of data collection and after receiving permission from six different educational institutions (i.e., Islamabad School of Excellence; F. G. Boys High School, Rawal Dam; F. G.

Boys Higher Secondary School, NIH, Islamabad; F.G. Girls High School, NHC, Islamabad; F.G. Girls High School, Noor Poor Shahaan, Islamabad; and F.G Girls High School G-7/1, Islamabad) researcher approached the participants. The administration of three of the educational institutions did not allow data collection from adolescents studying in their institutes due to some of their security and administrative issues.

### **Instruments**

In pilot study, Urdu versions of the following scales along demographic information (such as age, gender, and education; see Appendix-A) sheet containing consent from the respondent and illumination of the research purpose were used:

- New Active Procrastination Scale (Choi & Moran , 2009, see Appendix-C)
- Passive Procrastination Scale (Chu & Choi, 2005, see Appendix-E)
- Time Management Behavior Scale (Macan et al., 1990; Akhtar, 2005-U, see Appendix-G)
- General Self-Efficacy Scale (Schwarzer & Matthias, 1993; Nawaz, 2004-U, see Appendix-H)
- Brief COPE (Carver, 1997; Akhtar, 2005-U, see Appendix-I)
- Mini Marker Set (Saucier, 1994; Manzoor, 2000-U, see Appendix-J)
- Depression Anxiety Stress Scale (Lovibond & Lovibond, 1995; Aslam, 2007-U, see Appendix-L)

- Satisfaction With Life Scale (Diener et al., 1995; Zahid, 2002-U, see Appendix-N)

**New Active Procrastination Scale.** New Active Procrastination Scale was developed on the basis of 12-item measure of Active Procrastination Scale (Chu & Choi, 2005). For the development of NAPS a new expanded scale comprising of 40 items was constructed. The items were pooled after giving consideration to different cognitive, affective, and behavioral processes such as, preference for time pressure, intentional procrastination, ability to meet deadlines, and satisfactory outcomes. Each dimension was assessed by 10 items. Choi and Moran (2009) examined the content coverage and face validity of all the items in pilot-testing of the scale and on the basis of feedback from ten undergraduate students. Slight modifications were incorporated in the scale after running a series of EFA's that resulted in a balanced representation of the four underlying dimensions of active procrastination. Overall 61% of the total item variance was explained through these dimensions which led to development of a 16-item scale.

New Active Procrastination Scale is in a Likert-type format. It uses 7-point scale as a response format for all the items ranging from 1 (*not at all true*) to 7 (*very true*). There are four items in each dimension. Items no. 1 to 4 fall in the dimension of "outcome satisfaction", items no. 5 to 8 in "preference for pressure", 9 to 12 lie in the dimension of "intentional decision to procrastinate", and 13 to 16 measure "ability to meet deadlines". Scoring of all the items is in reversed form except items no. 9, 10, 11, and 12. The score range of total NAPS lies in 16 to 112 and for each dimension it is from 4 to 28. Cronbach's alpha coefficient of scales assessing the four dimensions

ranged between .70 and .83 providing support of acceptable internal consistency whereas alpha coefficient for total NAPS (.80) was also satisfactory. For this part of the research Urdu translation of NAPS was used. Alpha reliability coefficient of Urdu version of NAPS total was .82 ( $N = 80$ ) and it ranged from .55 to .88 for four dimensions of the scale (for details see Part I).

**Passive Procrastination Scale.** Passive Procrastination Scale was adopted by Chu and Choi (2005) to assess the level of traditional/passive procrastination. It comprises of six items belonging from two already existing measures of procrastination “Decisional Procrastination Scale” (Mann, 1982, as cited in Ferrari et al., 1995; H. C. Schouwenburg, 1995) and “Academic Procrastination: Theoretical Notions, Measurement, and Research,” as cited in Ferrari et al. (1995). The alpha reliability of the English version of the scale was .82. It is a 7-point scale in a Likert type format. It offers response categories ranging from 1 “*not at all true*” to 7 “*very much true*”. All items are positively scored except item no. 1 which is scored in a reverse manner. To get a total score of an individual on passive procrastination, scores on all the items are summed up. The score ranges from 6 to 42. Urdu translation of PPS was used in this part of the research. Alpha reliability coefficient of Urdu version of PPS is .75 ( $N = 80$ ) which is reasonably satisfactory (for details see Part I).

**Time-Management Behavior (TMB) Scale.** Time-Management Behavior Scale (TMBS) originally developed by Macan et al. (1990) was used to assess student’s time management behaviors. The instrument contained 34 items with a range of “*never true*” (1) to “*always true*” (5). The scale consisted of four subscales:

Setting Goals and Priorities, Mechanics of Time Management, Preference for Organization, and Perceived Control of Time. For development of Time Management Behavior Scale Macan et al. (1990) identified 76 items from a collection of tips, ideas, and techniques from various books on time management. The items covered the content areas on time management such as goals setting, determining priorities, planning, organizing, learning to say “no”, making to-do-list, delegating, and procrastinating. Some of the items were from the appendix of these self-help books. The items measured the degree to which time management behaviors were used rather than the individual’s own assessment of the effectiveness or appropriateness of related behaviors. Responses of 123 undergraduate students’ to all 76 items were subjected to item-analysis. Removal of all non contributing items resulted in 34-items TMB scale. An additional 165 subjects were given the scale in order to examine the dimensionality of the scale. Factor analyses on these two samples separately resulted in a similar factor structure. Thus a total of 288 subjects’ responses resulted in a four factor TMB scale. According to Macan et al. (1990) Cronbach’s alpha for all the factors of TMBS and overall TMBS score were as follows: setting goals and priorities (.83), mechanics of time-management (.62), perceived time control (.69), organization (.60) and overall TMBS score (.68).

In TMBS certain items fall into one specific category such as Items no. 1, 3, 5, 10, 14, 17, 23, 27, 30, 32 pertains to “Setting Goals and Priorities” subscale; Items no. 2, 6, 8, 11, 13, 15, 18, 21, 24, 26, 28 belong to subscale of “Mechanics of Time Management”; Items no. 4, 7, 19, 20, 22, 25, 31, 33 are related to “Preference for Organization” subscale whereas items no. 9, 12, 16, 29, 34 are from “Perceived Control of Time” subscale of TMBS. Some of the items are scored in reverse manner

such as items no. 7, 9, 12, 16, 19, 20, 22, 25, 29, 31, 33, and 34. All the items are summed for each subscale to get a total score on each category. The possible score range is 34 to 170.

Shahani, Weiner and Streit (1993) examined the dispositional nature of time management construct by examining the correlation between Time Management Behavior Scale (TMBS) and three other time-attitude scales. An examination of the correlations provided support for the convergent validity of the TMBS. They further found significant positive correlation between TMBS and sense of coherence. Students' self-reported use of time management behaviors remained fairly stable under varying levels of academic pressure that provided support for the dispositional nature of the construct of time management.

Peeters and Christel (2005) examined the interaction effects of time management with work demands and autonomy on burnout through Time Management Behavior Scale. Results provided support that when high work demands and low autonomy were combined they act as predictors to burnout for teachers low in time management and not, or to a lesser extent, for those who are high in time management. In present study Urdu translation of TMBS (Akhtar, 2005, Appendix-G) was used. Alpha reliability for translated version of total TMB Scale was .82 whereas for subscale it ranged from .52 to .81.

**General Self-Efficacy Scale.** General Self-Efficacy Scale developed by Schwarzer and Jerusalem (1995) consists of 10 items. Scholz, Dona, Sud, and Schwarzer (2002) reported that General Self-Efficacy Scale was developed to measure the construct of general self-efficacy at the broadest level and has been

adapted to many languages. They examined the psychometric properties of this instrument with 120 participants from 25 countries and findings supported the assumption that general perceived self-efficacy is a unidimensional and universal construct. These findings replicated the results of previous study by Schwarzer and Born (1997) in which psychometric properties (e.g., internal consistencies, item-total correlations, factor loadings, and fit indices of the confirmatory factor analysis) of the general self-efficacy scale was established with samples from 13 nations and found GSES being reliable, homogeneous, and unidimensional. Luszczynska, Gutierrez-Dona, and Schwarzer (2005) also confirmed the high reliability, stability, and construct validity of the GSES which was previously confirmed in several studies such as .85 (workers from Costa Rica), .90 (students from Costa Rica), .88 (East German migrants), .86 (German teachers), .79 (German students), .81 (Polish students), .79 (American students), and .82 (Turkish students) (Leganger, Kraft, & Roysamb, 2000; Luszczynska, Mohamed & Schwarzer, 2005; Schwarzer, Mueller, & Greenglass, 1999). Schwarzer and Hallum (2008) reported the Cronbach's alpha of .86 for the Germans and .87 for the Syrians on GSES.

In present study Urdu translation of Generalized Self-efficacy Scale was used to assess the self-efficacy of nonprocrastinators, active procrastinators, and passive procrastinators. It is a four point scale consisted of 10 items. The scale was translated in Urdu by Nawaz (2004, see Appendix-H). The scale is a self-administered measure of self-efficacy. Response categories range from “*not at all true*” scored as 1 to “*exactly true*” scored as 4. All items are positively phrased. To get a final composite score of an individual in terms of level of self-efficacy, scores on all the items are summed up. The score ranges from 10-40. GSES is a highly reliable instrument in



indigenous context as well with an alpha of .83 of English version (Anwer, 2000) and .88 and .86 respectively for Urdu version. The Urdu version of the scale has also been extensively used in local context (e.g., Atta, 2008; Fatima, 2007; Kalsoom, 2008; Nawaz, 2004; Qureshi, 2007).

**Brief Cope.** Brief Cope originally developed by Carver (1997) was used to identify the coping strategies employed by adolescents. Brief cope is an abridged version of COPE (Carver et al., 1989). The scale consisted of 28 items categorized into 14 subscales such as Self-Distraction, Active Coping, Denial, Substance Abuse, Use of Emotional Support, Use of instrumental Support, Behavioral Disengagement, Venting, Positive Reframing, Planning, Humor, Acceptance, Religion, and Self-Blame.

Different items pertain to different subscales such as Items no. 1 and 19 relate to “Self-distraction” subscale. Items no. 2 and 7 pertain to “Active coping” subscale. Items no. 3 and 8 are part of “Denial” subscale. Items no. 4 and 11 relate to “Substance use” subscale. Items no. 5 and 15 are part of “Use of emotional support” subscale. Items no. 10 and 23 belong to “Use of instrumental support” subscale. Items no. 6 and 16 are from “Behavioral disengagement”, items no. 9 and 21 relate to “Venting” subscale, items no. 12 and 17 are from “Positive reframing”, and items no. 14 and 25 pertained to “Planning” subscale. Items no. 18 and 28 was from “Humor”, items no. 20 and 24 pertained to “Acceptance”, items no. 22 and 27 pertained to “Religion” whereas items no. 13 and 26 were from “Self-blame subscale. Items for each subsection are summed together to get a total score on all the 14 categories.

In present research Urdu translation of Brief Cope (Akhtar, 2005, see Appendix-I) was used and for purpose of scoring and analysis, factor structure of Cooper et al. (2008) was followed that offers three types of coping strategies. To get a total score items on all the three categories are summed together. The high score on any subscale is an indication of more use of that particular coping strategy and low score indicates less use of that specific coping strategy. Three composite subscales measuring problem-focused, emotion-focused and dysfunctional coping have proved useful in previous research and have content validity (Cooper et al., 2008). Problem-focused coping includes all the items for the original Brief COPE subscales for Active Coping, Instrumental Coping, and Planning (items no. 2, 7, 10, 14, 23, and 25). Emotion-focused coping includes items from the original Brief Cope subscales of Acceptance, Emotional Support, Humor, Positive Reframing and Religion (items no. 5, 12, 15, 17, 18, 20, 22, 24, 27, and 28). Dysfunctional coping includes items from the original Brief Cope subscales of Behavioral Disengagement, Denial, Self-distraction, Self-blame, Substance use and Venting (items no. 1, 3, 4, 6, 8, 9, 11, 13, 16, 19, 21, and 26). Items are arranged in a 4-point Likert format (1 = *never*, 2 = *very less*, 3 = *sometimes*, and 4 = *a lot*). The summed score range for problem-focused coping 6–24; emotion-focused coping 10–40; and for dysfunctional coping is 12–48.

Cooper, Katona, and Livingston (2008) reported the psychometric properties of three subscales and demonstrated sufficiently sound internal consistencies of the subscales for the first time. Alpha for emotion-focused, problem-focused, and dysfunctional subscales was respectively .72, .84 and .75. Test-retest reliability for all three strategies over one year span did not change significantly ( $r = 0.58$ ,  $r = 0.72$ ,  $r = 0.68$ ;  $p < 0.001$ ). Alpha coefficient for all the 14 subscales of Brief Cope was above

.50 (Carver, 1997) and for three subscales of Brief Cope in Pakistani context ranged from .60 to .69 (Amjad, 2009). The alpha reliability of translated version of full scale was .77 and .87 respectively and for subscales the range of alpha reliability coefficient was .75 to .82 (Akhtar, 2005; Sabih, 2006). The scale has been used extensively in indigenous context and found to have satisfactory reliability (Absar, 2006; Eijaz, 2008).

**Mini Marker Set.** Mini Marker Set was developed by Saucier (1994) based on Goldberg's (1990) big five personality theory. Mini Marker Set is an abbreviated version of full set of 100 markers. It includes all the variables which are closer to the prototypical core of the five factors and also provide an easy way of measuring the five dimensions of personality. The factors of Mini Marker Personality Set closely correspond to the markers derived from full marker set of 100 markers. Factors derived from the Mini Marker Set correlated .92 to .96 (raw data) and .91 to .96 (scored data) with the corresponding factors from the full marker set.

The main advantage of Mini Marker Set is fewer items with decreased subject time and high inter-item correlations for the Mini Marker Set (Saucier, 1994). The alpha coefficients were relatively low as compared to full marker set but reasonably acceptable, ranging from .78 to .82. The set caters the requirements of researchers who are interested to use a simple structured measure of the Big Five Factors as an abbreviated form of 100-adjective markers (Goldberg, 1992). The instrument consists of 40 adjectives equally divided to constitute five separate scales for measuring Big Five Factors. All five subscales for the Big Five personality factors comprises of 8

items for each factor (with negatively loaded items which are reverse scored). The detailed description of these five traits with items numbers is as follows:

*Extraversion* measures the extent to which an individual is sociable, active, optimistic, and fun loving. This factor is measured through items no. 1, 2, 11, 13, 25, 28, 32, and 40.

*Agreeableness* indicates the individual's traits like being helpful, trusting, kind, and cooperative. Following items measure the trait of agreeableness, such as 4, 6, 15, 20, 27, 30, 38, and 39.

*Conscientiousness* describes the individual's task orientation, hard work, reliability, and socially required impulse control. Item nos. 3, 9, 10, 17, 22, 24, 29, and 31 measures the trait of Conscientiousness.

*Emotional Stability* refers to individual's capacity to remain calm, composed and being free from traits which carry negative emotional tone. Item nos. 12, 14, 19, 21, 26, 33, 34, and 36 measures the trait of emotional stability.

*Intellect/Openness* reflects individual's creativity, originality, imagination and complexity. Following item nos. 5, 7, 8, 16, 18, 23, 35 and 37 assess this trait of intellect/openness.

On Mini Marker Set respondents are asked to rate themselves on the scale to the degree that they believe that an adjective characterize their personality presently in comparison to their gender and age mates. The score on each item in all five scale ranges from 1 to 9, with subscale it ranges from 8 to 72 and for total set it is from 40 to 360 (1 = *extremely inaccurate*, 2 = *very inaccurate*, 3 = *moderately inaccurate*, 4 = *slightly inaccurate*, 5 = *neither inaccurate nor accurate*, 6 = *slightly accurate*, 7 =

*moderately accurate*, 8 = *very accurate*, 9 = *extremely accurate*). The items which have negative loadings (Extraversion: 28, 25, 1, 40; Agreeableness: 4, 38, 27, 15; Conscientiousness: 9, 29, 17, 3; Emotional Stability: 21, 19, 33, 12, 34, 14; Intellect: 5, 8, 35, 37) are to be scored in reverse manner. The sum of the scores is then divided by 8 (i.e., total no of items in each scale) to get an average score for items on a given scale.

For present research Urdu translation of the Mini Marker Set was used. It was adapted and translated by Manzoor (2000, see Appendix-J). The Urdu version of the set is slightly different from original version as some of the adjectives of Mini Marker Set were replaced with some different adjectives from the original unabridged version. The reported alpha reliability coefficient of translated version ranged between .38 and .80 (Manzoor, 2000). Scoring of translated Mini Marker Set is in 5-point Likert type format which ranges from 1 to 5 for each item, 8 to 40 for each factor, and 40 to 200 for total Mini Marker Set. There are no cut-off points for the dimensions or subscales that make a person characteristically extraverted or open rather they are an indication of the presence of a trait to a certain extent. Urdu translation of Mini Marker Set has been extensively used in research area with specific reference to Pakistani context (such as, Ayub, 2004; Bashir, 2009; Basir, 2006; Chauhdary, 2008; Hassan, 2008; Shahid, 2006).

**Depression, Anxiety, Stress Scale (DASS).** The DASS is a set of three self-report measures of depression, anxiety and stress. It was developed by Lovibond and Lovibond in 1995. All the DASS scales comprise of 14 items resulting 42 items in total. Nieuwenhuijsen, Verbeek, de Boer, and Blonk, van Dijk, (2003) reported high

internal consistency of the DASS subscales with Cronbach's alphas of .94, .88, and .93 for depression, anxiety, and stress respectively. Factor analysis revealed a three factor solution, which corresponded well with the three subscales of the DASS. Construct validity of the DASS was further established by the moderately high correlations of DASS with certain indices of convergent validity ranging from .65 to .75, and lower correlations of the DASS with indices of divergent validity (range -.22 to .07). Criterion validity was determined by a statistically significant difference in DASS scores and between two diagnostic groups.

Lovibond and Lovibond (1995) determined the psychometric properties of the Depression Anxiety Stress Scales (DASS) with normal sample ( $N = 717$ ) who were also administered the Beck Depression Inventory (BDI) and the Beck Anxiety Inventory (BAI). Satisfactory psychometric properties of DASS were quite eminent, and the factor structure was substantiated both by exploratory and confirmatory factor analysis. It was found that in comparison to the BDI and BAI, the DASS showed greater separation in factor loadings. Findings revealed that DASS Anxiety scale had correlation of .81 with BAI, and Depression scale had correlation of .74 with the BDI.

Brown, Chorpita, Korotitsch, and Barlow (1997) also examined the psychometric properties of the Depression Anxiety Stress Scales (DASS) in two subsequent studies using large clinical samples ( $N = 437$  and  $N = 241$ ). In Study 1, the three scales comprising of DASS were used and were found to have sound internal consistency and temporal stability. In addition an exploratory factor analysis using principal components extraction with varimax rotation yielded a solution with the factor structure which was highly consistent to previous studies on nonclinical samples. It was found through between-groups comparisons that the DASS has high

discriminatory power for various anxiety and mood disorder groups in the predicted direction. Study 2 dealt with the exploration of conceptual and empirical latent structure of the DASS which was upheld by findings from confirmatory factor analysis.

Daza, Novy, Stanley and Averill (2002) translated the English version of the Depression Anxiety Stress Scale-21 (DASS-21) into Spanish and administered it to 98 bilingual Hispanic adults. Participants who were diagnosed with an anxiety disorder on the Anxiety Disorders Interview Schedule-IV completed the Beck Anxiety Inventory, DASS-21, and the Beck Depression Inventory-II. Findings revealed the strong indices of internal consistency, expected patterns of discriminant, convergent, and structural validity of the DASS-21. Crawford and Henry (2003) provided UK normative data and established the latent structure of DASS and tested its convergent, discriminant and construct validity in a large nonclinical sample. They administered the DASS to a nonclinical sample which was broadly representative of the general adult UK population ( $N = 1,771$ ) in terms of demographic variables. Findings of their study suggested that DASS consisted of three correlated factors corresponding to the depression, anxiety, and stress with an adequate convergent and discriminant validity.

Sukantarat, Williams, and Brett (2007) administered DASS and HADS (Hospital Anxiety and Depression Scale) to critically ill patients whose illness was delayed by persistent anxiety and depression and who had spent a minimum of three days in a general intensive care unit. Fifty one patients were studied and three months later results showed strong correlation at each time point both for anxiety ( $r = .88$ ) and depression ( $r = .93$ ). It was found that DASS as accurately serves the purpose of

screening as HADS, and its psychometric properties support its use in an intensive care setting.

In present study shorter version of DASS (i.e., DASS-21) was used. For this purpose Urdu translation (Aslam, 2007, see Appendix-L) of DASS-21 was given to the respondents. The alpha reliability coefficient of Urdu version of Depression (.84), Anxiety (.82), Stress (.87) Scale was quite satisfactory ( $N = 600$ ). The DASS original and translated version has been widely used in the indigenous context (e.g., Batool, 2006; Naushine, 2008; Saleem, 2004). The Depression scale of DASS assesses dysphoria, life devaluation, inertia, self-deprecation, lack of interest, and feelings of hopelessness. The Anxiety scale of DASS assesses the level of autonomic arousal, situational anxiety, and individual experience of anxious affect. The Stress scale of DASS indicates individual's sensitivity to chronic and nonspecific arousal, difficulty in relaxing, being easily agitated, and upset, reactive, irritable and impatient.

DASS is a four point rating scale. The score ranges from 0 to 3 where 0 stands for "*did not apply to me at all*", 1 "*applied to me to some degree*", 2 "*applied to me a considerable degree or good part of time*", and 3 "*applied to me very much*". In DASS item numbers 3, 5, 10, 13, 16, 17, 21 assess the depression level of the respondent ( $\alpha = .86$ ), item numbers 2, 4, 7, 9, 15, 19, 20 belong to anxiety ( $\alpha = .78$ ) whereas item nos. 1, 6, 8, 11, 12, 14, and 18 pertain to level of stress ( $\alpha = .80$ ). All the items are to be scored positively. The cut-off scores for different levels of depression are: for normal (0-9), for mild (10-13), for moderate (14-20), for severe (21-27) and for extremely severe (28 and above). For anxiety scale cut-off scores are: normal (0-7), mild (8-9), moderate (10-14), severe (15-19), and for extremely severe (20 and



above). For different levels of stress scale cut-off scores are: normal (0-14), mild (15-18), moderate (19-25), severe (26-33) and for extremely severe it is 34 and above.

**Satisfaction With Life Scale.** Satisfaction With Life Scale is a measure of global life satisfaction. The scale is developed by Diener, Emmons, Larsen, and Griffin (1985). It provides respondent's overall assessment of their lives. The SWLS consists of 5 items and it is a 5-point scale where 1 corresponds to '*strongly disagree*' and 5 for '*strongly agree*'. The respondent has to indicate his/her level of satisfaction with current life status. Pavot and Diener (1993) examined the internal consistency of SWLS and reported alpha coefficient equaling .87. Diener, Sandvik, Seidlitz, and Diener (1993) found an alpha coefficient of .82 with two months test retest reliability. The inter item correlation and values of reliability coefficients show a high level of internal consistency, a feature not available with other life satisfaction measures (Lawton, 1975; Neugarten, 1961). Satisfaction With Life Scale has been found to be highly correlated with two other measures of life satisfaction which are Life Satisfaction index-A (LSI-A) and the Philadelphia Geriatric Centre Morale Scale. It has also been found to be correlated with personality indicators of wellbeing (Diener, Sandvik, Pavot, & Gallagher, 1991).

Yoshioka (n.d.) has also provided mean scores and standard deviation of different ethnic groups on SWLS. His findings indicate that among six ethnic groups Asians had the highest mean scores on SWLS and black had lowest.

Norms:

*Average Total Score (S.D) for the SWLS*

Group	<i>N</i>	<i>M</i>	<i>SD</i>
Asian	32	22.41	7.74
White	44	21.86	7.28
Black	39	19.90	7.52
Hispanic	33	20.85	7.84
Other	26	20.85	7.84
Total	174	20.95	7.69

Urdu translation of Satisfaction With Life Scale was initially done by Siddiqa (2001) and was later on improved by Zahid (2002, see Appendix-N) under supervision of an experienced psychometrician. Later revision was done to check the translation, editorial quality of items, and to make the instrument more culturally relevant. Alpha reliability of the Urdu version of SWLS was .81 ( $N = 60$ ). Satisfaction With Life Scale has been widely used in indigenous context (e.g., Abid, 2004; Aftab, 2002; Ali, 2005; Iram, 2007; Siddiqa, 2001; Saleem, 2004; Tallat, 2008; Zahid, 2008).

### **Procedure**

In order to collect data, present researcher contacted the heads of different educational institutions and after seeking verbal permission participants were approached in their respective classes. Each participant completed a consent form, demographic items (e.g., name, age, gender, education level, and institution), two measures of procrastination and six other measures of correlate variables (such as,

TMBS, GSES, Brief Cope, Mini Marker Set, DASS, and SWLS). Respondents were given the measures in fixed order in a way that each respondent received the set of measure containing questionnaires in same order (i.e., the sequence of questionnaires given to the respondents was kept same). Participants were selected through convenience sampling those who were falling in adolescence age range. First they were briefed about the purpose of the research and were told that that survey is about study and work styles of people and their personality characteristics. Otherwise there is no hidden purpose of this study. Researcher only wants to know your opinion regarding your own study and work style, and how it is influenced by different personality traits. Participants were given the opportunity to volunteer for the participation. Those who were not willing to participate due to lack of interest in the study or were not feeling energetic to remain engage for more than an hour were allowed to leave the room. Overall seventy participants voluntarily participated in the study whereas ten participants did not volunteer to participate. Respondents were assured for the confidentiality of the information provided by them.

General instructions (see Appendix-A) regarding how to participate and respond on the measures were given to them and later on instructions pertaining to each specific measure were also read and explained by the researcher. They were told to clarify any ambiguity that arises in their mind during and after administration. Then participants were given go ahead signal. It took participants almost one hour and twenty minutes to respond on all the measures. It was ensured that participants attempted all the items in each measure and did not select more than one response category on each item. After receiving all the questionnaires back, respondents were debriefed about the nature of the study and were assured for the use of information

provided by them only for research purpose. They were acknowledged for their volunteer participation in the research. Statistical package (PASW. 18) was used for the analysis of results.

## **Results**

Part II of the research was conducted to pretest the study design in order to gain insight in intricacies of the research and to identify any irritancy that may appear in main study. This part of the research provided deep understanding regarding appropriateness of the content of scales with cultural perspective. Moreover it helped to gain general understanding regarding the nature of relationship among variables. The study aided in investigating the relationship of active and passive procrastination with time-management, self-efficacy, coping strategies, personality traits, depression, anxiety, stress and life satisfaction. For this purpose psychometric properties, item-total correlation, inter scale correlations were computed. Inter scale correlation was computed to discern the pattern of relationships among study variables. Overall pilot study proved to be a fruitful and productive exercise which ensured that the whole set of questionnaires met the psychometric criteria for methodologically robust study.

Table 11 shows the descriptive statistics and psychometric properties for all the study variables. Alpha coefficient values presented in table indicate that all the measures were internally consistent and reliable except for control of time subscale of Time Management Behavior Scale and for emotion focused coping subscale of Brief Cope. This may be attributed to variation in nature of sample and as both the scales are widely used in indigenous context ( such as Absar, 2006; Eijaz, 2008) and

reported alphas for translated versions of the subscales and other studies were also low so in present study also the scales were used to assess the related construct.

**Table 11***Psychometric Properties of the Major Study Variables (N = 70)*

Scales	No. of Items	<i>M</i>	<i>SD</i>	$\alpha$	Range		Skew
					Potential	Actual	
New Active Procrastination Scale	16	53.9	16.6	.80	16-112	24-91	-0.37
Passive Procrastination Scale	6	22.3	8.1	.77	6-42	6-38	-.052
Time Management Behavior Scale	34	112.3	13.6	.64	34-170	84-146	0.01
Setting Goals and Priorities	10	35.57	6.78	.77	10-50	19-48	-0.24
Mechanics of Time Management	11	35.58	8.16	.76	11-55	19-51	-0.01
Organization	8	26.86	5.05	.64	8-40	15-38	-0.37
Perceived Control of Time	5	16.43	4.67	.50	5-25	7-52	-0.43
General Self-Efficacy Scale	10	29.1	5.2	.77	10-40	17-37	-0.57
Brief COPE	28	65.8	8.3	.66	28-112	43-85	-0.64
Problem Focused Coping	6	19.34	2.96	.61	6-24	7-23	-1.0
Emotion Focused Coping	10	28.51	4.25	.50	10-40	17-32	-0.70
Dysfunctional Coping	12	28.88	5.08	.80	12-48	14-40	0.07
Mini Marker Set	40	124.7	14.8	.73	8-40	16.8-32.2	0.06
Extraversion	8	3.1	0.72	.59	1-8	1.38-4.25	-0.06
Agreeableness	8	3.68	0.45	.77	1-8	1.25-4.88	-0.37
Conscientiousness	8	3.18	0.86	.71	1-8	1.63-4.50	-0.68
Emotional Stability	8	3.17	0.62	.60	1-8	1.25-4.38	0.03
Intellect/Openness	8	3.34	0.67	.69	1-8	1.75-4.13	-0.34
Depression Anxiety Stress Scale	21	32.4	18.0	.86	0-63	6-43	1.5
Depression	7	7.35	4.77	.66	0-21	1-16	0.52
Anxiety	7	7.28	4.85	.70	0-21	1-14	0.46
Stress	7	9.30	4.26	.69	0-21	1-15	0.21
Satisfaction With Life Scale	5	16.8	3.9	.66	5-25	9-23	-0.64

**Item Total Correlation.** Items total correlations of the scales were also computed in order to analyze each item's contribution in measuring the construct and to check whether the items were significantly measuring their respective construct.

Keeping this objective in view all items in each scale were individually correlated with the total score of their corresponding scale.

**Table 12**

*Item Total Correlation of New Active Procrastination Scale (N = 70)*

Item No.	<i>R</i>	Item No.	<i>r</i>
1	.59**	10	.52**
2	.62**	11	.47**
3	.60**	12	.42**
4	.36**	13	.57**
5	.62**	14	.63**
6	.39*	15	.64**
7	.56**	16	.43**
8	.58**		
9	.49**		

\* $p < .05$ . \*\* $P < .01$ .

Item total correlation shown in Table 12 indicated that all the items of New Active Procrastination Scale were significantly positively correlated with the total score of the scale. This advocated that the scale is internally consistent and all the items had their due share in the assessment of active procrastination. Moreover highly significant correlations were also indicative of construct validity of the scale as all the items are measuring only one construct i.e., active procrastination.

**Table 13***Item Total Correlation of Passive Procrastination Scale (N = 70)*

Item No.	<i>r</i>
1	.41**
2	.69**
3	.77**
4	.61**
5	.78**
6	.78**

\*\* $P < .01$ .

Table 13 indicated that all the items of Passive Procrastination Scale were significantly correlating with total score on PPS and were contributing in measuring the traditional/passive procrastination among adolescents. This ensures the internal consistency of the scale and an indication of all the items measuring the same construct.



**Table 14***Item Total Correlation of Time Management Behavior Scale (N = 70)*

Item No.	<i>r</i>	Item No.	<i>r</i>
1	.30*	18	.39**
2	.25*	19	.37**
3	.24*	20	.27*
4	.26*	21	.27**
5	.28*	22	.28*
6	.46**	23	.25**
7	.33**	24	.42**
8	.38**	25	.26**
9	.29*	26	.31**
10	.46**	27	.26*
11	.40**	28	.33**
12	.35**	29	.28*
13	.27*	30	.43**
14	.49**	31	.54**
15	.50**	32	.30**
16	.31**	33	.29**
17	.36**	34	.36**

\* $p < .05$ . \*\* $p < .01$ .

Table 14 shows the item total correlations of Time Management Behavior Scale. All the items demonstrated significant positive correlation with total score on TMBS. The findings therefore constituted the scale as a reliable and construct valid measure of the time management.

**Table 15***Item Total Correlation of General Self-Efficacy Scale (N = 70)*

Item No.	<i>r</i>
1	.64**
2	.57**
3	.54**
4	.67**
5	.61**
6	.44**
7	.43**
8	.49**
9	.69**
10	.56**

\*\* $P < .01$ .

The item total correlation of General Self-Efficacy Scale as shown in Table 15 indicated that all the items are significantly positively correlated with the total score on GSES. This suggested the internal consistency of the scale and each item's share in assessing the self-efficacy of the respondents.

Results of Table 16 show item total correlation of Brief Coping and suggest that scale is internally consistent and construct valid measure of coping strategies employed by the adolescents. All the items are significantly positively correlated with the total score on Brief COPE.

**Table 16***Item Total Correlation of Brief COPE Scale (N = 70)*

Problem-focused coping		Emotion-focused coping		Dysfunctional coping	
Item No.	<i>r</i>	Item No.	<i>r</i>	Item No.	<i>r</i>
2	.36**	5	.26*	1	.57**
7	.46**	12	.46**	3	.33*
10	.29*	15	.40**	4	.31**
14	.28*	17	.47**	6	.34**
23	.35**	18	.34**	8	.37*
25	.30*	20	.50**	9	.40**
		22	.29*	11	.25*
		24	.44**	13	.63**
		27	.29*	16	.44**
		28	.25*	19	.46**
				21	.38**
				26	.57**

\**p* < .05. \*\**p* < .01.**Table 17***Item Total Correlations of Subscales of Mini Marker Set (N = 70)*

Extraversion		Agreeableness		Conscientiousness		Emotional stability		Intellect/Openness	
Item No.	<i>r</i>	Item No.	<i>r</i>	Item No.	<i>r</i>	Item No.	<i>r</i>	Item No.	<i>r</i>
1	.26**	4	.28*	3	.28*	12	.26*	5	.29*
2	.29*	6	.24*	9	.42**	14	.25*	7	.34**
11	.37**	15	.25*	10	.24*	19	.50**	8	.29**
13	.50**	20	.35**	17	.27*	21	.28*	16	.41**
25	.28**	27	.33**	22	.43**	26	.44**	18	.31**
28	.34**	30	.44**	24	.52**	33	.51**	23	.45**
32	.31**	38	.38**	29	.38**	34	.34*	35	.48**
40	.27**	39	.25**	31	.24**	36	.34**	37	.34**

\**p* < .05. \*\**p* < .01.

The range of item total correlation for subscales of Mini Marker Set showed (Table 17) that all the items of the scale and subscales were significantly positively correlated with the total score on Mini Marker indicating their contribution in measuring their respective personality traits and overall personality. Overall scale turned out to be an internally consistent measure.

**Table 18**

*Item Total Correlations of Subscales of Depression, Anxiety, Stress Scale (N = 70)*

Depression		Anxiety		Stress	
Item No.	<i>r</i>	Item No.	<i>r</i>	Item No.	<i>r</i>
3	.39**	2	.71**	1	.68**
5	.71**	4	.70**	6	.50**
10	.39**	7	.54**	8	.61**
13	.62**	9	.44**	11	.47**
16	.50**	15	.37**	12	.50**
17	.57**	19	.53**	14	.30*
21	.39**	20	.55**	18	.60**

\* $p < .05$ . \*\* $p < .01$ .

As shown in Table 18 DASS is an internally consistent measure of depression, anxiety and stress. The highly significant positive magnitude of correlation suggested that all the items of scale and subscales had their due share in measuring their respective mental state. The scale is therefore espoused to be reliably consistent and construct valid measure of depression, anxiety, and stress providing further support for all the items measuring affective states.

Table 19 demonstrated that all the items had significant positive correlation with the total score of satisfaction with life. All the items of the scale significantly

positively contributed in measuring adolescent's life satisfaction and are measure of a single construct that is life satisfaction. Overall scale was found as a reliable, internally consistent, and construct valid measure of life satisfaction.

**Table 19**

*Item Total Correlation of Satisfaction With Life Scale (N = 70)*

Item No.	<i>r</i>
1	.71**
2	.57**
3	.62**
4	.69**
5	.62**

\*\* $p < .01$ .

***Relationship among Study Variables.*** In order to test whether the construct of active procrastination has theoretically predicted relations with other relevant constructs, correlation coefficients were computed in Table 20 among all the study variables. Findings revealed that there was no significant relationship between active procrastination and passive that further confirmed its distinctive nature. Documenting the previous research findings (Chu & Choi, 2005; Choi & Moran, 2009) current research also support the uniqueness of the construct. Significant negative correlation was observed between active procrastination and setting goals which indicates that those participants who scored high on active procrastination do not have tendency to set prior goals. Moreover significant negative relationship between organization and active procrastination indicates that those who scored high on active procrastination

scored low on organization subscale of TMBS. In contrast, significant positive correlation was found between active procrastination and time management and time control respectively, suggesting that those who are high on active procrastination tend to have more ability to manage their time efficiently and perceive greater sense of control over their time.

Regarding self-efficacy, it did not relate significantly to active procrastination and among coping strategies employed by adolescents active procrastination was found to have significant positive correlation with problem focused coping signifying that those score high on active procrastination have problem focused approach in case of any crisis. Dysfunctional coping strategy and emotion-focused coping was not found to be significantly related to active procrastination. Of the Big Five personality factors, extraversion and intellect/openness has significant positive correlation with active procrastination, whereas significant negative relationship emerged between active procrastination and personality trait of conscientiousness and agreeableness. Emotional stability was not found as a significant correlate of active procrastination. Among subscales of DASS, significant negative correlation was found between active procrastination and anxiety, whereas no significant relationship of active procrastination was observed with depression and stress. Moreover active procrastination had significant positive correlations with life satisfaction indicating that those respondents who are high on variable of active procrastination are more satisfied with their life (see Table 20).

The pattern of relationship between passive procrastination and other constructs (Table 20) revealed significant positive correlation of passive procrastination with setting goals and priorities and significant negative relationship

with time management and time control which indicated that those who are high on passive procrastination are less capable of managing their time efficiently and perceive less time control whereas no significant association was observed between passive procrastination and organization subscale of TMBS. The construct of self-efficacy has significant negative relationship with passive procrastination which showed that those passively procrastinate perceive them as less efficacious. Significant positive correlation between dysfunctional coping and passive procrastination indicates that those who score high on passive procrastination more actively engage in dysfunctional coping style.

The relationship pattern between passive procrastination and personality factors showed that those who were high in passive procrastination were also high in personality trait of agreeableness but were low in extraversion and emotional stability. Among outcome variables on DASS it was found that those who scored high on passive procrastination experience more depression and stress as there is significant positive relationship between passive procrastination and depression and stress scores. In addition significant negative relationship between passive procrastination and life satisfaction indicated that those who are high in passive procrastination experience low level of satisfaction with their life. The relationship patterns emerged among all the study variables provide an insight for further investigation and support for more intricate statistical analysis in main study (Table 20).

**Table 20***Correlation Coefficient among all the Study Variables (N = 70)*

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. AP	53.9	16.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. PP	22.3	8.1	.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. SGP	35.57	6.78	-.53**	.19*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4. TM	35.58	8.16	.11*	-.37**	.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5. Org	26.86	5.05	-.47**	.12	.47**	-.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6. TC	16.43	4.67	.16*	-.51**	-.42**	.35**	-.13	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7. S-E	29.1	5.2	.13	-.45**	.02	.75**	-.23	.38*	-	-	-	-	-	-	-	-	-	-	-	-	-
8. PFC	19.34	2.96	.41**	-.10	-.26*	.55**	-.46**	.30*	.55**	-	-	-	-	-	-	-	-	-	-	-	-
9. EFC	28.51	4.25	.40	.03	.02	.52**	-.30**	.08	.50**	.61**	-	-	-	-	-	-	-	-	-	-	-
10. DC	28.88	5.08	-.23	.70*	.16	-.63**	.29*	-.39**	-.60**	-.61**	-.46**	-	-	-	-	-	-	-	-	-	-
11. Ext	3.1	0.72	.27*	-.33**	-.41**	.51**	-.38**	.48**	.45**	.48**	.22	-.48**	-	-	-	-	-	-	-	-	-
12. Agr	3.68	0.45	-.50**	.28*	.74**	-.10	.51**	-.43**	-.05	-.22	-.11	.14	.28*	-	-	-	-	-	-	-	-
13. Con	3.18	0.86	-.56**	.00	.72**	.02	.36**	-.18	.13	-.17	-.01	-.01	-.14	.76	-	-	-	-	-	-	-
14. ES	3.17	0.62	-.02	-.67**	-.17	.62**	-.30*	.52**	.58**	.35**	.11	-.47**	.53**	-.22	.01	-	-	-	-	-	-
15. Int	3.34	0.67	.25*	-.18	-.25*	.58**	-.27*	.37**	.46**	.41**	.40**	-.47**	.52**	-.32*	-.17	.46**	-	-	-	-	-
16. Dep	7.35	4.77	-.19	.35**	.09	-.59**	.16	-.46**	-.63**	-.54**	-.35**	.66**	-.54**	-.04	-.15	-.51**	-.45**	-	-	-	-
17. Anx	7.28	4.85	-.28*	.21	.14	.57**	.31**	-.36**	-.61**	-.66**	-.41**	.71**	-.52**	-.02	-.11	-.50**	-.34**	.64**	-	-	-
18. Str	9.30	4.26	-.18	.38**	.13	-.63**	.27*	-.48**	-.60**	-.55**	-.34**	.72**	-.53**	.08	-.10	-.62**	-.41**	.64**	.73**	-	-
19. LS	16.8	3.9	.35**	-.30*	-.29*	-.25**	-.25**	.36**	.54**	.45**	.39**	-.51**	.60**	-.25*	-.05	.35**	.37**	-.53**	-.43**	-.53**	-

*Note.* AP = Active Procrastination; PP = Passive Procrastination; SGP = Setting Goals and Priorities; TM = Time Management; Org = Organization; TC = Time Control; SE = Self-Efficacy; PFC = Problem Focused Coping; EFC = Emotion Focused Coping; DC = Dysfunctional Coping; Ext = Extraversion; Agr = Agreeableness; Con = Conscientiousness; ES = emotional Stability; Int = Intellect; Dep = Depression; Anx = Anxiety; Str = Stress; LS = Life Satisfaction.

\* $p < .05$ , \*\* $p < .01$ .



## **Discussion**

Pilot study was conducted to see the applicability and determining the psychometric properties of all those measures which were likely to be used in main study to avoid any sort of irritancies and to look into niceties of research. Though it was carried out on relatively small sample yet it provided sufficient information regarding psychometric properties of all the translated scales used in the study, the pattern of relationship among variables, and personality profile of active procrastinators and passive procrastinators, their time management skills, coping strategies they use in case of crisis, and their level of self-efficacy. Pilot study also highlighted the relationship between outcome variables and different procrastination patterns in terms of depression, anxiety, stress, and level of satisfaction with their lives.

Findings of the pilot study indicated that all the translated scales have sound reliability and their item-total correlation indicated that they are internally consistent and measure the said construct. The relationship pattern that emerged showed active procrastination as a different and distinct construct other than passive procrastination. The relationship of both constructs to other variables was unique in its nature such as, regarding time management, relationship patterns revealed that active procrastinators are good in time control and managing their time efficiently and they are not very much organized and do not set their goals before hand, while passive procrastinators in contrast are not good in time management and lack time control as they set their goals in advance and want to adhere to set schedule.

Self-efficacy was found to be significant negative correlate of passive procrastination showing that those who score high on passive procrastination generally do not find themselves efficacious in performing different activities. Contrary to previous study (Chu & Choi, 2005) self-efficacy did not emerge as a significant correlate of active procrastination which may be due to the limitation of small sample size in pilot study. Concerning coping strategies findings indicate that in case of situation where one has to use some coping mechanism active procrastinators more frequently use problem focused and passive procrastinators prefer dysfunctional coping strategy as an emotional discharge.

Regarding five factors of personality extraversion and intellect/openness were positively related to active procrastination and conscientiousness and agreeableness were significant negative correlates of active procrastination. This finding was in contrast to the findings of Choi and Moran (2009) in which despite of the assumptions conscientiousness did not emerge as a significant negative predictor of active procrastination. Findings suggested significant positive correlation of passive procrastination with agreeableness and significant negative correlation with extraversion and emotional stability. These findings suggested that those who score high on variable of active procrastination are active, sociable, optimistic, fun loving, creative, have originality and imagination in their ideas. Due to carrying these personality traits they have the capacity of multi-tasking, can manage number of activities simultaneously after prioritizing. Moreover they lack individual's task orientation, less hard working, and has less socially required impulse control but remain calm and unruffled in case of unexpected time pressures. In contrast those scoring high on variable of passive procrastination though are more helpful and kind

towards others but are more reflexive and experience inertia. They are less active and less optimistic, unable to remain calm and composed in pressing situations.

The relationship of active and passive procrastination with outcome variables suggested that those who report high level of active procrastination experience less anxiety whenever they come across a situation where they have to meet the deadline and they are more satisfied with their lives. On the other hand those respondents who report higher level of passive procrastination suffer from high level of depression and stress and are less satisfied with their life routine. The relationship patterns and emerged findings highlighted the differences in personalities of respondents who were high on variable of active and passive procrastination and these differences can be attributed to characteristic features of the construct of active procrastination such as their preference for pressure, intentional decision to procrastinate, ability to meet deadlines and their satisfaction with the outcomes.

The above mentioned findings aggrandize our knowledge regarding the construct of active procrastination which indicates that, though who report high level of active procrastination do procrastinate, but as their procrastination is intentional, based on self-confidence and their ability to manage the things in a timely manner so they differ significantly from those who passively procrastinate, across all the study variables. This nature of relationship between procrastination and other variables additionally confirms the positive aspect of active procrastination which is though nascent but pragmatic and as Chase (2003) has advocated that putting off doing something because someone is not willing to do it or unable to do, and putting off doing something because it is not being important at the moment is entirely a different

perspective, the latter he says “is a highly desirable time management skill” in today’s business climate (p. 60).

Dawson (2007) further highlighted that regarding flow experiences nonprocrastinators and active procrastinators perceive themselves as better students than passive procrastinators but no significant difference was observed between nonprocrastinators and active procrastinators. As active procrastination is a multifaceted phenomenon which not only incorporates cognitive, affective, and behavioral components but also has positive outcomes so it would be useful to promote such construct to save the time and to enhance the ability of prioritizing the tasks according to their significance and urgency. In pilot study questionnaires were given to all the participants in the same order (such as the procrastination measures were given first and then rest of the measures were given) for which sequence effect was observed in terms of their responses, which was a limitation of this part. To overcome this limitation it was decided that questionnaires will be given in counter balanced order so the sequence effect may be minimized. Despite certain limitations such as small sample size and less rigorous analysis on the data, still pilot study provided ample information regarding the pattern of relationship among all the study variables and paved the way for carrying more detailed statistical analysis (such as, MANOVA, Regression analysis and Confirmatory Factor Analysis) in main study to explore the construct of active procrastination in more depth.

Overall present research is a step towards development of an indigenous counseling program in future for traditional/passive procrastinators to overcome their procrastination tendencies that ultimately affects their performance and psychological health. To pave the way for meeting this objective the study incorporated mixed-mode

approach that is combination of in-person and online data collection to have better understanding of the reasons behind procrastination tendencies of both types of sample. To meet this objective Part III (i.e., main study) was carried out which was completed in two phases. Phase I of main study focused on online data collection via website to provide online counseling services to procrastinators and for this purpose it was necessary to check the reliability of the scales for online population via online data collection and determining arbitrary cut-off scores for online adolescents' population. Participation in this part of the research (i.e., online data collection) was entirely voluntary as those participants who are intrinsically motivated are less likely to counterfeit their real responses (Fraleay, 2007). Further details of website development, it's designing, coding, and data collection is discussed in Part III of the research. Phase II of Part III dealt with in-person data collection on a relatively larger sample size than pilot study.

## **MAIN STUDY**

**PART III: MAIN STUDY**

Part III was carried out to have more in-depth understanding of the phenomenon of procrastination in indigenous context and to conduct some complex statistical analysis. To meet this objective, main study focused on online and in-person data collection. This part of the study was completed in two phases:

Phase I: Online data collection

Phase II: In-person data collection

**Phase I: Online Data Collection**

During the past few years internet has become a widely used tool for conducting personality research. Researchers have emphasized the role of web in research, like any study that can be carried out via traditional paper-pencil method can also be implemented online, avoiding the hassles of data entry by hand. Most importantly web not only helps to collect data efficiently but also open the doors to the people who are at a great physical distance from us. Internet is likely to play an enduring role in the way people work and communicate. Online researches have proved to be beneficial for personality and cognitive researchers in a number of ways. It allows researchers to study people using interactive-dynamic methods. It not only makes the research appear more interesting to the participants but also allow them to create and use more innovative and flexible assessment tools. It allows us to study people independent of their locations. They can participate while being at home, in

institution's lab, internet cafes, libraries, or anywhere else internet connection is available, or even wireless connections have expanded the interaction between participants and researchers (Fraley, 2007).

Skitka and Sargis (2005) considered it as transitional applications of the internet that is online realization of the traditional research paradigms. Researchers have identified several benefits of online data collection despite being relatively new in educational sphere. Online data collection is considered an efficient and convenient choice to the more traditional in-person method of collecting data from students, parents, and teachers. Web surveys not only assure a shorter time span for data collection but are also less time consuming and cost effective. The World Wide Web provides the opportunity to approach a varied nature of global population with the possibility of large amounts of data.

Additionally online data collection offer ease of data entry, speed of data entry, and the avoidance of data entry errors which save us from losing our data and easily transfer the data into a database for analysis (Carbonaro & Bainbridge, 2000; Ilieva, Baron & Healey, 2002; Langerak, Duhamel, 1998; Schonlau, Fricker, Elliott, 2001; Stanton, 1998). Moreover, McCabe (2004) highlighted that a web-based survey make it easy to get a higher response rate than a traditional mail survey in a short time period and to reach larger even international samples with comparatively low participant attrition, specifically in case of researching hidden populations (Ilieva et al., 2002; Stetina, Jagsch, Schramel, Maman, Kryspin-Exner, 2008).

Though the issue of sampling has been primary concern in internet-based research but on the other side researches using web for data collection have an edge over mail-out surveys and interviews regarding follow-up contact. With the help of



more advance forms of technology such as linking to text messages via mobile phones, follow-up e-mails, and follow-up reminders on Face book pages can be automatically send (Comber, 1997). Internet based research provides substantially more choices for researchers to have follow-up of the participants as compared to traditional methods of contact such as, letters and telephone calls.

Previous studies have also demonstrated that in comparison to paper-based methods, participants responding through Internet reported lower social desirability, lesser social anxiety, more self-focused reflection and greater self-disclosure and higher level of self-esteem (see Boyd, Esteban, McCabe, & Teeter, 2006; Davis, 1999; Wang et al., 2005). Guise, Chambers, Valimaki, and Makkonen (2010) used the mixed-mode approach for data collection by combining both web and paper questionnaires to observe attitude of nurses towards psychological problems and found that mixed-mode method was quite useful in increasing overall response rate. Moreover they encouraged researchers to use internet technologies as a mode of collecting data, either for single-mode or mixed-mode studies (Braithwaite, Emery, Lusignan, & Sutton, 2003). Ahren (2005) argued that the benefits of internet-based research outweigh its methodological concerns regarding its potential threats to reliability and external validity, and it is no more risky than traditional observational survey or experimental methods (Kraut et al., 2004).

As Internet has played a significant role in changing the communication patterns, commerce, and the distribution of information, so it is also making a significant contribution in psychological research. Psychologists not only can observe new or rare phenomenon online but can also do research more efficiently on traditional psychological topics that enables them to expand the scale and enhance

scope of their research. The very obvious use of internet for a personality research is collection of questionnaire data. It is comparatively easy to obtain a large amount of data which can be used for number of research purposes, such as questionnaire development, item analysis, norms development and conducting correlational research.

An additional advantage is that responses can be automatically coded by the web server saving the energy and effort of data entry. Due to automatic storage of data, it is readily available and allows researcher to monitor the progress of the study easily (Fraley, 2007). Lefever, Michael, and Matthiasdottir (2007) noted that use of e-survey was economically beneficial in spite of service charges of the company. In comparison to web survey traditional paper-and-pencil survey include the costs required for questionnaire administration its paper and printing, postage, training of the hired staff, travel expenses, and costs for data entry. It is estimated that all together, the costs for the online data collection were approximately less than half traditional data collection methods.

## **Objectives**

The underlying objective behind this part of the study was to collect online data on measures of procrastination, DASS, and SWLS. The rationale behind developing the website was to check the reliability of the procrastination scales via an additional source of data collection (i.e., online data) and to further enhance the generalizability of findings of the study regarding the effect of procrastination type (i.e., differences of nonprocrastinators, active procrastinators, and passive

procrastinators) on level of depression, anxiety, and stress, and satisfaction with life. Results of study may be utilized in future by psychologists, counselors and practitioners to offer their services via online counseling or in-person to overcome passive procrastination so it will prove helpful for procrastinators in defeating procrastination. For providing services to any population one must have some reliable instruments for assessment of particular construct and this part of the study aimed to check the reliability of procrastination and related outcome measures for Pakistani adolescent online population.

### **Procedure**

To collect online data a website was developed with the help of an expert in web developing. During process of website development multiple sources were approached. Figure 1 illustrates the sources of website development.

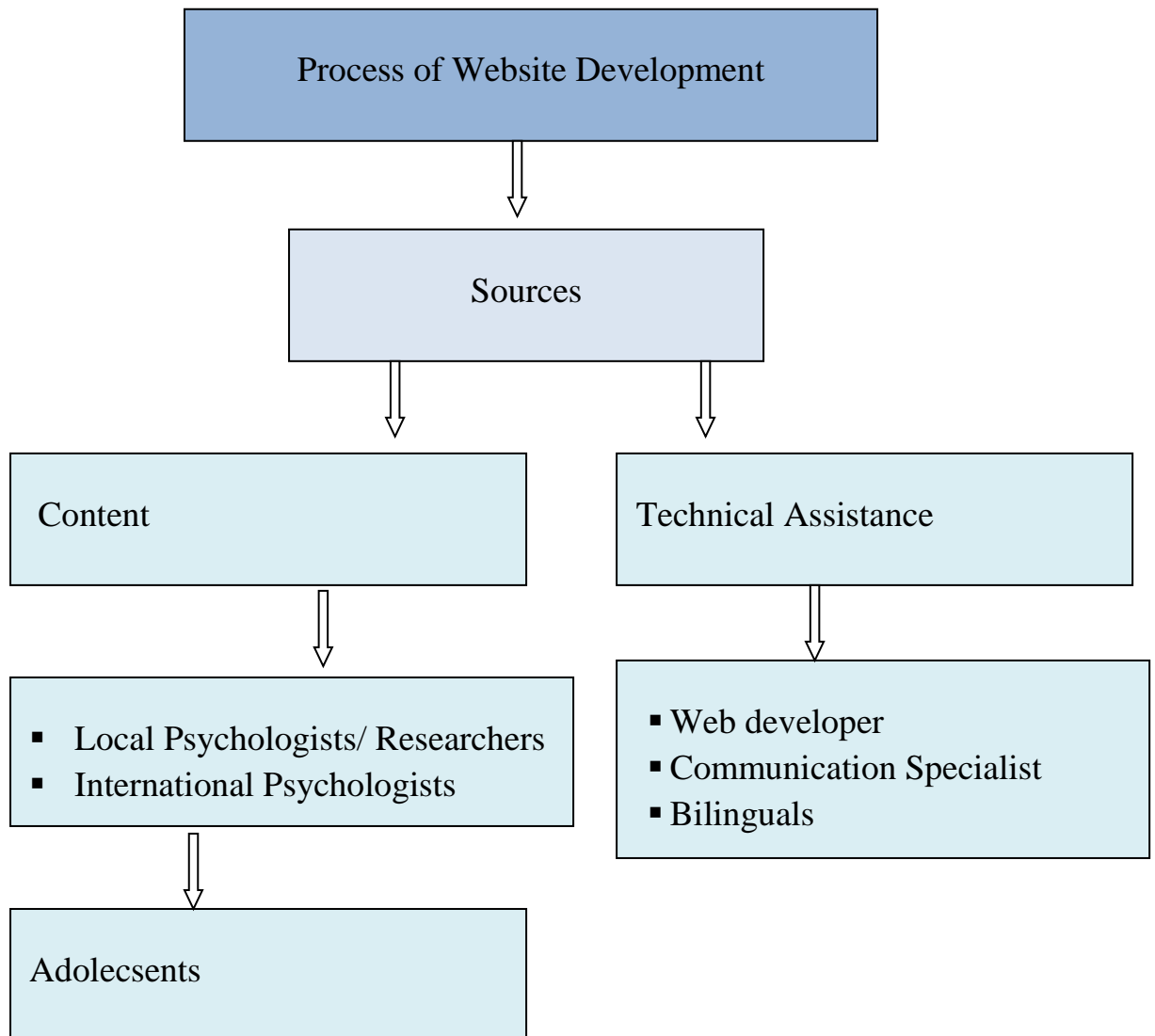


Figure 1. Process of website development

The procedure of website development was completed in following five steps (for detail of procedure see Appendix-O).

Step I: Developing a Database Structure

Step II: Designing Web Pages

Step III: Coding of Website

Step IV: Testing the Website

Step V: Launching the Website

### **Sample**

The response rate for this phase of study could not be determined in advance as sample of this phase was not actively recruited. Their participation was purely on the basis of their intrinsic motivation. A closer look into user results showed that over all 201 Pakistani adolescents voluntarily participated in the study within period of two weeks and out of those 201 adolescent participants 60% ( $n = 120$ ) were males and 40% ( $n = 81$ ) were females (Figure 2). The participants' age range was 13-21 years ( $M_{\text{age}} = 18.5$  years,  $SD = 5.79$ ) and they belonged to 12 major cities and 26 small cities of Pakistan (Figure 3). Participants from other countries ( $n = 35$ ) were not included in the analysis. To minimize the risk of counterfeit due to anonymity concerns on behalf of participants, they were left to participate on their intrinsic motivation. Moreover they were given the choice to mention their name if they would like to, otherwise their user id was used as their identity.

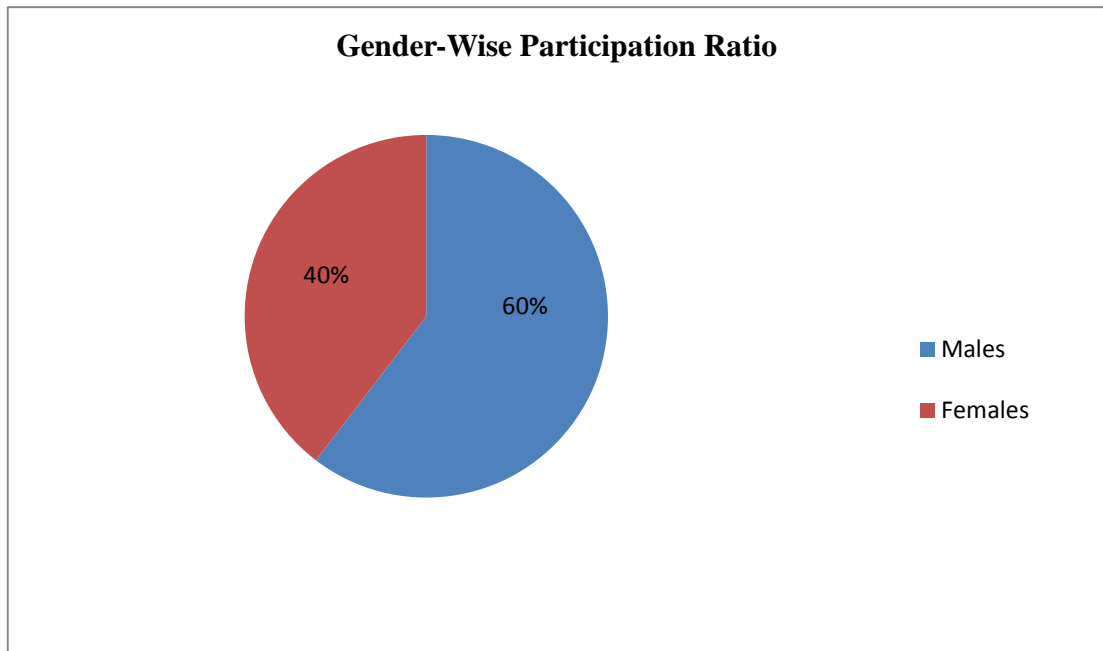


Figure 2. Gender-wise participation ratio

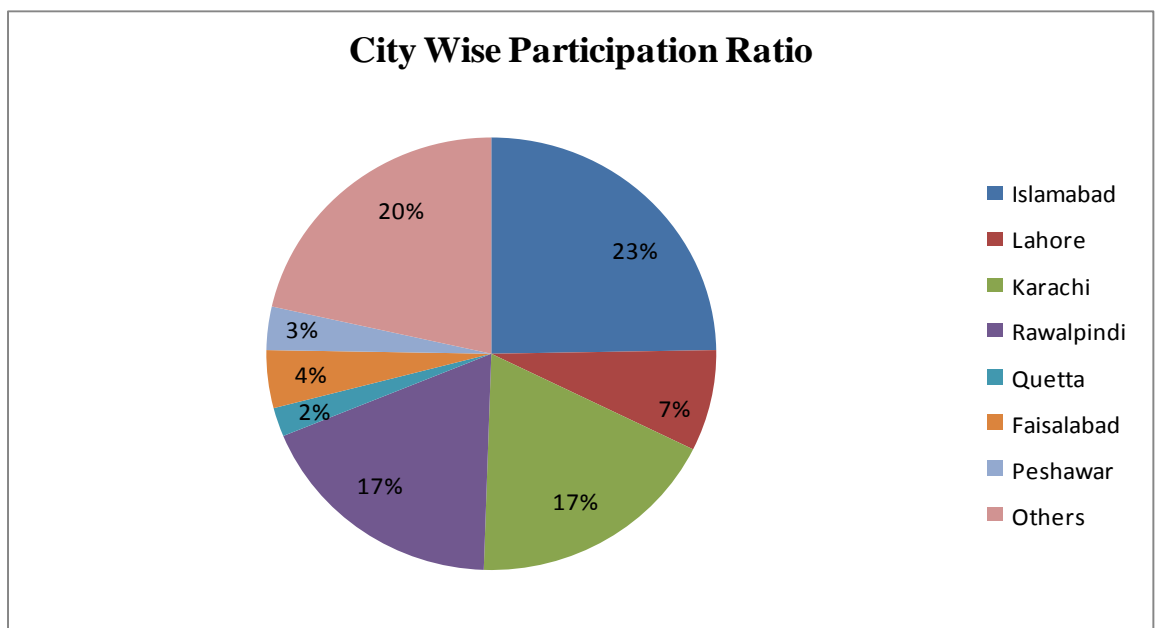


Figure 3. City wise participation ratio

## **Instruments**

All the instruments used in this part of the research were uploaded in Urdu as well as in English language. The justification for using the questionnaires in both languages (i.e., Urdu and English) was dual medium of instruction in our education system as some adolescents feel more confident and comprehend well in their local language or vice versa. Overall respondents had to attempt 48 items which were not so draining to distract the respondent. Measure of procrastination and measures of outcome variables (i.e., DASS & SWLS) were used for online data collection whereas no measure of correlate variables was used for online data collection. Following instruments were uploaded on the website that appeared to each respondent in random orders in a way that for every respondent who registered himself to participate in the study the sequence of questionnaires appeared to him was one out of these orders, NAPS, PPS, DASS and SWLS; DASS, SWLS, NAPS and PPS; and SWLS, NAPS, PPS, and DASS (for details of instruments See Part II).

- New Active Procrastination Scale (NAPS; Choi & Moran, 2009, see Appendix-C & F)
- Passive Procrastination Scale (PPS; Chu & Choi, 2005, see Appendix-E & F)
- Depression, Anxiety and Stress Scale (DASS; Lovibond & Lovibond, 1995; Aslam, 2007-U, see Appendix-K & L)
- Satisfaction With Life Scale (SWLS; Diener et al., 1995; Zahid, 2002-U, see Appendix-M & N)

In present part the English and Urdu versions of NAPS were used to measure the level of active procrastination among adolescents. For English version instead of original English version of NAPS and PPS, the back translated version (see Appendix-F) was used with the permission (see Appendix-T) of the author. The reason behind using the back translated version of NAPS was that in the original version few items were somewhat conceptually not clear to the participants so it was decided to use back translated version of the NAPS as Carbonaro and Bainbridge (2000) also highlighted that that web surveys must be designed in such a way that they are simple and easy to comprehend by the target sample.

## **Results**

As phase I of Part III was aimed to collect online data which may not only enhance the validity of findings but may also prove to be helpful in assessment of procrastination level and providing online services to Pakistani adolescent procrastinators to cut short their procrastination tendencies and to maximize their potentials. Results of this part show the descriptive statistics, alpha coefficients, interscale correlations, and effect of procrastination type i.e., among nonprocrastinators, active procrastinators, and passive procrastinators on depression, anxiety, stress, and life satisfaction.

Results shown in Table 21 indicate the mean scores and standard deviation and score ranges (minimum-maximum) on NAPS, PPS, subscales of DASS and SWLS. Alpha reliability coefficients of scales were also determined to see the reliability of scales with reference to online data. Findings show sound and



satisfactory reliability of the scales that ranged from .78 to .86. Values of skew are less than 1 indicating the normality of data.

**Table 21**

*Psychometric Properties of Major Study Variables (N = 201)*

S. No	Scales	No. of Items	<i>M</i>	<i>SD</i>	$\alpha$	Score Range		Skew
						Potential	Actual	
1.	NAPS	16	65.44	(16.2)	.78	16-112	26 - 107	-.006
2.	PPS	6	25.11	(9.48)	.83	6-42	6 – 42	-0.28
3.	Depression	7	8.03	(4.91)	.86	0-21	0 – 19	0.28
4.	Anxiety	7	6.58	(4.85)	.78	0-21	0 – 19	0.46
5.	Stress	7	6.47	(5.43)	.80	0-21	0 – 20	0.66
6.	SWLS	5	16.16	(4.74)	.80	5-25	7 – 25	-0.14

*Note.* NAPS = New Active Procrastination Scale; PPS = Passive Procrastination Scale; DASS = Depression Anxiety Stress Scale; SWLS = Satisfaction With Life Scale.

Table 22 indicates the relationship pattern among variables. Interscale correlation showed that no such relationship exists between NAPS and PPS and both constructs are of distinct nature. Significant negative correlation was found between NAPS scores and all subscales of DASS (i.e., depression, anxiety, and stress) whereas significant positive correlation was observed with SWLS. Moreover the pattern of relationship that emerged between PPS and other measures showed significant positive correlation between passive procrastination and subscales of DASS. A significant but negative relationship was found between passive procrastination and life satisfaction. All the subscales of DASS had significant positive relationship with each other and significant negative correlation with SWLS. These findings indicate that those who report high level of active procrastination experience less depression,

anxiety, and stress but are more satisfied with their lives. On the other hand those who report high level of passive procrastination experience more depression, anxiety, and stress but have less satisfaction of life.

**Table 22**

*Inter Correlations for Scores on NAPS, PPS, DASS Subscales, and SWLS (N = 201)*

Scales	1	2	3	4	5	6
1. NAPS	-	-	-	-	-	-
2. PPS	.04	-	-	-	-	-
3. Depression	-.49**	.16*	-	-	-	-
4. Anxiety	-.38**	.21**	.75**	-	-	-
5. Stress	-.48**	.41*	.82**	.71**	-	-
6. SWLS	.41**	-.14*	-.40**	-.35**	-.50**	-

*Note.* NAPS = New Active Procrastination Scale; PPS = Passive Procrastination Scale; DASS = Depression Anxiety Stress Scale; SWLS = Satisfaction With Life Scale.

\*\* $p < .01$ .

***One-way MANOVA between Groups of Procrastinators.*** One way MANOVA or multivariate analysis of variance was carried out to see that one or more independent variables, or factors, have an effect on a set of two or more dependent variables.

To see the difference among respondents with regards to their procrastination tendencies and other variables such as depression, anxiety, stress, and life satisfaction, all the respondents were categorized in to three groups; nonprocrastinators, active procrastinators and passive procrastinators. To run series of comparisons these groups were created in a two step process. First procrastinators were differentiated from nonprocrastinators on the basis of median split on PPS ( $Mdn = 26$ ). In sample of this phase of study procrastinators ( $n = 100$ ) were separated from nonprocrastinators ( $n = 101$ ). Those who scored less than 26 on PPS were categorized as nonprocrastinators

and those who scored above median score of 26 were categorized as procrastinators. In second step, procrastinators were further categorized into active and passive procrastinators on the basis of median split on NAPS ( $Mdn = 65$ ). In a way those who scored above median were categorized as active procrastinators and those who scored below median were considered as passive procrastinators. This resulted the whole sample of ( $N = 201$ ) participants in three different groups; nonprocrastinators ( $n = 101$ ), active procrastinators ( $n = 50$ ), and passive procrastinators ( $n = 50$ ). As all the participants responded on both the measures of procrastination so a closer examination of scores revealed that nonprocrastinators were those who were low on both the scales, meaning below the median (i.e., NAPS & PPS), passive procrastinators were those who were high on PPS and low on NAPS, whereas active procrastinators were those who scored low on PPS and high on NAPS (see Table 23 for mean and SD of three groups). This produced three comparable groups.

Power analysis was run to compute power of the test with predetermined sample size ( $N = 201$ ). Post hoc compute power test revealed that with medium effect size and alpha .05, power of the test was found to be .92. Moreover checking out the Box's  $M$  test findings showed that the test is nonsignificant which means that assumptions of homogeneity of variance are met. A one-way MANOVA revealed a significant multivariate main effect for procrastination category, Wilks'  $\lambda = .813$ ,  $F(8, 390) = 5.31$ ,  $p < .001$ , partial eta squared = .098 and power to detect the effect was .99. Since the  $F$  test was significant so one way ANOVA was carried out. As the experiment-wise alpha protection provided by the overall or omnibus  $F$  test does not extend to the univariate tests so there is a need to divide confidence levels by the number of tests intended to perform. In this case to look at  $F$  tests for the four

dependent variables an alpha level required is  $< .012$  ( $.05/4$ ). The Levene's statistics for the four DVs (i.e., depression, anxiety, stress & life satisfaction) that had significant univariate ANOVAs are all non-significant, meaning that the group variances were equal, so we can use the post hoc tests for comparing pair-wise group means. Significant univariate main effects for procrastination category were obtained for depression,  $F(2, 198) = 6.932$ ,  $p < .012$ , partial eta square = .065, power = .92; anxiety,  $F(2, 198) = 4.57$ ,  $p < .012$ , partial eta square = .04, power = .77; stress,  $F(2, 198) = 5.40$ ,  $p < .012$ , partial eta square = .05, power = .82; and life satisfaction  $F(2, 198) = 18.72$ ,  $p < .012$ , partial eta square = .18, power = .97.

Table 23 shows the result on one way analysis of variance (ANOVA) for the DASS subscales and SWLS with respect to nonprocrastinators, active procrastinators, and passive procrastinators. As the group sizes were unequal so Hochberg's GT2 and Games-Howell procedure were used for Post hoc multiple comparisons. Levenes' Statistics indicated that assumption of homogeneity of variance was met. Findings of Table 23 revealed significant differences on all subscales of DASS in terms of depression, anxiety, stress, and life satisfaction across three groups. Analysis of mean scores indicates that passive procrastinators experience more depression, anxiety, and stress as compared to nonprocrastinators and active procrastinators. To explore further, Post hoc comparisons were run which illuminated the significant difference between nonprocrastinators, active procrastinators, and passive procrastinators. Findings signify that on all the subscales of DASS (i.e., depression, anxiety, and stress) significant difference lies only between active and passive procrastinators. Regarding level of life satisfaction experienced by nonprocrastinators, active procrastinators and passive procrastinators it was observed that there is a significant

difference among groups. In addition results showed that difference was significant between nonprocrastinators and passive procrastinators and between active and passive procrastinators. Analyses of mean scores demonstrate that nonprocrastinators and active procrastinators are more satisfied with their life than their comparison group of passive procrastinators.

**Table 23**

*Mean, Standard Deviation, F values, and Hochberg's GT2 test for Nonprocrastinators, Active Procrastinators, and Passive Procrastinators on Depression, Anxiety, Stress, and Life Satisfaction (N = 201)*

Scales	NP (n = 101)		AP (n = 50)		PP (n = 50)		F	i-j	MD(i-j)	SE	95% CI		$\eta^2$
	M	SD	M	SD	M	SD					LB	UB	
Depression	7.81	(5.00)	6.8	(4.50)	10.22	(4.61)	6.93**	AP-PP	3.32	0.89	1.16	5.49	.06
Anxiety	6.15	(4.72)	6.00	(4.55)	8.50	(5.23)	4.57**	AP-PP	2.65	0.89	0.48	4.81	.04
Stress	6.22	(5.35)	5.42	(5.40)	8.55	(5.31)	5.40**	AP-PP	3.26	1.00	0.85	5.66	.05
Life Satisfaction	16.48	(4.78)	17.82	(3.61)	13.07	(5.09)	18.72**	NP-PP	2.94	0.82	0.97	4.92	.18
								AP-PP	5.13	0.83	3.11	7.15	

*Note.* NP = Nonprocrastinator (NAPS:  $M = 64.21$ ,  $SD = 17.71$ ; PPS:  $M = 15.74$ ,  $SD = 5.76$ ); AP = Active Procrastinator (NAPS:  $M = 75.21$ ,  $SD = 9.66$ ; PPS:  $M = 21.28$ ,  $SD = 4.27$ ); PP = Passive Procrastinator (NAPS:  $M = 52.10$ ,  $SD = 11.04$ ; PPS:  $M = 32.04$ ,  $SD = 4.42$ ). MD = mean difference; CI = confidence interval; LL = lower limit; UL = upper limit.  $df = (2, 198)$ .

\*\* $p < .01$ .

### **Reactions from Respondents**

The voluntary nature of this part of the study was reflected from feedback provided to the researcher. Some of the participants were quite keen to know more about the nature of study, expected findings, and how to overcome procrastination tendencies. Most of the respondents found it interesting to participate in the study which may be due to their own willingness to volunteer for participation whereas few (i.e., six) respondents left the survey half way by not completing the questionnaires or by not submitting the questionnaire. The underlying reason may be loss of interest before finishing the questionnaire or some technical problems while submitting the questionnaire such as low speed of internet, load shading, and so forth. By giving due importance to participants' reactions towards the study in future response rate can be improved.

### **Discussion (Phase I)**

This part of the research dealt with the online data collection and to meet this objective a website ([www.procrastination-research.edu.pk](http://www.procrastination-research.edu.pk)) was developed. The underlying rationale behind this phase of the research is based on the growing interest of Pakistani population in use of internet and facts and figures provided by Internet World Stats (2010) which indicate that 10.4% of the total Pakistani population is internet users and among Asian top 10 internet countries Pakistan stands at rank 7. The estimated population that fall under the age of 25 years is around 103 million or 63% and the youth literacy rate for age 15-24 years is estimated to be 53% (Board of

Investment: Government of Pakistan). The estimated number of internet users within Pakistan by World Bank report (2012) in year 2010 is approximately 29128969.67. Above mentioned facts and figures highlight the emerging trend of internet usage in adolescent population and signifies its importance as an advance mode of communication.

The task of website development for online data collection was completed in five steps with the help of a web developer. In Step I, a data base structure was developed, Step II aimed for designing of webpage, Step III dealt with the coding of website, in Step IV testing of the website was executed and finally Step V aimed for launching the website (see Appendix-O). Once the website was launched an invitation for volunteer participation in the study was posted on different educational community groups. Data of the participants was retrieved intermittently and after two week period. Overall 201 adolescents from all over the Pakistan who participated in the study were included in analysis.

Preliminary statistical analysis revealed sound internal consistency of the scales. The relationship pattern that emerged among variables revealed no significant relationship between NAPS and PPS indicating the distinct nature of the constructs. Previous findings of pilot study also showed active and passive procrastination as separate constructs. Results revealed significant negative correlation between NAPS scores and DASS subscales which indicate that those who are high on active procrastination experience less depression, anxiety, and stress. These results substantiate the findings of pilot study where the direction of relationship was negative between active procrastination, depression, anxiety, and stress, but this relationship was significant only between active procrastination and anxiety. This



may be due to small sample size that is a potential limitation of pilot study. These findings confirm the previous findings of McCown et al. (1987) and Haycock, McCarty, & Skay (1998) in which similar pattern of relationship between procrastination and anxiety was observed. Significant positive correlation was observed between active procrastination and satisfaction with life which shows that those respondents who report high level of active procrastination also report high level of life satisfaction. Moreover these findings are in accord to findings of pilot study that also revealed a significant positive relationship between active procrastination and life satisfaction. These findings substantiate the previous findings of Chu and Choi (2005) and Choi and Moran (2009). Though some of the correlations were low in magnitude but they were significant and were in expected direction of relationship. This may be due to a new mode of data collection for which respondents are not used to. Results of phase II would further enhance the clarity of these findings.

As regards to passive procrastination, significant positive correlation was found with DASS subscales indicating that those who are high in passive procrastination experience more depression, anxiety and stress. Findings of pilot study also showed similar pattern of results where significant positive correlation was found between passive procrastination and depression and stress. These findings are in accord to previous study of Fritzsche et al. (2003) in which procrastination of university students was found to be related to depression and anxiety. A significant negative correlation was observed between passive procrastination and life satisfaction showing that those who passively procrastinate are less satisfied with their lives. These results also validate the results of pilot study where a significant negative correlation was found between passive procrastination and life satisfaction. Moreover

significant positive correlation was observed between all subscales of DASS which shows that depression, anxiety and stress are related to each other and the likelihood is greater for one who is experiencing depression may also experience anxiety and stress as well. All the subscales of DASS were found as significant negative correlates of life satisfaction which is an indication that one who is experiencing depression, anxiety, or stress is less likely to be satisfied with his/her life.

To observe the main effect for procrastination category, one-way MANOVA was carried out after checking the assumptions of homogeneity of variance. Findings revealed a significant multivariate effect of procrastination category on dependent variables so it was followed by univariate ANOVA to see the differences between different groups of procrastinators. Results showed significant differences across groups in their level of depression, anxiety, stress, and life satisfaction. These findings were in accord to previous findings of Chu and Choi (2005) in which significant difference was observed across three groups. For post hoc comparisons, Hochberg's GT2 and Games-Howell procedure were used. Levenes' Statistics was further used to check the assumption of homogeneity of variance. Post hoc comparisons further revealed that on depression, anxiety, and stress the difference was significant between active and passive procrastinators whereas for life satisfaction this difference was also significant between nonprocrastinators and passive procrastinators and between active and passive procrastinators. Findings of this part highlighted that in terms of negative consequences of procrastination, active procrastinators are somewhat similar to nonprocrastinators indicating that due to being multifaceted phenomenon active procrastinators do not experience negative outcomes of their behavior.

Overall this part of the study proved to be an accomplishment as it led to a successful launch of a website that has a remarkable feature of online data collection. With reference to psychological researches conducted in Pakistan there is no such precedent available to conduct psychological research online. Keeping in view the advancement in technology, the impact of globalization, rapidly growing interest of Pakistani population in use of internet within all age groups, it is the demand of time to introduce new and advance methods of data collection to researchers and also to familiarize respondents with this mode of responding. Participation in online research not only assures anonymity on respondents' part but also save their time, and allows more self-deliberation.

Moreover website can be further utilized to provide assessment and online counseling services to those who have procrastination tendencies. Those who are in habit of putting things off, making unnecessary delays, and want to assess their level of procrastination and in turn need some guidance and help to curb this menace which has not only rotten their potentials but also leads to wastage of time and money. It will help them to manage their time efficiently in today's world where everyone has to meet number of deadlines in a shortest span. With futuristic perspective after determining a personality profile of Pakistani procrastinator, other measures of related constructs can also be uploaded on the website for assessment and their respective online counseling services may also be offered. In addition, as the content of the website is in both languages (i.e., Urdu and English) so it facilitates the respondents to comprehend the content accurately depending on their command of language.

Since adolescents are the frequent users of internet so it would facilitate them to avail online counseling services as in Pakistan still people do not want to disclose

their identity while seeking psychological services due to fear of being stigmatized and want to remain anonymous while asking for some psychological help, no matter how trivial is the concern in nature. Once the cut-off score for any specific population is determined it can be used for self-assessment and if a participant finds him above the cut-off score and ask for some psychological help, that can be offered via online psychological services. Furthermore as the present research also deals with in-person data so comparison of reliability of measures and cut-off scores for identifying different types of procrastinators can also be determined separately for both types of population that is, traditional and online.

After carrying out phase I which was about development of website and online data collection next phase (i.e., phase II) of the main study dealt with in-person data collection with a relatively large sample size ( $N = 500$ ) as an augment to the findings and to run more complex statistical analyses such as CFA and logistic and multiple regression analysis.

### **Phase II: In-person Data Collection**

Phase II of main study was carried out on a relatively larger sample than pilot study with more detailed analysis, and thorough concentration on construct of active and passive procrastination. Statistical package for social sciences (PASW. 18) was used to run a series of statistical analysis to analyze the data.

## Objectives

This phase aimed at meeting the objectives of present research and to test the formulated hypotheses. Besides exploring the effect of different types of procrastination through one way MANOVA, this part of research also dealt with some more analysis to have deep understanding regarding construct of active procrastination like CFA to confirm the four factor structure of NAPS. Some exploratory analyses were also run to identify the predictors of active and passive procrastination, outcomes of different types of procrastination behavior (i.e., nonprocrastinators, active procrastinators, and passive procrastinators), and to study the role of some personal and social variables in active procrastination of adolescents (such as, age, gender, education, parents education, and grade).

## Participants

In this phase 525 Pakistani adolescents were initially contacted but out of those 500 adolescents (52.6% boys, 47.4% girls;  $M_{\text{age}} = 15.77$  years old,  $SD = 1.87$ : age range = 13–21 years) who were selected through convenience sampling volunteered to participate and responded with zeal. The underlying reason to approach relatively larger sample than previous phases of research was to conduct some more intricate analysis (such as, CFA and multiple regression analysis) for which data size should be reasonably large enough. The education level of participants ranged from matriculation to graduation. Among them 49.8 % were doing matriculation whereas 50.2% were studying in graduate classes. In order to approach the participants

researcher contacted the head of different educational institutions from Rawalpindi and Islamabad in their respective departments. They were informed about the objectives and the significance of the study and were requested to grant permission for data collection. After getting permission from nine different educational institutions (i.e., F. G. Boys Higher Secondary School G-6/2; F. G. Boys Model School I-8/4; F. G. Boys Model School G-7/4; F. G. Boys High School, Rawal Dam; F.G. Boys Model School G-6/4; Islamabad College for Boys G-6/2; Islamabad College for Girls, F-6/2; Islamabad Model College for Girls, G-10/2 and Government Post Graduate College for women, 6<sup>th</sup> road, Satellite Town, Rawalpindi) researcher approached the participants in their respective classes. The administration of three of the educational institutions did not allow collecting data from adolescents studying in their institutes due to exams schedule and some of their security and administrative issues.

### **Instruments**

The instruments used in main study were the same as in pilot study and were found to have sufficiently sound psychometric properties. Urdu versions of the following scales along a demographic information sheet (e.g., name, gender, age, education, institution, mother education, father education, and grades achieved) containing consent from the respondent were used to collect data (see Part III for details of the instruments).

- New Active Procrastination Scale (Choi & Moran , 2009, see Appendix- C)
- Passive Procrastination Scale (Chu & Choi, 2005, see Appendix- E)

- Time Management Behavior Scale (Macan et al., 1990; Akhtar, 2005-U, see Appendix- G)
- General Self-Efficacy Scale (Schwarzer & Matthias, 1993; Nawaz, 2004-U, see Appendix- H)
- Brief COPE (Carver, 1997; Akhtar, 2005, see Appendix- I)
- Mini Marker Set (Saucier, 1994, see Appendix- J)
- Depression Anxiety Stress Scale (Lovibond & Lovibond, 1995; Aslam, 2007-U, see Appendix- L)
- Satisfaction With Life Scale (Diener et al., 1995; Zahid, 2002-U, see Appendix- N)

Besides the above mentioned scales participants were also asked to mention the extent to which they consider their procrastination habit as a problem for them on a three point rating scale that ranges from 1 (*not at all problematic*) to 3 (*too much problematic*).

## **Procedure**

The researcher personally contacted the head of institution and briefed them about the nature and purpose of study. They were told that survey is about study and work styles of people and their personality characteristics. It has no hidden purpose and researcher is merely interested to know your opinion regarding your own study

and work style, and how it is influenced by different personality traits. After seeking their permission participants were approached in their respective classes. Parents' permission was not sought as the questionnaires did not contain any private information. Only those participants who were intrinsically motivated to participate were given the opportunity to be part of the research. Those participants who were not willing to participate due to any reason were allowed to leave the room. To get maximally honest responses participants were kept free from any undue pressure to participate. Overall 15 participants showed lack of interest to participate in the study. Participants were assured about the confidentiality of the information and instructions regarding how to respond on a certain measure were also imparted to them. Participants were handed over the set of measures containing questionnaires in counterbalanced order in a way that for one third of the participants the order of procrastination scales was first, then for other one third respondents procrastination measures were in the middle and to the rest of the respondents it procrastination measures were given last in the order. Then the participants were asked to take a start. On average participants took one hour and fifteen minutes to complete all the measures. They were asked once again to go through the whole set of measures before handing it over to the researcher, lest they may not skip any item. Their participation was appreciated and acknowledged.

## **Results**

Phase II of main study was conducted to test the formulated hypotheses cited in Chapter II (Method, p. 64) and as an augment to the credibility of the findings of



pilot study. In this part of the research some more advance and complex analysis were carried out. Being a new and emerging construct, active procrastination has not been previously studied in indigenous context so it was deemed essential to run Confirmatory Factor Analysis to verify its four factor structure. Moreover the relationship of active and passive procrastination with rest of the study variables was also ascertained. Logistic regression analysis was carried out to explore the predictor variables of active and passive procrastination.

Role of different types of procrastination in determining the outcome variables was also explored through multiple regression analysis. One-way MANOVA followed by univariate ANOVA was computed to see the differences among nonprocrastinators, active procrastinators, and passive procrastinators in terms of their time management behavior, self-efficacy, coping strategies, personality traits, level of depression, anxiety, stress, life satisfaction and performance. In addition some exploratory analyses were also run to see the effect of person-social variables on variable of active and passive procrastination. Following results of the main study will be helpful in having profound understanding of the above mentioned analyses.

Table 24 shows the descriptive statistics and psychometric properties of the major study variables. Values of alpha coefficient shown in table indicate that all the measures are internally consistent and have sufficiently sound reliability. Summary statistics (Table 24) revealed that there is no restriction of ranges that enhances the strength of the findings. Moreover frequency distributions indicate that the values of skew are close to 0 and not exceeding 1, which shows that most of the distributions are close to symmetry. A closer examination of alpha level of scales have sound reliabilities, except some subscales such as emotion focused coping of Brief Cope,

and agreeableness and emotional stability subscale of Mini Marker Set, but as these subscales have been used extensively in indigenous context ( Bashir, Hanif, Nadeem, 2014; Khurshid, 2011) and reported alpha for these subscales in those studies was also low, even the original Urdu translated version on which the norms were established also reported the alpha for Mini Marker Set subscales ranging from .38 to .80 (Manzoor, 2000). This may be attributed to contextual and cultural factors, so keeping in view these limitations scales were used for the assessment of related trait.

**Table 24**  
*Psychometric Properties of Major Study Variables (N = 500)*

Scales	No. of Items	<i>M</i>	<i>SD</i>	$\alpha$	Range		Skew
					Potential	Actual	
New Active Procrastination Scale	16	65.48	18.63	.85	16-112	24-100	-0.37
Passive Procrastination Scale	6	27.28	7.65	.72	6-42	7-42	-.052
Time Management Behavior Scale	34	112.4	15.23	.75	34-170	72-152	0.01
Setting Goals and Priorities	10	35.57	6.78	.75	10-50	16-50	-0.24
Mechanics of Time Management	11	35.58	8.16	.77	11-55	12-54	-0.01
Organization	8	26.86	5.05	.60	8-40	12-38	-0.37
Perceived Control of Time	5	16.43	4.67	.72	5-25	6-29	-0.43
General Self-Efficacy Scale	10	29.02	5.76	.83	10-40	13-39	-0.57
Brief COPE	28	75.92	7.70	.70	28-112	39-99	-0.64
Problem Focused Coping	6	19.34	2.96	.61	6-24	7-24	-1.0
Emotion Focused Coping	10	28.51	4.25	.55	10-40	12-37	-0.70
Dysfunctional Coping	12	28.88	5.08	.61	12-48	16-43	0.07
Mini Marker Set	40	16.48	1.60	.62	8-40	11.63-21.13	0.12
Extraversion	8	3.1	0.72	.67	1-8	1.38-4.75	-0.06
Agreeableness	8	3.68	0.45	.52	1-8	2.25-4.88	-0.37
Conscientiousness	8	3.18	0.86	.79	1-8	1.00-4.88	-0.68
Emotional Stability	8	3.17	0.62	.53	1-8	1.25-4.88	0.03
Intellect/Openness	8	3.34	0.67	.62	1-8	1.25-4.75	-0.34
Depression Anxiety Stress Scale	21	23.94	12.31	.87	0-63	2.00-58.00	0.46
Depression	7	7.35	4.77	.77	0-21	0-21	0.52
Anxiety	7	7.28	4.85	.64	0-21	0-20	0.46
Stress	7	9.30	4.26	.79	0-21	0-21	0.21
Satisfaction With Life Scale	5	17.54	4.44	.74	5-25	6.00-25.0	-0.64

**Confirmatory Factor Analysis.** Active procrastination being a nascent construct required thorough analysis and it was deemed essential to determine the factor structure of its measure. Choi and Moran (2009) has identified four underlying dimensions of active procrastination and found that 61% of the total item variance was explained by these dimensions. In order to verify the identified factor structure of

a set of observed variables of active procrastination, confirmatory factor analysis (CFA) was conducted using AMOS (version 18) on NAPS. CFA is a powerful technique that allows the researcher to test the hypothesis whether a relationship between observed variables and their underlying latent constructs exists or not. In order to test the factor structure of NAPS with an indigenous sample CFA was run (Figure 4). To meet the objectives all the four factors were designed into one model, and error co-variances were allowed. The model obtained from previous research (Choi & Moran, 2009) showed a good fit to the data (Figure 5) and the final model containing 16 items presented a good model fit (see Table 26) with item loadings ranging from .39 to .77 (see Table 25).

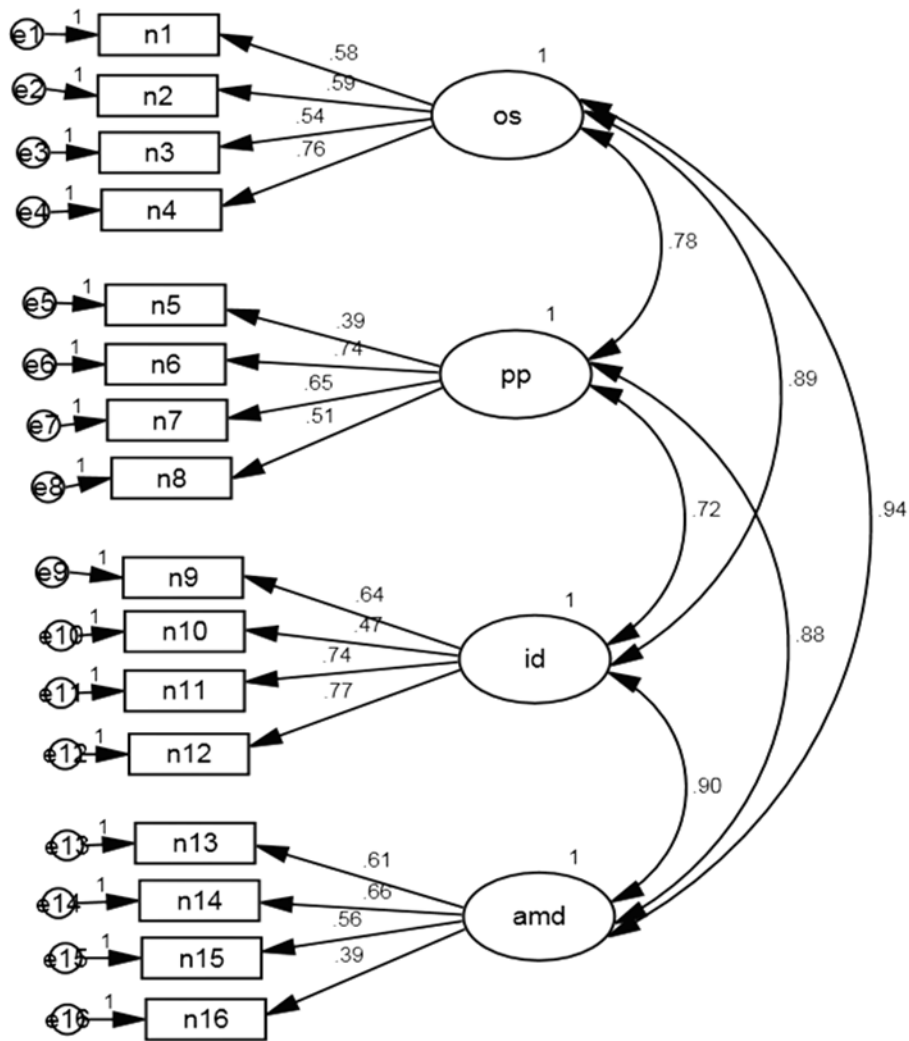


Figure 4. Confirmatory Factor Analysis of the New Active Procrastination Scale

Note. OS = outcome satisfaction; PP = preference for pressure; ID = intentional decision; AMD = ability to meet deadlines

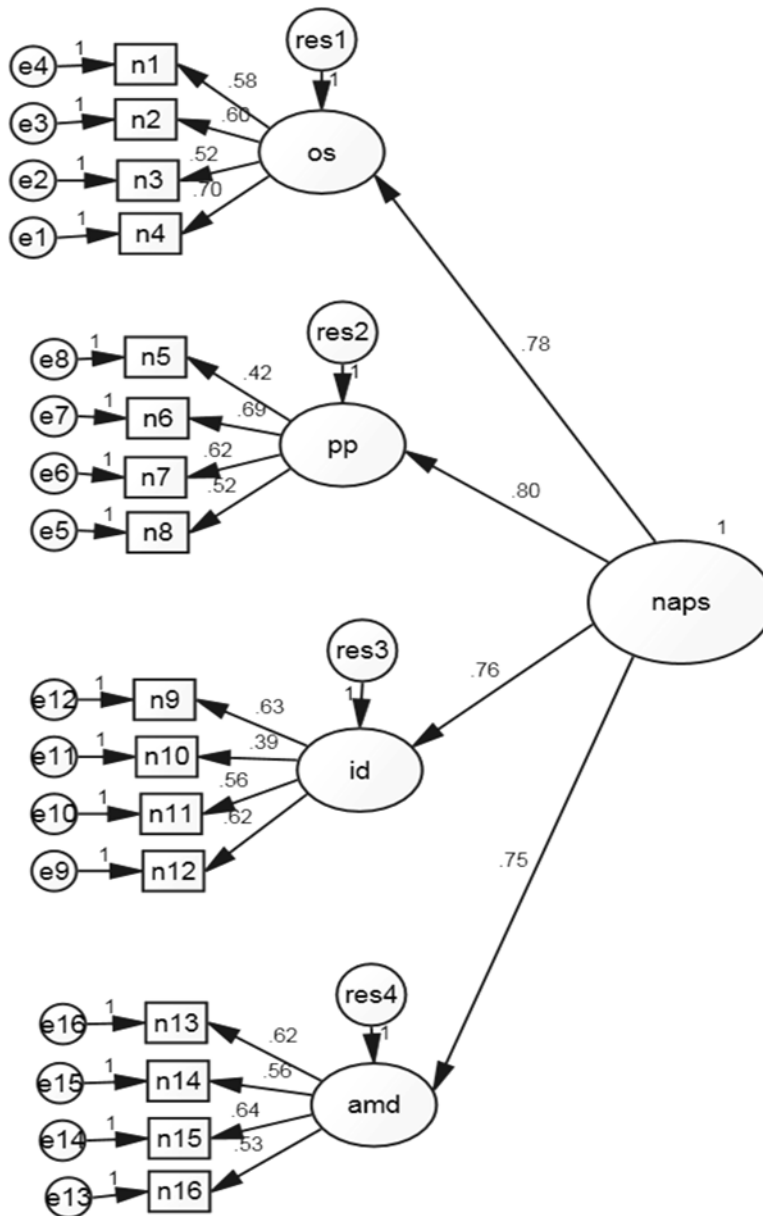


Figure 5. Second-order Confirmatory Factor Analysis of the New Active Procrastination Scale

Note. OS = outcome satisfaction; PP = preference for pressure; ID = intentional decision; AMD = ability to meet deadlines

Table 25

Confirmatory Factor Analysis: Factor Loading/Completely Standardized Regression Weights for Four Correlated Factors (N = 500)

Items	Factors	Items Statements	Factor Loadings
1.	F1	میری کارکردگی اس وقت متاثر ہوتی ہے، جب مجھے مقررہ وقت کے اندر کام کرنا پڑے۔	.58
2.	F1	اگر مجھے جلدی میں کوئی کام کرنا پڑے تو میں اسے صحیح نہیں کر پاتا رہتا ہوں۔	.59
3.	F1	اگر میں چیزوں کو آخری لمحے تک چھوڑے رکھوں تو میں ان کے نتائج سے مطمئن نہیں ہوتا رہتا ہوں۔	.54
4.	F1	اگر میں آہستہ آہستہ کام کرتے ہوئے مقررہ وقت کے اندر اسے مکمل کر لوں تو بہتر نتائج حاصل کرتا رہتا ہوں۔	.76
5.	F2	مقررہ وقت کے اندر کام کرنا میرے لئے حقیقتاً تکلیف دہ ہے۔	.39
6.	F2	مجھے اس کام کو کرنے میں پریشانی اور اکتاہٹ ہوتی ہے، جو مجھے مجبوراً دباؤ کے تحت کرنا پڑے۔	.74
7.	F2	جب میرے پر وقت کا بہت زیادہ دباؤ ہو، میں تناؤ محسوس کرتا ہوں، اور توجہ نہیں دے پاتا رہتا ہوں۔	.65
8.	F2	میں بے چین ہو جاتا ہوں جب مجھے مقررہ وقت پر ہی کام کرنا پڑے۔	.51
9.	F3	میں ارادتاً کچھ کاموں کو ملتوی کرتا رہتا ہوں تاکہ میں اپنے وقت کو زیادہ بہتر انداز میں استعمال کر سکوں۔	.64
10.	F3	میں اپنا شوق اجنبی بڑھانے کی خاطر جان بوجھ کر کام میں تاخیر کرتا رہتا ہوں۔	.39
11.	F3	میں اپنے وقت کے بہتر استعمال کے لئے ارادتاً کچھ کاموں کو چھوڑے رکھتا رہتا ہوں۔	.46
12.	F3	میں اپنی خواہش کے مطابق اپنے اکثر کام مقررہ اوقات سے پہلے مکمل کر لیتا رہتا ہوں۔	.74
13.	F4	میں اکثر کام آخری لمحے شروع کرتا رہتا ہوں اور انہیں وقت پر مکمل کر لینے میں مشکل محسوس کرتا رہتا ہوں۔	.77
14.	F4	میں اکثر اپنے طے شدہ مقاصد کو حاصل کرنے میں ناکام رہتا رہتا ہوں۔	.61
15.	F4	مجھے اپنے کام مکمل کرنے میں اکثر دیر ہو رہی ہوتی ہے۔	.66
16.	F4	ایک مرتبہ کاموں کو شروع کرنے کے بعد مجھے ان کو مکمل کرنے میں مشکل پیش آتی ہے۔	.56

Note. F1(OS) = outcome satisfaction; F2 (PP) = preference for pressure; F3 (ID) = intentional decision to procrastinate; F4 (AMD) = ability to meet deadlines.

### Confirmatory Factor Analysis (Indices of Model Fit).

**Table 26**

*Confirmatory Factor Analysis of NAPS (Indices of Model Fit) (N = 500)*

Model in CFA	$\chi^2$	df	CFI	RMSEA	TLI	NFI
First Order	299.2	89	.90	.06	.92	.91
Second Order	301.0	90	.90	.06	.91	.90

*Note.* CFI = comparative fit index; RMSEA = root mean square error of approximation.

Table 26 shows the findings of second order confirmatory analysis which was conducted to see whether all four factors initially confirmed by CFA are valid aspects of one latent construct that is, active procrastination. Results confirmed that all the four factors loaded significantly on their corresponding dimensions with  $\chi^2$  ( $df = 89$ ) = 299.2, CFI = .90 and RMSEA = .06 and also loaded well on a single factor with  $\chi^2$  ( $df = 90$ ) = 301.0, CFI = .90 and RMSEA = .06 labeled as active procrastination. This supports the theoretically predicted factor structure of the measure of active procrastination (i.e., NAPS).

To establish the construct related validity of active procrastination and passive procrastination and to ascertain the theoretically predicted relations with other variables of the study, Pearson's product-moment correlation was separately computed for active and passive procrastinators to investigate relationship pattern between passive procrastination and major study variables. Correlation among subvariables was not computed in this phase to control type I error and as it has been previously explored in pilot study to check the multicollinearity. Moreover hypotheses were formulated regarding only procrastination and study variables being the major objective of study but not about relationship among subvariables. Results of Table 27 highlight the pattern of relationship among passive procrastination and study



variables for active procrastinators. For active procrastinators findings revealed significant negative relationship between passive procrastination and variables of time management and time control which indicates that as active procrastinators score low on passive procrastination, they report high level of time management and time control due to which they can manage their time more efficiently.

**Table 27**

*Correlation Coefficient between passive procrastination and all the Study Variables for Active Procrastinators (N = 125)*

	Variables	<i>M</i>	<i>SD</i>	<i>r</i>
1.	Passive Procrastination	31.39	4.11	-
2.	Setting goals and priorities	34.75	7.35	-.01
3.	Time management	35.73	7.45	-.22**
4.	Organization	27.0	4.92	.06
5.	Time control	17.84	4.57	-.14**
6.	Self-efficacy	31.72	4.02	-.16*
7.	Problem focused coping	19.86	2.87	-.19**
8.	Emotion focused coping	28.15	4.05	-.02
9.	Dysfunctional coping	28.64	4.78	.08
10.	Extraversion	3.37	.64	-.45**
11.	Agreeableness	3.77	.38	.20**
12.	Conscientiousness	3.01	.90	.28**
13.	Emotional stability	3.50	.56	-.17*
14.	Intellect	3.78	.46	-.15*
15.	Depression	5.24	3.42	.12*
16.	Anxiety	5.29	3.53	.10**
17.	Stress	7.6	3.43	.08
18.	Life satisfaction	19.1	3.38	-.27**

\* $p < .05$ , \*\* $p < .01$ .

In addition results of table also highlight the significant negative relationship between procrastination and self-efficacy and problem-focused coping which shows that being low on passive procrastination active procrastinators perceive them more self-efficacious and frequently employ problem-focused coping strategies.

Regarding personality traits of active procrastinators' significant negative relationship emerged between procrastination and personality traits of extraversion and emotional stability which indicates that for active procrastinators, those who are low on passive procrastination tend to be higher on extraversion, emotional stability, and intellect/openness to experience. Significant positive relationship was observed for active procrastinators between procrastination and personality traits of agreeableness and conscientiousness that highlights active procrastinators as being low on procrastination also scored low on trait of agreeableness and conscientiousness. These findings emphasize that active procrastinators are less agreeable and spontaneous which is also a characteristic feature of their profile as they do not show a planned behavior and follow others' schedule. They have the ability to do multitasking and can reshuffle their plans according to their priorities.

As regards to outcome variables for active procrastinators results indicate significant positive relationship between passive procrastination, depression and anxiety which shows that being low on procrastination they also experience less depression and anxiety. For life satisfaction significant negative relationship highlights that as active procrastinators are low on procrastination so they are more satisfied with their life (see Table 27).

Table 28 highlights the pattern of relationship among study variables for passive procrastinators. Findings show significant positive relationship for passive

procrastinators between passive procrastination and setting goals and priorities but significant negative relationship with time management. These findings signify that as passive procrastinators report higher level of passive procrastination so they also set their goals and priorities in advance and being low in time management are less capable of managing their time. In addition significant positive relationship between passive procrastination and emotion-focused coping and dysfunctional coping indicates that in case of stressful life events passive procrastinators employ more emotion-focused and dysfunctional coping strategies. Significant negative correlation between problem focused coping and passive procrastination indicate that passive procrastinators being high on passive procrastination imply less problem focused coping strategies. As regards to self-efficacy significant negative relationship with procrastination shows that as passive procrastinators are high on passive procrastination they report lower level of self-efficacy.

Concerning personality traits of passive procrastinators results show significant negative relationship between passive procrastination and extraversion, emotional stability, and intellect whereas findings indicate significant positive relationship between passive procrastination and agreeableness. These findings highlight that as passive procrastinators are high on passive procrastination they score low on sociability, emotional stability and creativity whereas they are more agreeable and conforming. Concerning outcome variables results show significant positive relationship between traditional/passive procrastination and variables of depression, anxiety, and stress indicating that as passive procrastinators report high level of passive procrastination they also experience greater level of depression, anxiety, and stress.

**Table 28**

*Correlation Coefficient between passive procrastination and all the Study Variables for Passive Procrastinators (N = 125)*

	Variables	<i>M</i>	<i>SD</i>	<i>r</i>
1.	Passive Procrastination	31.91	3.90	-
2.	Setting goals and priorities	37.06	5.84	.22**
3.	Time management	32.02	9.10	-.23**
4.	Organization	27.38	5.32	.07
5.	Time control	15.61	4.79	-.08
6.	Self-efficacy	25.18	6.39	-.02
7.	Problem focused coping	18.88	2.76	.17*
8.	Emotion focused coping	29.7	4.02	.14*
9.	Dysfunctional coping	30.1	5.42	.46**
10.	Extraversion	2.58	.56	-.58**
11.	Agreeableness	3.76	.44	-.17*
12.	Conscientiousness	3.56	.57	-.25**
13.	Emotional stability	2.80	.47	-.25**
14.	Intellect	2.85	.54	.06
15.	Depression	10.11	4.91	.39**
16.	Anxiety	10.39	4.81	.34**
17.	Stress	11.44	4.21	.33**
18.	Life satisfaction	15.48	4.98	-.34**

\* $p < .05$ , \*\* $p < .01$ .

Significant negative relationship between passive procrastination and life satisfaction shows that as passive procrastinators report higher level of passive procrastination they are less satisfied with lives. These findings illustrate that passive procrastinators report high level of passive procrastination, depression, anxiety, and stress and low level of satisfaction with their life.

Overall results of Table 27 and 28 highlight the relationship pattern among study variables for active and passive procrastinators. Above mentioned findings demonstrate that for active procrastinators who tend to have more time control, seems to manage their tasks timely, are more likely to be self-efficacious and in case of stressful situations may use problem-focused coping strategies that may help them to tackle the problem. They are more likely to be social, emotionally stable, and creative and innovative in their approach, may not follow the rigid time schedule, are less likely to conform to the standards set by others and lack passivity. As regards to outcome variables they may report lesser level of depression and anxiety but tend to be higher as regards to life satisfaction. Contrary to that for passive procrastinators who set their goals in advance as they may lack the ability to manage their time in an effective manner, seems to be less efficacious and may report lower level of emotional stability, innovativeness, and extraversion but are more likely to be agreeable and conforming. Regarding outcome variables passive procrastinators tend to suffer from more depression, anxiety and stress and less likely to be satisfied with their lives.

The relationship of active and passive procrastination to other variables of the study highlights the personality profile of active and passive procrastinator which would be helpful in further analysis to see the effect of procrastination category on

multiple dependent variables and to observe the differences between different types of procrastinators.

*One-Way Multivariate Analysis of Variance (MANOVA) for Comparison of Three Groups of Procrastinators.* One way MANOVA was run to determine the effect of procrastination category on all the DV's and to see whether there are any differences between independent groups (i.e., nonprocrastinators, active procrastinators, passive procrastinators) on more than one continuous dependent variable such as time management behavior, coping strategies, self-efficacy, personality traits, and depression, anxiety, stress and life satisfaction. For the purpose of comparison three equal-sized subgroups were formed in a two-step process. In first step an arbitrary cut-off point which was a median split on Passive Procrastination Scale ( $Mdn = 29$ ) was used to identify nonprocrastinators from procrastinators. Those participants who scored less than 29 were categorized as nonprocrastinators and those who scored above 29 were identified as procrastinators. In our total sample of main study ( $N = 500$ ), 250 participants were categorized as nonprocrastinators and 250 as procrastinators. As the study explored two distinct types of procrastination that is active versus passive so in the next step, 250 procrastinators were further categorized into two groups: active and passive procrastinators. Median split on NAPS ( $Mdn = 70$ ) was used as a cut-off point such as, among participants whose score was more than 70 were considered as active procrastinators ( $n = 125$ ) and whose score was less than 70 were categorized as passive procrastinators ( $n = 125$ ). As respondents took both the measures of procrastination so a closer examination of scores revealed that nonprocrastinators were those who were below the median on NAPS and PPS,

passive procrastinators were marked as high on PPS and low on NAPS, whereas active procrastinators were those scored below the median point on PPS and high on NAPS (see Table 29 for *M* and *SD* of three groups).

Effect estimates in form of eta square ( $\eta^2$ ) were calculated for each inferential test. Power analysis was conducted using G-power 3.1.9.2 to see the effect size produced by the employed sample size, and also to determine the power of the test. For this purpose a post hoc: compute achieved power test was run to see the effect size and power of the test. This revealed that with pre specified sample size ( $N= 500$ ), alpha .05, and the effect size of .25 which is a medium effect size for ANOVA, the power of the test was 0.99 which shows that the sample employed to run the analysis was quite adequate in size.

*Time Management Behavior.* One-way MANOVA was conducted to see the effect of independent variable that is different groups of procrastinators in their time management behavior. The findings of Box's *M* test showed that the test is nonsignificant indicating homogeneity of variance. A one-way MANOVA revealed a significant multivariate main effect for procrastination category, Wilks'  $\lambda = .88$ ,  $F(8, 988) = 7.50$ ,  $p < .001$ , partial eta squared = .057 and power to detect the effect was .97. In order to increase the statistical power Bonferroni procedure was applied for comparison of three groups, and as the criterion for statistical significance of *F* tests an adjusted alpha level has to be determined (Rosenthal & Rosnow, 1991). As the experiment-wise alpha protection provided by the overall or omnibus *F* test does not extend to the univariate tests so need to divide confidence levels by the number of

tests intended to perform. In this case to look at  $F$  tests for the four dependent variables an alpha level required is  $< .012$  ( $.05/4$ ). Given the significance of overall test, the univariate main effects were examined. Significant univariate main effects for procrastination category were obtained for setting goals and priorities,  $F(2, 497) = 6.69$ ,  $p < .012$ , partial eta square = .05, power = .91; time management,  $F(2, 497) = 9.58$ ,  $p < .012$ , partial eta square = .04, power = .96; and time control,  $F(2, 497) = 11.93$ ,  $p < .012$ , partial eta square = .05, power = .99. The Levene's statistics for the four DVs (i.e., setting goals and priorities, time management, time control & organization) that had significant univariate ANOVAs are all non-significant, meaning that the group variances were equal, so we can use the post hoc tests for comparing pair-wise group means and to see that if different groups of procrastinators significantly differ in time management skills. For post-hoc tests of four dependent variables an alpha level required is  $< .016$  ( $.05/3$ ).

Findings shown in Table 29 revealed significant mean difference among nonprocrastinators, active procrastinators and passive procrastinators in setting goals and priorities, time management and time control. A nonsignificant difference was observed between different types of procrastinators on organization subscale. Hochberg's GT2 Test was performed only on variables where significant difference was found to further explore the difference between groups. Analysis further indicates that on setting goals and priorities this difference is significant between nonprocrastinators and passive procrastinators, and between active and passive procrastinators.

Above mentioned findings support hypothesis no. 1 that presumed passive procrastinators as being high on setting goals and priorities than nonprocrastinators



and active procrastinators. Hypothesis no. 2 was also supported that both nonprocrastinators and active procrastinators will report more time management as compared to passive procrastinators. Nonsignificant difference in mean scores of nonprocrastinators, active procrastinators and passive procrastinators on organization subscale of Time Management Behavior Scale disconfirmed hypothesis no. 3 which presumed that passive procrastinators will report high on variable of organization than nonprocrastinators and active procrastinators. Significant difference in mean scores of nonprocrastinators, active procrastinators and passive procrastinators regarding time control shows that active procrastinators perceived themselves as having highest level of time control than other groups (Table 29).

Post hoc analysis further revealed that the difference regarding time control was significant only between active and passive procrastinators. These findings partially support hypothesis no. 4 which states that nonprocrastinators and active procrastinators will report more perceived time control than passive procrastinators but as this difference was significant only between active and passive procrastinators so hypothesis no. 4 is partially supported.

**Table 29**

*Mean, Standard Deviation, F values, and Hochberg's GT2 Test for Nonprocrastinators, Active Procrastinators, and Passive Procrastinators on Time Management Behavior Subscales (N = 500)*

Subscales	NP (n = 250)		AP (n = 125)		PP (n = 125)		F	i-j	MD (i-j)	SE	95% CI		$\eta^2$
	M	SD	M	SD	M	SD					LB	UB	
Setting Goals and Priorities	34.77	6.90	34.75	7.35	37.06	5.84	6.69**	NP-PP	.02	0.74	-4.04	-0.53	.02
Time Management	33.07	7.30	35.73	7.45	32.02	9.10	9.58**	AP-PP	-2.31	0.72	-4.05	-0.56	
								NP-PP	2.66	0.89	0.52	4.80	.03
								AP-PP	3.71	0.87	1.63	5.80	
Organization	26.14	4.81	27.00	4.92	27.38	5.32	2.63	No	No	-	-	-	-
Time control	16.45	4.66	17.22	4.43	15.63	4.79	4.97**	AP-PP	1.59	0.50	0.38	2.79	.02

*Note.* NP = nonprocrastinator (NAPS:  $M = 68.20$ ,  $SD = 17.05$ ; PPS:  $M = 17.88$ ,  $SD = 4.49$ ); AP = active procrastinator (NAPS:  $M = 78.06$ ,  $SD = 7.40$ ; PPS:  $M = 25.39$ ,  $SD = 4.11$ ); PP = passive procrastinator (NAPS:  $M = 58.10$ ,  $SD = 9.22$ ; PPS:  $M = 31.91$ ,  $SD = 3.90$ ). MD = mean difference; CI = confidence interval; LL = lower limit; UL = upper limit.  $df = (2, 497)$ .

\*\* $p < .004$ .

*Coping Strategies, Self-Efficacy, Depression, Anxiety, Stress, and Life satisfaction.* To see the effect of independent variables that is differences among different groups of procrastinators in coping strategies they employ, level of self-efficacy, depression, anxiety, stress and life satisfaction, one-way MANOVA was conducted as all these variables were theoretically related to each other. The findings of Box's  $M$  test showed that the test is nonsignificant indicating homogeneity of variance. A significant multivariate main effect for procrastination category was revealed through one-way MANOVA, Wilks'  $\lambda = .95$ ,  $F(16, 980) = 18.16$ ,  $p < .001$ , partial eta squared = .26 and power to detect the effect was .91. Since the  $F$  test was significant so one way ANOVA was carried out. To look at  $F$  tests for eight dependent variables an alpha level required is  $< .006$  ( $.05/8$ ). Significant univariate main effects for procrastination category were found all the variables except variable of stress such as, for problem focused coping,  $F(2, 497) = 4.68$ ,  $p < .006$ , partial eta square = .18, power = .79; emotion focused coping,  $F(2, 497) = 12.80$ ,  $p < .006$ , partial eta square = .17, power = .98; dysfunctional coping,  $F(2, 497) = 9.68$ ,  $p < .006$ , partial eta square = .19, power = .96, self-efficacy,  $F(2, 497) = 81.98$ ,  $p < .006$ , partial eta square = .24, power = .91; depression,  $F(2, 497) = 59.41$ ,  $p < .006$ , partial eta square = .19, power = .88, anxiety,  $F(2, 497) = 72.45$ ,  $p < .006$ , partial eta square = .23, power = .81; stress,  $F(2, 497) = 42.63$ ,  $p > .006$ , partial eta square = .21, power = .92 and life satisfaction,  $F(2, 497) = 35.87$ ,  $p < .006$ , partial eta square = .20, power = .93. The Levene's statistics for all the eight DVs (i.e., problem focused coping, emotion focused coping, dysfunctional coping, self-efficacy, depression, anxiety, stress, and life satisfaction) that had significant univariate ANOVAs were non-significant, indicating equal group variances, and further use of post hoc tests for

comparing pair-wise group means and to see that if different groups of procrastinators significantly differ along above mentioned eight DVs. For post-hoc tests of seven dependent variables an alpha level required is  $< .007$  ( $.05/7$ ). Findings shown in Table 30 indicate that there is a significant difference across groups of procrastinators in use of problem-focused coping, emotion-focused coping, and dysfunctional coping. Hochberg's GT2 test further illuminated that which groups significantly differ from each other. Results highlight that in use of problem-focused coping strategies difference is significant only between active and passive procrastinators. Findings of Hochberg's GT2 test revealed that in use of emotion-focused and dysfunctional coping strategies, significant difference lies between nonprocrastinators and passive procrastinators and between active and passive procrastinators. Analysis of mean scores indicates that active procrastinators more frequently employ problem-focused coping whereas passive procrastinators more frequently use emotion focused and dysfunctional coping strategies in their daily life as compared to nonprocrastinators and active procrastinators (see Table 30).

These results provide partial support to hypothesis no. 5 which presumed that in challenging situations, both nonprocrastinators and active procrastinators will more frequently employ problem-focused coping strategies whereas passive procrastinators will make more use of emotion-focused and dysfunctional coping strategies but as on problem-focused coping the difference is significant only between active and passive procrastinators so hypothesis no. 5 is not completely supported.

As regards to self-efficacy significant difference has been observed between different groups of procrastinators. Analysis of mean score reveals that active procrastinators got highest mean score among all groups on self-efficacy. Post hoc

analysis further illuminated that significant difference lies between nonprocrastinators and passive procrastinators and between active and passive procrastinators. These results led to the confirmation of hypothesis no. 6 which assumed that nonprocrastinators and active procrastinators have greater level of self-efficacy than passive procrastinators (Table 30).

Findings revealed significant mean difference across groups of procrastinators in their level of depression, anxiety and life satisfaction whereas nonsignificant difference was observed in their level of stress (Table 30). A closer look to mean scores of groups shows that though the difference was nonsignificant but passive procrastinators experience more stress as compared to other groups. Hochberg's GT2 test further documented that on variable of depression and anxiety, difference was significant only between active and passive procrastinators. Moreover significant difference was found between nonprocrastinators and passive procrastinators, and between active and passive procrastinators in their level of life satisfaction.

Results from Table 30 partially support hypothesis no. 7 which stated that both nonprocrastinators and active procrastinators will report low level of depression, anxiety and stress as compared to passive procrastinators. Findings indicated that though active procrastinators and nonprocrastinators reported low level of depression, anxiety, and stress as compared to passive procrastinators but this difference was significant only in their level of depression and anxiety, but not in stress. In addition this difference was significant only between active and passive procrastinators but not between nonprocrastinators and passive procrastinators.

As regards to life satisfaction analysis of mean scores shows that active procrastinators have more life satisfaction as compared to other groups. Post hoc analysis further illuminated that significant difference in life satisfaction lies between nonprocrastinators and passive procrastinators and between active and passive procrastinators. The present findings provide support to hypothesis no. 8 that was regarding high level of life satisfaction among nonprocrastinators and active procrastinators as compared to passive procrastinators (Table 30).

**Table 30**

*Mean, Standard Deviation, F values, and Hochberg's GT2 Test for Nonprocrastinators, Active Procrastinators, and Passive Procrastinators on Brief Cope, General Self-Efficac, Depression, Anxiety, Stress Scale, and Satisfaction with Life Scale (N = 500)*

Scales	NP (n = 250)		AP (n = 125)		PP (n = 125)		F	i-j	MD (i-j)	SE	95% CI		$\eta^2$
	M	SD	M	SD	M	SD					LB	UB	
Problem-Focused Coping	19.30	3.18	19.86	2.87	18.88	2.76	4.68**	AP-PP	0.97	0.31	0.21	1.73	.01
Emotion-Focused Coping	27.51	4.40	28.15	4.05	29.73	4.02	12.80**	NP-PP	2.22	0.45	3.31	1.13	.05
								AP-PP	1.58	0.45	2.66	0.50	-
Dysfunctional Coping	27.72	4.70	28.64	4.78	30.13	5.42	9.68**	NP-PP	-2.40	0.54	-3.71	-1.09	.03
								AP-PP	-1.48	0.54	-2.78	-0.19	-
Self-Efficacy	29.82	5.40	30.73	4.90	25.31	6.21	46.31**	NP-PP	4.51	0.60	3.05	5.96	.18
								AP-PP	5.41	0.60	3.97	6.85	-
Depression	7.46	4.30	5.65	3.89	7.52	3.98	11.37**	AP-PP	1.86	0.44	0.80	-2.92	.04
Anxiety	6.87	4.50	6.00	4.27	7.54	4.14	5.44**	AP-PP	1.54	0.47	0.42	2.66	.02
Stress	8.96	4.16	8.22	3.97	9.26	3.94	2.98	No	No	-	-	-	-
Life Satisfaction	17.7	4.18	18.5	3.82	15.7	4.76	19.81**	NP-PP	0.34	0.06	0.17	0.50	.07
								AP-PP	0.48	0.06	0.31	0.65	-

*Note.* NP = nonprocrastinator NP = nonprocrastinator (NAPS:  $M = 68.20$ ,  $SD = 17.05$ ; PPS:  $M = 17.88$ ,  $SD = 4.49$ ); AP = active procrastinator (NAPS:  $M = 78.06$ ,  $SD = 7.40$ ; PPS:  $M = 25.39$ ,  $SD = 4.11$ ); PP = passive procrastinator (NAPS:  $M = 58.10$ ,  $SD = 9.22$ ; PPS:  $M = 31.91$ ,  $SD = 3.90$ ). MD = mean difference; CI = confidence interval; LL = lower limit; UL = upper limit.  $df = (2,497)$ .

\*\* $p < .006$ .

*Personality Traits.* One-way MANOVA was run separately on personality traits to observe the effect of independent variables that is differences among different groups of procrastinators on personality traits. The findings of Box's  $M$  test showed that the test is nonsignificant indicating homogeneity of variance. One-way MANOVA revealed a significant multivariate main effect for procrastination category, Wilks'  $\lambda = .54$ ,  $F(10, 986) = 34.77$ ,  $p < .001$ , partial eta squared = .26 with power to detect the effect as .94. Given the significance of overall test, the univariate main effects were further examined. To be more stringent regarding the control of Type I error we need to divide confidence levels by the number of tests intended to perform. In this case to look at  $F$  tests for the five dependent variables an alpha level required is  $< .01$  ( $.05/5$ ). Significant univariate main effects for procrastination category were obtained for extraversion,  $F(2, 497) = 97.50$ ,  $p < .01$ , partial eta square = .28, power = .89; emotional stability,  $F(2, 497) = 67.28$ ,  $p < .01$ , partial eta square = .21, power = .92; intellect/openness,  $F(2, 497) = 121.13$ ,  $p < .01$ , partial eta square = .32, power = .88; conscientiousness,  $F(2, 497) = 29.94$ ,  $p < .01$ , partial eta square = .10, power = .93; agreeableness,  $F(2, 497) = 18.96$ ,  $p > .01$ , partial eta square = .07, power = .89. For personality trait of agreeableness the difference was nonsignificant across different groups of procrastinators according to adjusted alpha level of .01. The Levene's statistics for the all the five DVs (i.e., extraversion, emotional stability, openness, conscientiousness, and agreeableness) that had significant univariate ANOVAs are all non-significant, indicating equal group variances and further use of post hoc tests for comparing pair-wise group means and to see that if different groups of procrastinators significantly differ in terms of personality traits. For post-hoc tests



of four dependent variables that had significant effect an alpha level required is  $< .012$  ( $.05/4$ ).

Results shown in Table 31 demonstrated that there is a significant difference between groups of procrastinators in personality traits of extraversion, emotional stability, intellect/openness to experience and conscientiousness. Post hoc analysis further illuminated that on personality traits of extraversion, emotional stability, and intellect/openness to experience the difference was significant between nonprocrastinators and passive procrastinators and between active and passive procrastinators whereas no significant difference was observed between nonprocrastinators and active procrastinators. These findings suggests that in comparison to passive procrastinators, nonprocrastinators and active procrastinators are more extravert, social, and are emotionally stable and have more creativity, originality and are open to experience new situations. These findings provide support to hypothesis no. 9 that assumed nonprocrastinators and active procrastinators as having high level of emotional stability, extraversion and openness to experience as compared to passive procrastinators.

Above cited findings as shown in Table 31 partially supported hypothesis no. 10 in which a significant difference was presumed across different groups of procrastinators on personality trait of conscientiousness. Post hoc analysis indicated that the difference is significant only between nonprocrastinators and active procrastinators but not between active and passive procrastinators in personality trait of conscientiousness. These findings signify that nonprocrastinators are more conscientious as compared to active procrastinators. Findings regarding personality trait of agreeableness as shown in Table 31 revealed nonsignificant difference in mean scores of nonprocrastinators, active procrastinators, and passive procrastinators. These findings disconfirmed hypothesis no. 11 that presumed passive procrastinators as being more agreeable than active and nonprocrastinators.

**Table 31**

*Mean, Standard Deviation, F values, and Hochberg's GT2 Test for Nonprocrastinators, Active Procrastinators, and Passive Procrastinators in Personality Traits on Mini Marker Set (N = 500)*

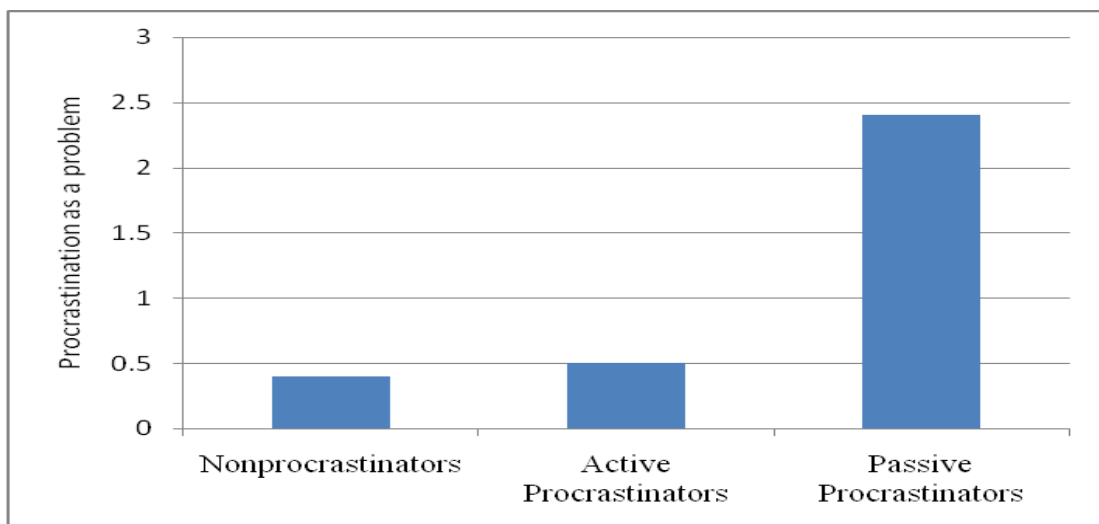
Scales	NP (n = 250)		AP (n = 125)		PP (n = 125)		F	i-j	MD (i-j)	SE	95% CI		$\eta^2$
	M	SD	M	SD	M	SD					LB	UB	
Extraversion	3.27	0.67	3.27	0.69	2.67	0.60	54.36**	NP-PP	0.59	.07	0.42	0.76	.21
								AP-PP	0.68	.07	0.51	0.85	
Emotional Stability	3.27	0.61	3.44	0.60	2.82	0.48	53.48**	NP-PP	0.45	.06	0.30	0.60	.21
								AP-PP	0.62	.06	0.47	0.76	
Intellect/Openness to Experience	3.47	0.63	3.66	0.59	2.89	0.54	77.93**	NP-PP	0.75	.06	0.42	0.73	.31
								AP-PP	0.77	.06	0.61	0.92	
Conscientiousness	3.09	0.89	3.01	0.92	3.06	0.93	7.90**	NP-PP	0.47	.09	0.25	0.69	.03
Agreeableness	3.63	0.44	3.70	0.48	3.72	0.42	1.43	No	No	-	-	-	-

*Note.* NP = nonprocrastinator (NAPS:  $M = 68.20$ ,  $SD = 17.05$ ; PPS:  $M = 17.88$ ,  $SD = 4.49$ ); AP = active procrastinator (NAPS:  $M = 78.06$ ,  $SD = 7.40$ ; PPS:  $M = 25.39$ ,  $SD = 4.11$ ); PP = passive procrastinator (NAPS:  $M = 58.10$ ,  $SD = 9.22$ ; PPS:  $M = 31.91$ ,  $SD = 3.90$ ). *MD* = mean difference; *CI* = confidence interval; *LL* = lower limit; *UL* = upper limit.  $df = (2,497)$ .

\*\* $p < .01$ .

This part of the study also focused on some exploratory findings such as the extent to which procrastination is considered a problem by different groups of procrastinators, and gender, age, and academic level-wise differences on study variables.

*Procrastination as a Problem.* To probe the extent to which adolescents consider procrastination as a problem for them, they were asked to mention the degree to which they consider it a problem on a three point rating scale.



*Figure 6.* Mean scores of nonprocrastinators, active procrastinators, and passive procrastinators on perception of procrastination as a problem

Figure 6 display the degree to which procrastination is considered a problem by nonprocrastinators, active procrastinators and passive procrastinators. This can be observed from mean scores of Figure 6 that passive procrastinators believed it to be more problematic for them than nonprocrastinators and active procrastinators. This may be attributed to distinct nature and ultimate outcomes of different types of

procrastinatory behavior. Moreover it confirms that though active procrastinators do procrastinate but the associated outcomes of their behavior are positive in nature due to which they do not consider procrastination a problem for them.

Table 32 showed the results of one-way ANOVA for three groups of procrastinators' view regarding the extent to which they consider procrastination a problem for them. Findings showed that there is a significant difference between groups. Post hoc comparison further revealed that the difference in perception of procrastination a problem is significant for nonprocrastinators and passive procrastinators, and between active and passive procrastinators. These results further validate the distinct features of active procrastinators, no doubt they do procrastinate but as their procrastination is intentional and due to their tendency to meet the deadlines so they do not consider procrastination as a problem for them. The highest mean scores of passive procrastinators show that they consider procrastination a problem for them because they suffer maximum in terms of negative outcomes as compared to rest of the groups. This may be because of the perceived nature of the phenomenon as active procrastinators like challenges, want to work under pressures, have ability to meet the deadlines and eventually are satisfied with the outcomes as well, so they intentionally procrastinate due to which they do not consider procrastination as a problem to the extent passive procrastinators perceive (see Table 32).

**Table 32**

*Mean, Standard Deviation, F values, and Hochberg's GT2 Test for Nonprocrastinators, Active Procrastinators, and Passive Procrastinators on procrastination as a problem (N = 500)*

Scales	NP (n = 250)		AP (n = 125)		PP (n = 125)		F	i-j	MD (i-j)	SE	95% CI		$\eta^2$
	M	SD	M	SD	M	SD					LB	UB	
Procrastination as a problem	1.38	0.53	1.40	0.56	2.40	0.56	189.28**	NP-PP	1.01	0.06	-1.16	-0.87	.03
								AP-PP	1.00	0.06	-1.15	-0.86	.02

*Note.* NP = nonprocrastinator (NAPS:  $M = 68.20$ ,  $SD = 17.05$ ; PPS:  $M = 17.88$ ,  $SD = 4.49$ ); AP = active procrastinator (NAPS:  $M = 78.06$ ,  $SD = 7.40$ ; PPS:  $M = 25.39$ ,  $SD = 4.11$ ); PP = passive procrastinator (NAPS:  $M = 58.10$ ,  $SD = 9.22$ ; PPS:  $M = 31.91$ ,  $SD = 3.90$ ). MD = mean difference; CI = confidence interval; LL = lower limit; UL = upper limit.  $df = (2,497)$ .

\*\* $p < .01$ .

*Gender.* Table 33 showed gender differences in active procrastination and passive procrastination. Power analysis was run with predetermined sample (boys = 263, girls =237) to see the power of the test. Analysis revealed that with medium effect size .50, and alpha level of .05, power of the test is .99. Values of Cohen's *d* indicate the estimated effect sizes.

**Table 33**

*Gender-Wise Differences in level of Active and Passive Procrastination (N = 500)*

Scale	Boys ( <i>n</i> = 263)		Girls ( <i>n</i> = 237)		<i>t</i> (498)	<i>p</i>	95% CI		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Active Procrastination	69.53	13.94	66.09	14.75	2.67	.008	0.91	5.95	0.24
Passive Procrastination	26.03	7.59	28.65	7.49	-3.87	.05	-3.94	-1.29	0.34

*Note.* CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

Results showed a significant difference between boys and girls in their level of active and passive procrastination. Analysis of mean scores demonstrates that boys have high level of active procrastination than girls whereas girls were high in traditional/passive procrastination. This may be attributed to our social and cultural factors and parenting styles that from very early stages of development encourage male child to be more independent, manage activities outside and inside the home simultaneously whereas girls are discouraged to take part in outside activities that hampers their ability to do multi-tasking.

*Age.* One-way ANOVA was conducted to investigate the differences in level of active and passive procrastination with reference to different age groups. To meet the objective respondents were categorized into three different age groups i.e., early adolescents (13-15 years old), middle adolescents (16-18 years old), and late adolescents (19-21 years old). Power analysis conducted through G-power 3.1.9.2 via post hoc compute power option due to prespecified sample size (EA = 217, MA = 191, LA = 92) revealed that with effect size of .25 and alpha .05, the power of the test is 0.96. Results shown in Table 34 revealed a significant difference in level of active procrastination across different age groups. Moreover findings of post hoc test also highlighted that this difference is significant between early adolescents and late adolescents and between middle adolescents and late adolescents. This shows that there is no significant change in level of active procrastination among adolescents from early to middle adolescence but this change is visible as they move to late adolescence indicating that with growing age adolescents learn to do multitasking, enjoy working under time pressure, and intentionally postpone certain activities to manage their priorities. As a result they are not only able to meet the deadlines but are also satisfied with the outcomes they achieve. No significant difference across different age groups was observed regarding passive procrastination.

**Table 34**

*Mean, Standard Deviation, F Values, and Hochberg's GT2 Post hoc Test for Early, Middle, and Late Adolescents on Active and Passive Procrastination (N = 500)*

Scales	EA (13-15 years)		MA (16-18 years)		LA (19-21 years)		F	i-j	MD(i-j)	SE	95% CI		$\eta^2$
	(n = 217)		(n = 191)		(n = 92)						LB	UB	
	M	SD	M	SD	M	SD							
Active Procrastination	65.52	14.12	67.80	14.64	73.72	13.08	10.87**	EA-LA	8.20	1.75	1.08	5.63	.04
								MA-LA	5.92	1.79	1.09	10.15	
Passive procrastination	27.30	7.16	27.30	8.22	27.16	7.65	.013	No	No	-	-	-	-

*Note.* EA = early adolescents; MA = middle adolescents; LA = late adolescents. MD = mean difference; CI = confidence interval; LL = lower limit; UL = upper limit.  $df = (2, 497)$ . \*\* $p < .01$ .



*Academic Level-Wise Difference in Active and Passive Procrastination.* Table 35 highlights the results of academic level wise differences in active and passive procrastination. Power analysis was conducted to see the power of the test. As the sample size was predetermined (Matriculates = 249, Graduates = 251) so post hoc compute power option was used to calculate the power of test, with medium effect size, and alpha of .05. The calculated power of the test was found to be .99.

**Table 35**

*Academic Level-Wise Differences in Active and Passive Procrastination (N = 500)*

Variable	Matriculation (n = 249)		Graduation (n = 251)		t(498)	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
	Active Procrastination	62.59	13.17	73.17			13.67	8.80	
Passive Procrastination	28.29	7.27	26.27	7.90	2.97	<.01	.68	3.35	0.26

*Note.* Matriculation = 10 years education; Graduation = 14 years education; CI = confidence interval; LL = lower limit; UL = upper limit.

Findings revealed a significant difference between two levels of education (i.e., Matriculation vs. Graduation) with respect to their level of active and passive procrastination. Analysis of mean scores show that adolescent with graduate level of education experience higher level of active procrastination as compared to matriculates whereas matriculates reported higher level of traditional/passive procrastination than graduates. This shows that with the increasing level of education adolescents' multitasking ability improves and level of passive procrastination decreases.

**Effect of Personal-Social Variables on Active Procrastination.**

Procrastination has been widely viewed from personal perspective and there is less research that explores the phenomenon from a broad social perspective. The role of social influencers in emergence of procrastination tendencies among adolescents is not widely explored. Present study also dealt with some of the exploratory analysis that investigates the impact of some person-social variables on active and passive procrastination behavior as the role of personal and social variables in active and passive procrastination behaviors is yet to be explored. As these analyses were exploratory so no hypotheses were formulated regarding these analyses.

**Table 36***Descriptive Statistics of Personal-Social Variables (N =500)*

<i>Socio-Family Variables</i>	<i>N</i>	<i>%</i>
<i>Gender</i>		
Boys	263	52.6
Girls	237	47.4
<i>Age</i>		
Early Adolescents (13-15 years)	217	43.0
Middle Adolescents (16-18 years)	191	38.0
Late Adolescents (19-21 years)	92	18.4
<i>Education Level</i>		
Matric	249	49.8
Bachelors	251	50.2
<i>Mother's Education</i>		
Matric	247	49.4
Intermediate	96	19.2
Bachelor	112	22.4
Masters and above	45	9.0
<i>Father's Education</i>		
Matric	144	28.8
Intermediate	80	16.0
Bachelor	151	30.2
Masters and above	125	25
<i>Grade Achieved</i>		
A } High-achievers	213	42.6
B }	210	42.0
C } Low-achievers	61	12.2
D }	16	3.2

Table 36 shows the number of cases and their respective percentages regarding different familial and educational variables.

**Gender-Wise Differences on Study Variables.** To explore the gender-wise differences on study variables among adolescents, *t*-test was conducted.

**Table 37**

*Gender-Wise Differences in Time Management Behavior and Self-Efficacy (N = 500)*

Scales	Boys (n = 263)		Girls (n = 237)		<i>t</i> (498)	<i>p</i>	95% CI		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
TM	115.29	14.67	109.29	15.24	4.47	<.001	3.36	8.62	0.40
SE	29.92	5.30	28.02	6.10	3.68	<.001	0.88	2.90	0.33

*Note.* TM = Time management; SE = Self-efficacy; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

Results shown in Table 37 illustrate gender-wise differences in time management behavior and self-efficacy. Findings revealed that there is significant difference in time management behavior and self-efficacy of boys and girls as boys were found to be more self-efficacious and have more time management skills as compared to girls.

Findings of Table 38 indicate significant difference between boys and girls in the use of coping strategies. Analysis of mean scores highlight that, the difference is significant only in emotion-focused coping strategies as girls employ more emotion focused coping as compared to boys.

**Table 38***Gender-Wise Differences in Coping Strategies (N = 500)*

Scales	Boys (n = 263)		Girls (n = 237)		t(498)	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
	Problem-Focused Coping	19.18	2.89	19.51			3.03	1.23	
Emotion-Focused Coping	27.82	4.36	29.26	4.00	3.81	<.001	-2.17	0.69	0.34
Dysfunctional Coping	29.03	5.15	28.70	5.00	0.71	.47	-0.56	1.22	0.06

Note. CI = confidence interval; LL = lower limit; UL = upper limit.

**Table 39***Gender-Wise Differences in Personality Traits (N = 500)*

Scales	Boys (n = 263)		Girls (n = 237)		t(498)	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
	Extraversion	3.23	0.70	2.95			0.71	4.35	
Agreeableness	3.57	0.43	3.81	0.44	-6.26	<.001	-0.32	-0.16	-0.56
Emotional Stability	3.21	0.58	3.13	0.67	1.30	.19	-0.03	0.18	0.11
Intellect/Openness	3.38	0.66	3.29	0.68	1.55	.12	-0.02	0.21	0.13
Conscientiousness	3.06	0.88	3.30	0.82	-3.20	<.001	-0.39	-0.09	-0.28

Note. CI = confidence interval; LL = lower limit; UL = upper limit.

Results shown in Table 39 demonstrate gender-wise differences in personality traits. Findings revealed a significant difference between boys and girls in their personality traits of extraversion, agreeableness, and conscientiousness. Analysis of mean scores further illuminate that on extraversion boys had high score than girls, whereas on personality traits of agreeableness and conscientiousness girls had high

score as compared to boys. This shows that boys are more likely to be extravert than girls while girls are more sympathetic, cooperative, confirming, and self-disciplined than boys.

**Table 40**

*Gender-Wise Differences in Depression, Anxiety, and Stress (N = 500)*

Scales	Boys (n = 263)		Girls (n = 237)		t(498)	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
Depression	7.31	4.44	7.40	5.11	-0.20	.83	-0.92	0.75	-0.01
Anxiety	7.10	4.60	7.98	5.13	-0.87	.03	-1.23	0.47	-0.07
Stress	8.98	3.91	9.64	4.61	-1.73	.04	-1.41	0.08	-0.15

*Note.* CI = confidence interval; LL = lower limit; UL = upper limit.

Table 40 illustrates the level of depression, anxiety, and stress among boys and girls. Findings indicate significant difference between boys and girls in their level of anxiety, and stress as girls experience more anxiety and stress as compared to boys.

**Table 41**

*Gender-Wise Differences in Life Satisfaction and Procrastination as a Problem*

*(N = 500)*

Scales	Boys (n = 263)		Girls (n = 237)		t(498)	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
Life Satisfaction	17.66	4.38	17.40	4.51	0.65	.51	-0.52	1.04	0.05
Procrastination as a problem	1.69	0.76	1.81	0.70	-1.79	.07	-0.24	0.01	-0.16

*Note.* CI = confidence interval; LL = lower limit; UL = upper limit.

Findings of Table 41 revealed nonsignificant gender difference in life satisfaction of boys and girls. Moreover regarding the extent to which they consider that procrastination as a problem for them, no significant difference was found between boys and girls in their perception about procrastination as a problem.

**One-way ANOVA on Personal and Familial Variables.** One-way MANOVA was also conducted to see the effect of age on time management ability, coping strategies employed, self-efficacy, depression, anxiety, stress, and life satisfaction of different age groups, but as findings revealed nonsignificant effect of age on time management, coping strategies, Self-efficacy, depression, anxiety, stress, and life satisfaction across different age groups so these findings are not further discussed and reported in tabulated form.

*Parents Education Level.* In order to investigate the differences in level of active and passive procrastination among adolescents with reference to mother's and father's education level, one-way ANOVA was conducted. Power analysis was also conducted to see the power of test. G-power 3.1.9.2 was used to calculate the power. Post hoc compute power revealed that with prespecified sample size (mothers = 500, fathers = 500), effect size of 0.5 and alpha level of .05, the power of the test was 1.0. as sample size was equal so REGWQ post hoc test was run to see the difference between groups. For this purpose mothers' and fathers' education was categorized into four levels (i.e., Matric, Intermediate, Bachelors, Masters and above).

**Table 42**

*Mean, Standard Deviation, F values, and REGWQ Post hoc Test for Parents' Education Level on Active Procrastination of Adolescents (N = 1000)*

Education Level	Mothers (n = 500)								Fathers (n = 500)							
	N	M		i-j	MD (i-j)	SE	95% CI		N	M		i-j	MD (i-j)	SE	95% CI	
			SD				LB	UB			SD				LB	UB
Matric	247	65.29	17.91	-	-	-	-	-	144	65.70	17.26	-	-	-	-	-
Intermediate	96	62.81	20.21	-	-	-	-	-	80	63.72	17.97	-	-	-	-	-
Bachelors	112	67.41	18.42	-	-	-	-	-	151	67.70	18.87	-	-	-	-	-
Masters and Above	45	67.40	19.34	-	-	-	-	-	125	67.28	20.25	-	-	-	-	-
<i>F</i>		1.23		No	No	.83	63.84	67.11		.72		No	No	.83	63.84	67.11

*Note.* Matric = ten years of schooling; Intermediate = two years education at college level; Bachelor = four years education at college level; Masters = two years education in university; MD = mean difference; CI = confidence interval; LL = lower limit; UL = upper limit.  $df = (2, 497)$



**Table 43**

*Mean, Standard Deviation, F values, and REGWQ Post hoc Test for Parents' Education Level on Passive Procrastination of Adolescents (N = 1000)*

Education Level	Mothers (n =500)							Fathers (n =500)								
	N	M	SD	i-j	MD (i-j)	SE	95% CI		N	M	SD	i-j	MD (i-j)	SE	95% CI	
							LB	UB							LB	UB
Matric	247	27.22	7.59	-	-	-	-	-	144	27.02	8.00	-	-	-	-	-
Intermediate	96	27.06	7.40	-	-	-	-	-	80	26.70	7.41	-	-	-	-	-
Bachelors	112	28.10	7.72	-	-	-	-	-	151	27.11	7.66	-	-	-	-	-
Masters and Above	45	26.00	8.33	-	-	-	-	-	125	28.13	7.44	-	-	-	-	-
<i>F</i>		.88		No	No	.34	26.60	27.95		.74		No	No	.33	26.59	27.92

*Note.* Matric = ten years of schooling; Intermediate = two years education at college level; Bachelor = four years education at college level; Masters = two years education in university; MD = mean difference; CI = confidence interval; LL = lower limit; UL = upper limit.  $df = (2, 497)$ .

Findings shown in Table 42 and Table 43 revealed nonsignificant difference in adolescents' level of active procrastination and passive procrastination with reference to their mother's and father's education level.

**Grade-Wise (Academic Achievement) Differences in Active and Passive Procrastination, Time Management, Depression, Anxiety, Stress and Life Satisfaction.** One way MANOVA did not yield a significant main effect of academic achievement so one way ANOVA was separately run for different variables to see the grade wise differences. Findings of Table 44 show grade-wise differences in active procrastination, passive procrastination, time management and life satisfaction of adolescents. Power analysis was carried out to see the power of the ANOVA test for predetermined sample size. With alpha .05 and effect size of .25, power of the test was found to be .98. Results showed a significant difference in level of active procrastination of adolescents with reference to grades achieved. Post hoc analysis further illuminated that these differences were significant between those who achieved grade A and grade B, C, and D. Moreover significant difference was also found between grade B and grade C and D. These findings indicate that those who have high level of active procrastination got high grades or vice versa. On variable of passive procrastination significant difference also emerged. Post hoc comparison showed that significant difference was found between grade A and grade C and D, and also between grade B and D. These findings highlight that those adolescents who achieved low grades report greater level of passive procrastination.

**Table 44**

*Mean, Standard Deviation, F values, and Hochberg's GT2 Post hoc Test for Grades Achieved on Active Procrastination, Passive Procrastination, TMBS, and SWLS by Adolescents (N = 500)*

Scales	Grade A (n = 213)		Grade B (n = 210)		Grade C (n = 61)		Grade D (n = 16)		F	i-j	MD(i-j)	SE	95% CI		$\eta^2$
	M	SD	M	SD	M	SD	M	SD					LB	UB	
AP	71.36	16.84	63.64	18.67	55.52	18.11	49.25	17.68	19.58**	A-B	7.72	1.71	3.18	12.26	.11
										A-C	15.84	2.54	9.35	22.32	
										A-D	22.11	4.58	11.60	32.62	
										B-C	8.11	2.57	1.61	14.62	
										B-D	14.39	4.58	3.86	24.92	
PP	26.33	7.70	27.22	7.62	29.36	7.60	32.50	3.46	5.17**	A-C	-3.02	1.09	-5.92	-.11	.03
										A-D	-5.27	1.96	-10.45	-.10	
										B-D	-6.16	1.96	-11.34	-.98	
TMBS	112.50	15.50	111.71	15.08	106.90	12.73	103.18	14.64	6.41**	A-C	5.60	2.17	0.10	11.10	.03
										A-D	9.31	3.38	2.59	20.45	
										B-C	7.81	2.18	2.29	13.32	
										B-D	11.52	3.88	2.59	20.45	
SWLS	18.44	4.20	17.60	4.08	15.08	5.20	14.06	4.15	13.32**	A-C	3.35	0.62	1.78	4.93	.08
										A-D	4.37	1.11	1.82	6.93	
										B-C	2.52	0.62	0.94	4.10	
										B-D	3.54	1.11	0.99	6.10	

*Note.* AP = Active procrastination; PP = passive procrastination; TMBS= Time Management Behavior Scale; SWLS = Satisfaction With Life Scale. CI = confidence interval; LL = lower limit; UL = upper limit. *df* = (3,496).

\*\**p* < .01.

Regarding time management results showed significant difference regarding grades achieved. Post hoc test further clarify that difference in time management was significant between those who achieved grade A and those who achieved grade C and D. moreover significant difference in time management behavior was also observed between those who achieved grade B and those who got grade C and D. These findings indicate that those who got high grades had more time management skills than those who achieved low grades. In addition significant difference was found in life satisfaction with reference to grades achieved. This difference was significant between those who got grade A and those who achieved grade C and D. Moreover the difference was also significant between those who got grade B and those who got grade C and D. Analysis of mean scores shows that those who achieved high grades are more satisfied with their lives. These findings indicate that may be those adolescents who have more time management skill and multitasking ability, they get better grades and are more satisfied with their lives than those who have less time management skill and multitasking ability (Table 44).

To see the difference in level of depression, anxiety and stress among high-achievers and low-achievers, those who achieved grade A and B were grouped as high-achievers and those who got grade C and D were grouped as low-achievers. Findings shown in Table 45 revealed significant difference between high and low-achievers regarding their level of depression, anxiety and stress. Analysis of mean scores revealed that high academic achievers experience less depression, anxiety and stress than low academic achievers. Power of the test was also computed through G-power 3.1.9.2 and post hoc compute power option was selected due to pre determined sample size. With alpha .05 and medium effect size for variable of depression and

anxiety and small effect size for variable of stress, the power of the test ranges from .50 to .92.

**Table 45**

*Grade-Wise (Academic Achievement) Differences in Depression, Anxiety, and Stress*  
( $N = 500$ )

Scales	High-achievers ( $n = 423$ )		Low-achievers ( $n = 77$ )		$t(498)$	$p$	95% CI		Cohen's $d$
	$M$	$SD$	$M$	$SD$			$LL$	$UL$	
Depression	7.04	4.67	9.06	4.93	-3.45	.001	-3.16	-.86	-0.30
Anxiety	7.00	4.80	8.85	4.86	-3.11	.002	-3.02	-.68	-0.27
Stress	9.14	4.22	10.18	4.47	-1.97	.04	-2.07	-.03	-0.17

*Note.* CI = confidence interval;  $LL$  = lower limit;  $UL$  = upper limit.

**Determination of Predictors of Active and Passive Procrastination.** As active procrastination is a new construct and multifaceted phenomenon so it requires scrupulous investigation and it seems useful to dig out how different time management skills, self-efficacy, coping strategies, and personality traits predict this new construct. So in order to explore the relationship between procrastination and correlate variables (such as, time management, self-efficacy, coping strategies, and personality traits) as predictors of active and passive procrastination among adolescents, logistic multiple regression analysis was conducted to find the magnitude of prediction. The underlying reason for conducting regression analysis was the fact that outcome variable was dichotomous (i.e., active procrastination and passive procrastination) and the predictor variables were continuous. Before conducting logistic regression analysis it was ensured that data meets the requirements of

stepwise logistic regression analysis such as, all the variables included in the analysis satisfied the level of measurement requirements for stepwise binary logistic analysis, no indices of multicollinearity were observed and available cases also satisfied the required sample size.

Logistic regression analysis is the best to use when to predict an outcome variable that is categorical from one or more continuous or categorical variables (Field, 2005). Simply it can predict that which of the two categories a person belongs giving certain other information. Among different methods of logistic regression stepwise method (forward: LR method) was used because stepwise methods are best to use in situation where there is not much previous research exists and where causality is not of interest rather one needs to carry out exploratory analysis.

More over forward: LR method can manage a large number of explanatory variables. It is designed to find the most parsimonious set of predictors that can effectively predict the dependent variable. Forward: LR method starts without any predictor variable in the model and then variables are added to the logistic regression equation one by one, and at each step the predictor that has the largest score statistic and whose significance value is less than .05 is added. The process of adding more variables stops when all the variables have been entered or when it is not feasible to make a statistically significant reduction in -2 Log Likelihood. After each variable is entered, SPSS checks the significance of those variables that are already in the model to see if anyone can be removed on the basis of the likelihood ratio test.

For present logistic regression analysis variables of time management behavior, self-efficacy, coping strategies, and personality traits on the variable of active and passive procrastination were entered. The SPSS output of stepwise logistic

regression analysis with ( $N = 250$ ) produced a regression model consisted of variables such as, coping strategies, self-efficacy, and personality traits that are measured by Brief COPE, GSES, and Mini Marker Set. The variable of time management behavior was not included among the statistically significant predictors so it is not interpreted. The output showed in the initial block 0 that out of 500 only 250 cases had been accepted in which there were 125 were active procrastinators and 125 were passive procrastinators. Power analysis was also run to see the power of logistic regression with prespecified sample size, for this purpose, post hoc compute achieved power was selected. Power analysis revealed that with two tails, alpha .05, and sample of 250, power of the test was .97, indicating a healthy sample size.

Overall the model correctly classified the 51.6% of the adolescent procrastinators. The block 0 which included only the constant in the equation also displayed the value of overall statistics (residual Chi square statistic) for variables not included in the equation i.e., 201.78 which is significant at  $p < .001$ , indicating that variables which are not included in the model have the coefficients that are significantly different from zero which means that if we include any of these variables in the model it will enhance its predictive power. The dependent variable (i.e., procrastination) was coded 0 and 1, (0 for active procrastination and 1 for passive procrastination). The initial model derived is based only on the constant in the regression equation which represents the fit of the model when the basic model is fitted to the data. The value of -2LL for this initial model when only constant was included was 472.371 but after adding the variables it should be less than the original -2LL. In our model the value of -2LL after addition of variables reduced to 193.21 that indicate that model is better at predicting the procrastinator type than it was

before adding the variables. The value of  $\chi^2 = 279.15$  is significant at .05 level which affirms that overall model is better in predicting procrastination category than with only the constant variable. Moreover classification table revealed that model is correctly classifying 91% of active procrastinators and 89% passive procrastinators whereas when only the constant was included model correctly classified 51.6% cases and with inclusion of the predictors this has risen to 89%.

Another crucial measure in interpreting the logistic regression analysis is the value of  $\text{Exp}(b)$  that indicates the change in odds due to unit change in the predictor. The value of  $\text{exp } b$  in the population indicates either a positive ( $\text{exp } b > 1$ ) relationship: if the value is greater than 1 then it indicates that as predictor increases, the odds of the outcome occurring increase (positive relationship) whereas a value less than 1 ( $\text{exp } b < 1$ ) indicates that as the predictors increase the odds of outcome occurring decrease (negative or inverse relationship). The 95% confidence interval ranges from less than 1 to more than 1, if both the values are less than 1 or more than 1, one can be confident of the sample representing the true of the whole population. Conversely if interval ranges from less than 1 to more than 1 then it limits the generalizability of the findings (Field, 2005).

Table 46 displays the significant predictors of procrastination as the significance values of Wald statistics indicate that among predictor variables emotion-focused coping, self-efficacy, emotional stability, intellect/openness to experience and conscientiousness are the significant predictors of procrastination. The value of  $\text{Exp } b$  for emotion-focused coping has been found to be 1.15 which is greater than 1 indicating that the odds of an adolescent who employs emotion-focused coping experiences passive procrastination is  $(1.15 - 1.00 = .15)$  15 times higher than the



adolescent who does not employ emotion-focused coping (as the  $\exp b$  is greater than 1). The confidence interval for this value ranges from 1.05 to 1.27 so one can be confident that the value of  $\exp b$  lies somewhere between these two values and as both values are greater than one so the relationship between emotion-focused coping and passive procrastination found in this sample represents the whole population. The value of  $\exp b$  for self-efficacy is less than 1 (i.e., .81) revealing a negative relationship which means that if the level of self-efficacy decreases the odd of experiencing passive procrastination increases by 19% (i.e.,  $.81 - 1.00 = .19$ ). In other words we can say that odds of an adolescent who is passive procrastinator are 19 times higher to be low in self-efficacy than who is not a passive procrastinator. The value of confidence interval ranges from .75 to .88 and both values are lesser than 1, so we can be fairly sure of that the value of  $\exp b$  lies between these two values and being representative of the whole population.

For emotional stability the value of  $\exp b$  is .23 which is less than 1, indicating that if the level of emotional stability decreases by one point along the Mini Marker Set then the odds of experiencing passive procrastination increase by 77 times more (i.e.,  $.23 - 1.00 = .77$ ). The confidence interval for this value ranges from .10 to .49 which is lesser than 1, signifying that value of  $\exp b$  in population may be somewhere in this range.

**Table 46**

*Summary of Logistic Multiple Regression Analysis for Variables Predicting Procrastination (N = 250)*

Predictors	B	SE	Wald	$\beta$	95% CI for exp b	
					Lower	Upper
Emotion-focused coping	.14 **	.04)	9.21	1.15	1.05	1.27
Self-efficacy	-.20**	04	26.26	.81	.75	.88
Emotional stability	-1.46 **	.39	13.93	.23	.10	.49
Intellect/openness	-2.74**	.42	42.04	.06	.02	.14
Conscientiousness	.55*	.28	3.78	1.74	.99	3.05
Constant	13.85**	1.46	31.70			
$\chi^2$	279.15					
Df	5					

Note.  $R^2 = .59$  (Hosmer & Lameshow),  $.56$  (Cox & Snell),  $.74$  (Nagelkerke).

\* $p < .01$ . \*\* $p < .05$ .

Regarding personality trait of intellect/openness to experience the exp  $b$  value is  $.06$  which is less than 1 and indicates that as the predictor increases, odds of occurring an outcome decreases. In this case it shows that as the adolescent gets low in personality trait of intellect/openness to experience his level of passive procrastination raises. Moreover one can say that the odds of a respondent who is low on intellect procrastination is 94 times higher than those of an adolescent who does not score low on personality trait of intellect. The confidence interval ranges from  $.02$  to  $.14$ , indicating that value of exp  $b$  must be lying somewhere between these two values and as both lower and upper range of confidence interval is lesser than 1 so one can be certain that these intervals encompass the actual value of exp  $b$  in population.

On personality trait of conscientiousness the value of exp b is 1.74 which is greater than 1, indicating that as the odds of being conscientious increases the odds of being passive procrastinator also increase. So for each unit increase in being conscientious adolescents are 74% more likely to be passive procrastinators. The range of confidence interval lies between .99 to 3.05 which is greater than 1 and shows that the direction of this relationship may be unstable in the population as a whole (i.e., the value of exp b for conscientious in our sample may be quite different to the value if we had it from population) and we cannot be confident in generalizing that if the conscientiousness increases the level of passive procrastination will also increase in population.

**Regression Analysis on Outcome Variables of the Study.** As active procrastination is a new construct so it was deemed imperative to examine the incremental validity of NAPS to ascertain its unique role in predicting various outcomes. Linear regression analysis was carried out for outcome variables such as, depression, anxiety, stress, life satisfaction and procrastination as a problem, and procrastination as a predictor variable. To see the power of the test with large effect size (i.e., .35) and prespecified sample size ( $N = 500$ ), post hoc: compute achieved power option was selected for linear regression analysis. Findings showed that with above mentioned sample size, alpha of .05, and large effect size, power of the test is 1.0 which indicates that the sample was quite adequate for this analysis. As procrastination was a categorical variable (i.e., nonprocrastinators, active procrastinators, and passive procrastinators) so dummy coding was used which is a way of representing groups of people using only zeroes and ones. For this several

variables were created by recoding our grouping variable into dummy variables. As there were three groups; nonprocrastinators, active procrastinators and passive procrastinators so for dummy coding nonprocrastinators were chosen as baseline group and rest of two groups were compared with this baseline category.

Findings shown in Table 47 revealed that by entering the two dummy variables 19% of the variance in the depression can be explained by the category of procrastinators an adolescent belongs. The model is significantly better at predicting the depression level than having no model. Results indicate the beta values of two groups and change in the outcome due to a unit change in predictor, so it represents the shift in change of depression level if an adolescent's category changes from nonprocrastinator to active procrastinator or passive procrastinator.

**Table 47**

*Linear Regression Analysis of Different Groups of Procrastinators as Predictors for Depression (N = 500)*

Model	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>	95% CI	
						LL	UL
Constant	6.50	.34		19.09	<.001	5.83	7.17
NP vs. AP	-1.26	.47	-.12	-2.64	<.01	-2.19	-.32
NP vs. PP	3.61	.47	.36	7.68	<.001	2.68	4.53
$R^2$	.19				<.001		
<i>F</i>	59.41						
$\Delta R^2$	.19						

Note. NP = nonprocrastinators; AP = active procrastinators; PP = passive procrastinators; CI = confidence interval

For first dummy variable, the *t*-test is significant and beta coefficient is negative which indicates that level of depression goes down as adolescent changes the

category of nonprocrastinator to active procrastinator. Second dummy variable compares nonprocrastinators with passive procrastinator and beta value again represents the shift in change of depression level if an adolescent is nonprocrastinator compared to passive procrastinator. The *t*-test is again significant and beta value has positive value, indicating that level of depression increases if a person changes from nonprocrastinator to passive procrastinator. Overall findings of Table 47 revealed that compared to being nonprocrastinator, active procrastinators report lower level of depression whereas passive procrastinators report higher level of depression.

**Table 48**

*Linear Regression Analysis of Different Groups of Procrastinators as Predictors for Anxiety (N = 500)*

Model	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>	95% CI	
						LL	UL
Constant	5.90	.34		17.38	<.001	5.23	6.57
NP vs. AP	-.60	.47	-.05	-1.27	.20	-1.54	.32
NP vs. PP	4.49	.46	.44	9.58	<.001	3.57	5.41
<i>R</i> <sup>2</sup>	.22				<.001		
<i>F</i>	72.45						
$\Delta R^2$	.22						

Note. NP = nonprocrastinators; AP = active procrastinators; PP = passive procrastinators; CI = confidence interval

Table 48 highlight the change in anxiety level of adolescents as they shift from experiencing no procrastination to either active or passive procrastination. Overall model explain 22% variance in anxiety level by the procrastination category of an

adolescent. The  $t$ -statistic for first dummy variable is nonsignificant indicating that change in anxiety level is the same if an adolescent changes from nonprocrastinator to active procrastinator. Moving to second dummy variable that compares nonprocrastinators with passive procrastinators, beta coefficient has a positive value and  $t$ -test is also significant that indicates the change in anxiety level goes up as a person changes from being nonprocrastinator to passive procrastinator. So on the whole analysis has shown that compared to being nonprocrastinator, passive procrastinators significantly experience more anxiety but active procrastinators do not.

**Table 49**

*Linear Regression Analysis of Different Groups of Procrastinators as Predictors for Stress (N = 500)*

Model	$B$	$SE$	$\beta$	$t$	$p$	95% CI	
						LL	UL
Constant	8.66	.31		27.64	<.001	8.05	9.28
NP vs. AP	-1.03	.44	-.11	-2.35	<.01	-1.89	-.17
NP vs. PP	2.77	.43	.31	6.42	<.001	1.92	3.62
$R^2$	.14				<.001		
$F$	42.63						
$\Delta R^2$	.14						

*Note.* NP = nonprocrastinators; AP = active procrastinators; PP = passive procrastinators; CI = confidence interval

Findings reported in Table 49 revealed that difference between the change in stress level for the nonprocrastinators, active procrastinators, and passive procrastinators. Overall model explain 14% variance in stress level of respondents by

their procrastination category. For first dummy variable the beta value is negative and *t*-test is significant indicating that change in stress score goes down as the person changes from being nonprocrastinator to active procrastinator. For second dummy variable beta value is positive and *t*-test is also significant which shows that change in stress score goes up as a person changes from category of nonprocrastinators to passive procrastinators. So the analysis has shown that level of stress was significantly low among nonprocrastinators and active procrastinators as compared to passive procrastinators.

**Table 50**

*Linear Regression Analysis of Different Groups of Procrastinators as Predictors for Life Satisfaction (N = 500)*

Model	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>	95% CI	
						LL	UL
Constant	18.11	.31		54.83	<.001	17.46	18.76
NP vs. AP	1.07	.46	.11	2.32	<.05	.16	1.98
NP vs. PP	-2.63	.45	-.28	-5.77	<.001	-3.52	-1.73
<i>R</i> <sup>2</sup>	.12				<.001		
<i>F</i>	35.87						
$\Delta R^2$	.12						

*Note.* NP = nonprocrastinators; AP = active procrastinators; PP = passive procrastinators; CI = confidence interval

Results of Table 50 draw attention to level of life satisfaction among different types of procrastinators and indicate that after entering the two dummy variables model explain 12% of the variance in life satisfaction of adolescents that can be explained by their procrastination type. For first dummy variable beta value has

positive value and *t*-test is also significant indicating that change in life satisfaction goes up if a person changes from category of nonprocrastinators to active procrastinators. In other words level of life satisfaction is significantly predicted by the category of procrastinators a respondent belongs. For second dummy variable beta value is negative and *t*-statistic is also significant, highlighting that change in life satisfaction level goes down as a person changes from category of nonprocrastinators to passive procrastinators so it actually means that life satisfaction decreased significantly more in passive procrastinators compared to those who are nonprocrastinators and for active procrastinators level of life satisfaction increased as compared to nonprocrastinators.

**Table 51**

*Linear Regression Analysis of Different Groups of Procrastinators as Predictors for Procrastination as a Problem (N = 500)*

Model	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>	95% CI	
						LL	UL
Constant	1.39	.04		31.48	<.001	1.30	1.47
NP vs. AP	.01	.06	.006	.16	<.87	-.11	.13
NP vs. PP	1.01	.06	.66	16.73	<.001	.90	1.13
<i>R</i> <sup>2</sup>	.43				<.001		
<i>F</i>	189.28						
$\Delta R^2$	.43						

Note. NP = nonprocrastinators; AP = active procrastinators; PP = passive procrastinators; CI = confidence interval

Findings of Table 51 revealed how different group of procrastinators perceive procrastination as a problem for them. Comparison of different groups highlighted that model is significantly better at predicting the change in conceiving



procrastination as a problem because it explains 43% of the variance. The beta value for first dummy variable is very small and *t*-test is also not significant indicating that change in perceiving procrastination as a problem almost the same if a person changes from nonprocrastinator to active procrastinator whereas for second dummy variable the beta coefficient is positive and *t*-test is also significant revealing that change in perceiving procrastination as a problem goes up as a person changes from category of nonprocrastinators to passive procrastinators. To put it another way one can say that viewing procrastination as a problem is significantly predicted by category of nonprocrastinators.

### **Discussion (Phase II)**

Phase II of main study was carried out to collect in-person data on a relatively large sample to have more authenticity of findings. The underlying purpose of this phase was to test the formulated hypotheses. In addition some more complex analyses were also run to have in depth understanding of the construct of active and passive procrastination. As the construct of active procrastination is new so it required thorough understanding. Instruments that were used in pilot study and found to have sufficient psychometric properties were also used in main study to collect in-person data.

Findings of phase II highlighted that all the instruments had sound reliability and were internally consistent. To determine the factor structure of the construct of active procrastination Confirmatory Factor Analysis was run. CFA is an important analytic tool for construct validation, used to examine the latent structure of the test

instrument and to verify the number of underlying dimensions of the scale and pattern of inter-factor relationship. CFA also supports the use of total score as well as subscales score (Brown, 2006). Initially Choi and Moran (2009) explored the factor structure of active procrastination and confirmed four underlying dimensions of the construct. Results of initial confirmatory factor analysis based on indigenous findings (i.e., phase II of main study) also showed good fit to the data. Moreover Second-order CFA also supported four underlying factors as dimensions of active procrastination. This finding further supports the use of translated version of New Active Procrastination Scale in Pakistani context and highlights the significance and positive nature of the construct despite being nascent.

Construct validity, the extent to which the test measures a theoretical construct involves gradual accumulation of information from multiple sources and any data illuminating the nature of the trait and conditions affecting its manifestations are appropriate for this type of validation (Anastasi & Urbina, 1997). To determine the construct validity of active procrastination and ascertaining its distinctiveness in theoretical space, Pearson's product-moment correlation was computed. Findings revealed the uniqueness of construct and its distinct nature from traditional (passive) procrastination. This finding is consistent with previous researches in which a positive type of procrastination was identified that views procrastinators as a well-organized human beings and value them for efficiently using their time (e.g., Alexander & Onwuegbuzie, 2007; Bui, 2007; Howell & Watson, 2007; Choi & Moran, 2009; Chu & Choi, 2005; Morales, 2011).

The pattern of relationship (Table 27) that emerged among variables for active procrastinators' highlights a significant negative relationship between passive

procrastination and time management, Time control, self-efficacy, problem-focused coping, extraversion, emotional stability, intellect/openness and life satisfaction. These findings indicate that active procrastinators who score low on passive procrastination are more capable of managing their time efficiently, have high level of time control, are more self-efficacious and employ problem- focused coping strategies in case of any crisis. Previous studies also show similar findings in which active procrastinators were found to have high level of self-efficacy, problem focused coping, and life satisfaction (e.g., Smith & Dust, 2006; Zeenath & Orcullo, 2012).

Regarding personality traits active procrastinators are more extraverts, emotionally stable and high in intellect. These results substantiate the previous findings of Sliviakova and Klimusova (2011) in which active procrastinators were found to have high level of emotional stability and openness to change. As regards to other variables significant positive relationship was observed for active procrastinators between their level of passive procrastination and personality trait of agreeableness and conscientiousness, signifying that as active procrastinators are low on passive procrastination they are also less agreeable and less conscientious. Moreover significant positive relationship was also found for active procrastinators between their level of passive procrastination and depression and anxiety, indicating that as active procrastinators report lower level of passive procrastination so they also report lesser level of depression and anxiety. Previously Sliviakova and Klimusova (2011) also found tension as a negative correlate of active procrastination. These findings provide further evidence for the construct validity of active procrastination and support the previous findings of Choi and Moran (2009) and Chu and Choi (2005) in which they found similar pattern of results.

For passive procrastinators (see Table 28) a significant positive correlation was observed between passive procrastination and setting goals and priorities, emotion-focused coping and dysfunctional coping style indicating that passive procrastinators set their goals in advance, try to follow the same schedule, and are inflexible in their routine. They do not have adequate time management skills that ultimately results in procrastination. Findings of Ackerman and Gross (2005) also linked procrastination to poor time management. Moreover in case of any crisis they employ dysfunctional and emotional coping pattern to deal with the situation instead of focusing on the problem.

Significant negative correlation for passive procrastinators between their passive procrastination and time management and self-efficacy shows that passive procrastinators report higher level of passive procrastination but low level of time management and self-efficacy. They are less self-efficacious which indicates their lack of confidence in their abilities. These findings are in line to previous researches such as Klassen et al. (2008) and Howell, Watson, Powell, and Buro (2006) in which an inverse relationship was found between self-efficacy and passive procrastination.

Passive procrastinators follow the passive approach such as they wait for the last moment to take some action instead of being active which ultimately results in negative consequences. This is confirmed as a significant positive correlation was observed between procrastination and agreeableness for passive procrastinators (Table 28). Moreover they are less likely to be extravert, emotionally stable, and open to new experiences which may be the reasons behind their following the passive style in different spheres of life as due to being less extravert they are not much exposed to new and varied experiences. Previous researches show diverse findings, some report

similar pattern of results in which (traditional) procrastination was found to have low correlation with extraversion and conscientiousness (e.g., Aitken, 1982; Johnson & Bloom, 1995; Scher & Osterman, 2002) and others report high negative correlation between passive procrastination and conscientiousness (Johnson & Bloom, 1995; Lay, 1997; Schouwenburg & Lay, 1995).

Concerning outcome variables for passive procrastinators significant positive correlation was found between passive procrastination and depression, anxiety, and stress and significant negative correlation with life satisfaction which indicates that as passive procrastinators report high level of passive procrastination they also experience high level of depression, anxiety, and stress but lower level of life satisfaction (see Table 28). These results are in accord to previous studies that highlight those who tend to procrastinate are more prone to be anxious, emotional distressed, and in poor mood (Ferrari, & Scher, 2000; Sarid & Peled, 2010; Steel, 2007; Wolters, 2003).

To find out the effect of procrastination category on multiple dependent variables (i.e., time management, coping strategies, self-efficacy, depression, anxiety, stress, life satisfaction, and personality traits) one-way MANOVA was run. To see the difference between nonprocrastinators, active procrastinators and passive procrastinators, three groups were formed on the basis of median split on PPS and NAPS as a cut-off score. The findings of Box's *M* test showed that the test is nonsignificant indicating homogeneity of variance. One-way MANOVA revealed a significant multivariate main effect for procrastination category on time management behavior which was subsequently followed by one-way ANOVA. Levenes' statistics indicated the homogeneity of variance. Post hoc comparisons revealed significant

difference between nonprocrastinators, active procrastinators and passive procrastinators in setting goals and priorities that supported hypothesis no.1 in which a significant difference between nonprocrastinators, active procrastinators and passive procrastinators in setting prior goals was presumed (see Table 29). Hypothesis no. 2 was also accepted that both nonprocrastinators and active procrastinators will report high level of time management as compared to passive procrastinators as this difference was significant between nonprocrastinators and passive procrastinators and between active and passive procrastinators. Regarding organization skill of time management, significant difference was observed across different groups of procrastinators. Hypothesis no. 3 was disconfirmed that presumed passive procrastinators being high on organization skill but as it was not supported by the findings so it was not confirmed (Table 29). Hypothesis no. 4 was partially supported as on variable of time control significant difference was observed only between active and passive procrastinators but not between nonprocrastinators and passive procrastinators. These finding are in accord to the previous research of Donnelly, Kovar, and Fisher (2005) who suggested perception of time control is a significant determinant of persistence in task. In addition findings of Bond and Feather (1988) and Chu and Choi (2005) also revealed similar findings where a significant difference was observed between active procrastinators and passive procrastinators in time management behavior.

One-way MANOVA was carried out too see the effect of procrastination in coping strategies used by respondents, their level of self-efficacy, depression, anxiety, stress and life satisfaction, All these variables were put together as they are theoretically related to each other. Findings of Box's *M* test indicated the

homogeneity of variance. A significant multivariate main effect for procrastination category was found that was followed by one way ANOVA. Significant univariate main effects for procrastination category were found for problem focused coping, emotion focused coping, dysfunctional coping, self-efficacy, depression, anxiety, and life satisfaction. The Levene's statistics for all the eight DVs indicated equal group variances, and further allowed use of post hoc tests for pair-wise group means comparison.

Findings showed that in case of coping strategies employed by different groups of procrastinators difference was significant on all the three types of coping strategies (i.e., problem-focused, emotion-focused, and dysfunctional coping). Post hoc analysis further revealed that in use of problem-focused coping active procrastinators and passive procrastinators significantly differ from each other. On emotion-focused and dysfunctional coping significant difference was found between nonprocrastinators and passive procrastinators and between active and passive procrastinators. These results lend partial support for hypothesis no. 5 in which it was hypothesized that nonprocrastinators and active procrastinators more frequently employ problem-focused coping whereas passive procrastinators make frequent use of emotion-focused coping and dysfunctional coping (Table 30). These findings are in line to previous findings of Chu and Choi (2005) in which significant difference was observed in use of task-oriented coping, emotion-focused, and avoidance coping among different types of procrastinators.

In terms of self-efficacy which shows an individuals' level of confidence to perform certain activities, a significant difference was observed across three groups of procrastinators that led to the confirmation of hypothesis no. 6 which stated that both

nonprocrastinators and active procrastinators will report high level of self-efficacy than passive procrastinators (see Table 30). These results substantiate previous findings which highlighted that self-efficacy is inversely related to traditional passive procrastination and positively associated with active procrastination (e.g., Chu & Choi, 2005; Haycock et al., 1998; Klassen et al., 2008; 2010).

Findings revealed significant mean difference across groups of procrastinators in their level of depression, anxiety and life satisfaction whereas nonsignificant difference was observed in their level of stress (Table 30). A closer look to mean scores of groups shows that though the difference was nonsignificant but passive procrastinators experience more stress as compared to other groups. Hochberg's GT2 test further documented that on variable of depression and anxiety, difference was significant only between active and passive procrastinators. Moreover significant difference was found between nonprocrastinators and passive procrastinators, and between active and passive procrastinators in their level of life satisfaction.

Results from Table 30 partially support hypothesis no. 7 which stated that both nonprocrastinators and active procrastinators will report low level of depression, anxiety and stress as compared to passive procrastinators. Findings indicated that though active procrastinators and nonprocrastinators reported low level of depression, anxiety, and stress as compared to passive procrastinators but this difference was significant only in their level of depression and anxiety, but not in stress. In addition this difference was significant only between active and passive procrastinators but not between nonprocrastinators and passive procrastinators.

Findings of Phase I (i.e., online data collection) of main study also revealed similar results (Table 23) in which significant difference was observed between active



and passive procrastinators in their level of depression and anxiety. Regarding life satisfaction significant difference was found between nonprocrastinators and passive procrastinators and between active and passive procrastinators. Results of both samples (i.e., online and in-person) share somewhat similar results, that adds to the strength of findings. As regards to life satisfaction analysis of mean scores shows that active procrastinators have more life satisfaction as compared to other groups. Post hoc analysis further illuminated that significant difference in life satisfaction lies between nonprocrastinators and passive procrastinators and between active and passive procrastinators. The present findings provide support to hypothesis no. 8 that was regarding high level of life satisfaction among nonprocrastinators and active procrastinators as compared to passive procrastinators (Table 30). These results also agree with Chu and Choi's study (2005) in which significant difference between active and passive procrastinators was revealed in their perceived level of depression and stress. Findings of Byrne (2008) also emphasized that those who manage their time effectively tend to be happier and satisfied with their lives.

To see the effect of independent variables on personality traits that is differences among different groups of procrastinators in their personality traits one-way MANOVA was conducted. Box's *M* test indicated homogeneity of variance and findings revealed a significant multivariate main effect for procrastination category on personality traits. As overall test was significant so univariate effects were further examined. Significant univariate main effects for procrastination category were observed for extraversion, emotional stability, intellect/openness, conscientiousness. For personality trait of agreeableness this difference was nonsignificant across different groups of procrastinators according to adjusted alpha level of .01. The

Levene's statistics for the all the five DVs was nonsignificant allowing further use of post hoc tests for group-wise comparison.

Regarding different personality traits hypothesis No. 9 was supported that hypothesized active procrastinators and nonprocrastinators as having high level of emotional stability, extraversion and openness to experience as compared to passive procrastinators. Findings revealed significant difference between nonprocrastinators and passive procrastinators and between active and passive procrastinators in their emotional stability, extraversion and openness to experience. This highlights that nonprocrastinators and active procrastinators are more social, extrovert, have emotional stability than passive procrastinators and due to which can make their decision with more confidence and are open for unique and new experiences.

Hypothesis no. 10 in which it was presumed that nonprocrastinators and passive procrastinators will score high as compared to active procrastinators on personality trait of conscientiousness was partially supported as according to findings significant difference emerged only between nonprocrastinators and active procrastinators and not between active and passive procrastinators in personality trait of conscientiousness. This may be due to the related traits of a conscientious person who is well-organized and disciplined; therefore, he or she is more likely to be a nonprocrastinator than an active procrastinator or passive procrastinator as both are not disciplined so this difference was not significant between active and passive procrastinators. Although active procrastinators are well capable of managing their time and can easily meet the deadlines in a flexible and adjustable manner but they do follow an organized and preplanned schedule. Moreover regarding personality trait of agreeableness findings revealed nonsignificant difference in mean scores of

nonprocrastinators, active procrastinators, and passive procrastinators which led to the disconfirmation of hypothesis no. 11 (Table 31). Previously carried out studies also showed similar findings such as Johnson and Bloom (1995) and Watson (2001) did not find any significant relation between procrastination and agreeableness. Choi and Moran (2009) also found very low correlation of active and passive procrastination with personality trait of agreeableness further providing support for the results of present study.

Some exploratory findings were also carried out in this part of the research for which no hypotheses were formulated such as when nonprocrastinators, active procrastinators and passive procrastinators were probed the extent to which they consider procrastination a problem for them, passive procrastinators reported it as most problematical for them and this may be due to the outcomes associated with different types of procrastination (Figure 6). One-way ANOVA revealed significant difference across groups of procrastinators in their perception regarding procrastination as being problematic for them (Table 32). As passive procrastinators are apprehensive regarding outcomes of their procrastinatory behavior so they consider it a predicament for them while active procrastinators are not beset with the consequences of their procrastination as a result they did not consider it a dilemma for them and are relatively satisfied. Chase (2003) has also advocated this viewpoint that putting off doing something because of being incapable to make timely decision and to act accordingly, and putting off doing something because it is not being important and urgent at the moment, are two different approaches that results in different outcomes. Merely identifying procrastinators may not provide sufficient information about the underlying causes of their procrastinatory behavior so an effort was made to

dig out the underlying reasons indigenously as though the incidence of procrastination is universally observed but the cultural and social factors leading to procrastination might be different.

Gender difference in level of active and passive procrastination was also probed and findings showed significant difference between boys and girls in their level of active and passive procrastination (Table 33). These findings are in accord to study of Drysdale and Mcbeath (2014) who also reported significant gender difference in traditional/passive procrastination level of students. Age-wise difference in active and passive procrastination was also explored (Table 34) and results showed significant difference in level of active procrastination across different age groups (i.e., early, middle, and late adolescents). These findings lend support to Ferrari and Steel (2013) who also found that younger adolescents tend to procrastinate more than elder adolescents. In a study by Khan et al. (2014) it was found that Pakistani boys tend to procrastinate more as compared to girls, more over they also reported that procrastination level was high among younger adolescents than elder ones, and procrastination level was also high among college students than university students. This shows that level of procrastination decreases with growing age and with higher level of education, and this may be because with growing age individual learn to manage multiple tasks simultaneously. With reference to indigenous context these findings lend support to the results of present study. These findings are novel and are not in accord to Yong (2010) who reported that level of traditional passive procrastination increases with older age and these tendencies are higher among boys whereas findings of current study highlight that level of active procrastination increases with age and high level of education.

Academic level-wise difference (i.e., Matriculates vs. Graduates) revealed significant difference between Matriculates and Graduates in their active and passive procrastination (see Table 35). As findings showed that Graduates report higher level of active procrastination than Matriculates and Matriculates higher level of passive procrastination. Prior studies revealed mixed findings such as findings of Alexander and Onweugbuzie (2007) indicated similar level of procrastination among undergraduates and graduates whereas findings of Sirin (2011) and Rosario et al. (2009) illuminated that level of passive procrastination increases with grade level. These findings indicate that level of active procrastination is higher among boys and increases with higher grades and growing age. This may be due to different socialization pattern for boys and girls in our culture as boys are encouraged to go for multitasking and learn to manage things in and outside home simultaneously.

The role of some personal-social variables in active procrastination was also explored as there is no such indigenous finding that has investigated the role of personal and social variables. Gender-wise differences in time management, self-efficacy, coping strategies, personality traits, and outcome variables (such as depression, anxiety, stress, life satisfaction and procrastination as a problem) were also explored (Table 37-41). Results revealed that boys had significantly higher level of active procrastination whereas girls were significantly high on passive procrastination. Previous studies show similar results in which women were found at greater risk to procrastinate passively (e.g., Ozer et al., 2009; Paludi & Frankell-Hauser, 1986) whereas others indicate no significant gender differences in procrastination (e.g., Effert & Ferrari, 1989; Haycock et al., 1998; Kachgal et al., 2001; Rothblum et al., 1986; Sirin, 2011). Regarding time management skills boys scored significantly

higher than girls (Table 37) that is contrary to some earlier studies such as, Liu, Rijmen, MacCann, and Roberts (2009) found that girls had higher score on time management than boys. These differences may be attributed to variation in culture and perception of time which is truly a subjective experience. Findings also revealed significant gender difference in self-efficacy indicating males to be more self-efficacious than females. These findings are in accord to study of Drysdale and Mcbeath (2014) who also reported significant gender difference in self-efficacy with boys reporting higher level of self-efficacy than girls. Findings of Abesha (2012) and Vuong et al. (2010) are also in the same line, indicating males' to be more efficacious than females. Significant gender difference in coping strategies was also observed as girls reported significantly more usage of emotion-focused coping strategy than boys (see Table 38). These results substantiate the previous findings in which college women reported greater use of emotion-focused coping (e.g., Brougham, Zail, Mendoza, & Janine, 2009; Lawrence, Ashford, & Dent, 2006; Puskar & Grabiak, 2008; Wilson, Pritchard, & Revalee, 2005).

Findings also showed significant gender differences in personality traits of extraversion, agreeableness, and conscientiousness as boys reported high level of extraversion and girls scored high on personality trait of agreeableness and conscientiousness (Table 39). Some previous studies also show similar pattern of results in which women scored higher than men on trait of agreeableness and conscientiousness (e.g., Champan, Duberstein, Sorensen, & Lyness, 2007; Weisberg, De Young, & Hirsch, 2011). Moreover significant gender differences were observed in level of anxiety and stress whereas no significant difference was found in depression, life satisfaction, and procrastination as a problem (Table 40 & 41). These

findings support the previous findings that demonstrate significant gender differences in anxiety and stress with women being more vulnerable to all (e.g., Altemus, 2006; Farooqi & Habib, 2010; Locker & Cropley, 2004; Krumm et al., 2011; Nolen-Hoeksema, 2001). Regarding life satisfaction nonsignificant gender difference is in accord to previous researches that report gender as a weak predictor of adolescents' life satisfaction (e.g., Huebner, Drane, & Valois, 2000; Gilman & Huebner, 2006).

Father's and mother's education level did not make any significant difference in adolescents' level of active procrastination and passive procrastination (see Table 42 & 43). Grade-wise differences in active procrastination, passive procrastination, time management, and life satisfaction were also explored and findings indicated that those who achieve high grades reported significantly higher level of active procrastination, more time management skill and greater level of satisfaction with their lives as compared to those who achieved low grades (Table 44). Previously findings of Gendron (2011) also demonstrated the significant role of active procrastination in academic achievement of students. Moreover these findings also support the prior studies in which it was suggested that time management skills have direct effect on academic performance of adolescent students (Macan, 1996; Macan et al., 1990).

Furthermore differences between high-achievers and low-achievers were also explored regarding their level of depression, anxiety and stress. Findings showed significant difference between high-achievers and low-achievers in their level of depression, anxiety and stress revealing that high-achievers experience less depression, anxiety and stress (Table 45). These results support the previous findings of Yasin and Dzulkifli (2011) in which significant differences emerged between high-

achievers and low-achievers with respect to their level of depression, anxiety, and stress.

Besides hypothesis testing some other exploratory analysis were also run to have more profound understanding of the construct of active and passive procrastination being nascent and distinct in nature. As procrastination is a complex, multifaceted phenomenon that is related to many diverse causes in the situation, the characteristics of the task, and the actor's personality (see Liberman et al., 2007; van Eerde, 2000) so it was deemed essential to explore it in more depth. Multiple logistic regression analysis was carried out through Forward: LR method to see the role of time management skills, coping strategies, self-efficacy, and different personality traits in predicting active and passive procrastination (Table 46). Findings revealed that model correctly identified 89 % of the cases after including the predictors. Results of Multiple logistic regression analysis revealed that among predictor variables emotion-focused coping, self-efficacy, emotional stability, intellect/openness to experience and conscientiousness emerged as significant predictors of procrastination.

Linear regression analysis was also run to examine the role of different types of procrastination in predicting various outcomes (i.e., depression, anxiety, stress, and life satisfaction). As there were three groups of procrastinators so for dummy coding nonprocrastinators were chosen as baseline group and rest of two groups were compared with this baseline category. Results showed that category of procrastinators significantly predict the respondents' level of depression, anxiety, stress, life satisfaction and his/her perception of procrastination being problematic for him. These findings highlight that as the respondent's category changes from baseline



category (i.e., nonprocrastinator) to active procrastinator his/her level of depression and stress decreases and level of life satisfaction increases. On the other hand if the respondent category changes from baseline category (i.e., nonprocrastinator) to passive procrastinator his/her level of depression, anxiety, stress and perception of procrastination being problematic increases whereas level of life satisfaction decreases (See Table 47-51).

On the whole findings of main study illuminate researchers, educationists, counselors, and administrators of institutions regarding the positive and negative nature of procrastination, its underlying reasons, correlates and outcomes. These findings have implications for counselors while dealing with procrastinators in indigenous context, having knowledge of the causal factors that lead to procrastination may help them to tap those areas that require change such as improving time management skills, boosting self-efficacy, and use of appropriate coping strategies in case of coping with the situation. Moreover merely identifying procrastinators may not classify the type of procrastination as in both the individual shows dilatory behavior but the reason and the approach one is following is entirely different. Helping adolescents in overcoming passive procrastination tendencies that lead to negative outcomes may not only save their energies and time, but would also improve their health status as social and psychological barriers that hinder adolescents from availing mental health counseling services further contribute to the prevalence of depression and anxiety in adolescent population.

## **GENERAL DISCUSSION**

**Chapter VI****GENERAL DISCUSSION**

Procrastination is quite prevalent phenomenon in general population. Some people tend to procrastinate more than others while some claim to be totally free of this nuisance. Though the phenomenon of procrastination is not new as it has existed throughout the history but the term gained its popularity with the advent of latest technology and industrial revolution. Initially it was considered a menace only to the industrialized societies but current studies that have explored the phenomenon in East Asian settings have revealed that procrastination equally afflicts Asian cultures. The difference lies in the perception of time and value assigned to it which is truly a subjective experience. The importance given to the associated outcomes of dilatory behavior also determine our actions. Globalization a process by which cultures influence one another and become more alike has existed for many centuries. The impact of globalization has made both Eastern and Western cultures vulnerable towards each others' values and life styles. However, in recent years, the intensity of the connections among different cultures and various parts of the world have dramatically increased due to advancement in technology and a rapid increase in economic and financial interdependence.

Globalization has played a significant role in the psychological development of the people of the 21<sup>st</sup> century. Previously many cultures had deep rooted enduring traditions that were barely touched by anything global whether Western, or Asian, but now the young people from every part of the world are affected by globalization. Almost all of them are aware to some extent about global culture that exists beyond

their local culture. People belonging to collectivist cultures have number of expectations and demands to meet that keep them under pressures and at times lead to procrastination tendencies. Adolescents in Asian setting such as Pakistan live with their immediate or extended family where they are influenced by family and cultural norms and resulting behavior is the outcome of interaction between multiple influencers. The self in collectivist cultures such as Asian settings is enmeshed, interdependent, and linked with its close relations such as family and peers, and emphasize on its socially contingent nature. So it was considered important to explore the procrastination tendencies of Pakistani adolescents who are constantly under social and cultural pressures that associate their worth with their achievements.

As earlier discussed, procrastination was considered a nuisance only for industrialized countries where people have number of commitments and deadlines to meet, and it was presumed that agrarian or nonindustrialized societies are not much affected by this hazard. Though the phenomenon of procrastination is not extensively studied in Asian settings but findings of the studies conducted, revealed that some of the underlying reasons of procrastinatory behavior might be different (such as relationship bonding, the value assigned to commitments, and perception of time which is truly subjective) but the associated costs and the outcomes of behavior are eventually the same. The relationship bonding and networking in Asian settings is quite strong due to their collectivist nature. Moreover the value assigned to commitments is major difference between Western and Asian setting.

As previously discussed different explanations portray the phenomenon in their own way such as Popoola (2005) viewed that procrastinator is the one who has an idea what he wants to do, can do, is trying to do it, however doesn't do it whereas

another perspective of van Eerde (2003b) highlights that procrastination may not necessarily be dysfunctional, arguing that sometime procrastination may lead to time pressure for simple and routine tasks and that time pressure creates a challenge and ultimately lead to finish a task quicker. Mostly procrastination has been viewed in negative connotation but it has positive consequences too, like it may provide a temporary relief from stress, evades anxiety and improves a bad mood (Tice, Bratslavsky, & Baumeister, 2001).

Present study is an endeavor to explore the phenomenon of procrastination in detail, its positive and negative outcomes among Pakistani adolescents. Previously most of the studies were carried out in west and explored the negative effects of procrastination. With reference to Pakistani context very few studies have explored procrastination thoroughly and almost all of them have investigated the negativities associated with it. This study is first of its type that has explored the phenomenon of procrastination in depth and excavated its positive outcomes indigenously.

The study has adopted Chu and Choi's perspective (2005) that viewed procrastination from both positive and negative angles. Chu and Choi's stance was somewhat similar to Lay (1986) who considered procrastination as functional and dysfunctional but they preferred to reserve a term passive procrastination for traditional negative view of procrastination (dysfunctional) and active procrastination for functional delay. The major difference between active and passive procrastinators is of their approach, though the apparent behavior of both is dilatory in nature. Passive procrastinators initially do not intend to delay but due to their inability to manage the task timely, they end up with procrastinating for an indefinite period. As a result they face negative consequences and are dissatisfied. On the other hand active

procrastinators due to their multitasking ability and being capable of managing timely tasks completion intentionally put off some tasks, and as a result achieve positive outcomes and are more satisfied with their lives. The present research contributes to theory, research and practical implications of active and passive procrastination as it demonstrates the complexity of their relationship with time management skills, coping strategies, self-efficacy, personality traits and associated outcomes in terms of psychological health, life satisfaction and academic achievement.

The study was carried out in three parts. Part I was about translation, cross language validation and determining the psychometric properties of New Active Procrastination Scale and Passive Procrastination Scale. Part II was pilot study and Part III was main study in which mixed-mode approach of data collection was used (i.e., online and in-person data collection) to observe the relationship among all the study variables and to find out the effect of procrastination type on time management, self-efficacy, coping strategies, personality traits, depression, anxiety, stress, and life satisfaction. Besides this some exploratory analyses were also run in main study to further explore the nature of both construct that is, active and passive procrastination.

Part I was completed in three phases; phase I was try out which was conducted to have knowledge about the comprehension of respondents regarding the scale items and to identify any ambiguity in the content of the scales. As both the scales were in original form due to which some of the items were not fully comprehended by the respondents and provided a rationale for the translation of the scales into local language (i.e., Urdu). Phase II was completed in three steps; forward translation, back translation, and cross language validation. Process of decentring was used for translation of measures. To meet the objectives of first two steps bilingual were

approached and were requested to translate the scales initially from source (i.e., English to Urdu) to target language and then from target to source language (i.e., Urdu to English). Committee approach was followed to select and finalize the translations. In step III cross language validity of the scales was determined and to meet this objective forty adolescents were approached for participation in this part of the study. They were divided into four groups. Half of them (first two groups) were given original version of the scales and rests of them were given translated versions. Among four groups, two groups were given the same version that was previously given to them and rest of the two was given translated versions. Test-retest reliabilities of scales were determined across two administrations and findings revealed that highest test-retest reliability was between translated versions of the scales. In phase III psychometric properties of the scales were established and the results of this phase revealed sufficient alpha reliability coefficients of the scales. Sound psychometric properties of the scales revealed in further parts of the study that there was no problem of restriction of ranges that enhance the credibility of measures and are an augment to the findings of study. Moreover to see the construct validity that refers to whether a scale measures or correlates with the theoretically predicted psychological constructs, correlation coefficient was calculated for measures of active and passive procrastination with measures of time management and life satisfaction ( $N = 80$ ). Findings revealed that active procrastination as total and its factors was significantly positively related to time management and life satisfaction.

Part II was pilot study which was carried out on a relatively small sample size (i.e., 70 adolescents) to avoid any sort of irritants that one may face while conducting main study. The objective of the pilot testing was to ascertain the psychometric

properties of all the measures which were likely to be used in main study and to see their appropriateness with reference to indigenous context. Findings of pilot study revealed sound internal consistency of the scales and provided an insight into intricacy of relationship among correlate variables and outcome variables. Results of pilot study indicated the distinct nature of active and passive procrastination and their divergent relationship with correlate and outcome variables. In pilot testing the order of measures was same for all the participants for which sequence effect was observed, so it was decided to give the measures in random order for main study.

Part III (i.e., main study) was completed in two phases, phase I dealt with online data collection and phase II with in-person data collection. To meet the objective of phase I, a website was developed for data collection as internet has proved to be an efficient way of data collection in personality researches. Previous research such as Guise et al. (2010) has shown that researches using mixed-mode approach to collect data are quite successful and enhance the validity of findings. To have more generalizability of the findings and implications for procrastinators to overcome their procrastination tendencies it was decided to develop a website and approach the respondents via online mode of communication which may subsequently prove to be useful in offering online counseling services to procrastinators and to help them in managing their procrastination tendencies. To meet the objective phase I of part III was completed in five steps (for details see Appendix-O).

Overall eight people participated in the development of the website that contained New Active Procrastination Scale, Passive Procrastination Scale, Depression, Anxiety, and Stress Scale, and Satisfaction with Life Scale. Only measures of procrastination and outcome variables (such as DASS and SWLS) were



uploaded on website. The reason behind not uploading the measures of correlate variables was to keep the content as concise as possible hence respondents may not feel distracted and lose their interest as in online data collection the participation of respondents was purely voluntary and they cannot be persuaded at the time of their participation to respond on all the measures. Another reason is the availability of time to participate as in online data collection every respondent participates according to his/her convenience so if the length of measures will be too extensive they may not take an initiative to volunteer for the study or will drop at any stage of participation. After passing all the steps of website development a website ([www.procrastination-research.edu.pk](http://www.procrastination-research.edu.pk)) was launched. A message for volunteer participation in the study was dropped on different education related websites. As the target group of study was adolescents so the data of those participants was retained for statistical analysis that fall in the age range of 13-21 years.

Sound internal consistency of measures was observed in online data that showed the appropriateness of measures to be used for online population. The relationship pattern among variables revealed the uniqueness of the construct of active procrastination and its distinct nature from passive procrastination. Findings of one way MANOVA revealed significant main effect of procrastination type on depression difference, anxiety, stress, and life satisfaction. One way ANOVA further revealed significant difference between active and passive procrastinators in their level of depression, anxiety, and stress. Similarly significant difference in life satisfaction of nonprocrastinators, active and passive procrastinators was also observed. Findings of the present study revealed lower level of life satisfaction among Pakistani adolescents as compared to the norms (for Asian) provided by Yoshioka (n.d.).

Phase II of main study was carried out on a larger sample to have more authentic findings. This part aimed for hypothesis testing, and some exploratory analysis. Moreover confirmatory factor analysis (CFA) was run using AMOS (version 18) on NAPS to verify the identified factor structure of a set of observed variables of active procrastination initially given by Choi and Moran (2009). Main study revealed many significant findings that have practical implications in real life situations where counselors have to identify the reasons behind counselee's procrastination and to help him in managing procrastination tendencies. Results of main study demonstrated sound internal consistency of all the measures. Confirmatory factor analysis showed a good model fit to the data and second order CFA confirmed that all the four factors loaded significantly on their corresponding dimensions and also loaded well on a single factor labeled as active procrastination. Results also provided support for theoretically predicted factor structure of NAPS and supported the previous findings of Choi and Moran (2009).

Relationship among study variables for active and passive procrastinators was also explored in this part and findings revealed that active procrastinators are low on passive procrastination and high on time management, time control, self-efficacy and problem-focused coping. This confirms the findings of pilot study and findings of Chu and Choi (2005). Among personality traits active procrastinators being low on passive procrastination were more extraverts, emotionally stable, and open to new experiences but less agreeable and conscientious. Among outcome variables active procrastinators were low in depression and anxiety but high in life satisfaction. For passive procrastinators results showed that as they scored high in passive procrastination they were high in setting goals and priorities, emotion-focused and

dysfunctional coping whereas they were low in time management and self-efficacy. Regarding personality traits passive procrastinators were high in agreeableness and low in extraversion, emotional stability, and intellect. For outcome variables they reported higher level of depression, anxiety, and stress but lower level of life satisfaction. These findings are in line to findings of pilot study in which similar pattern of relationship emerged.

Hypothesis testing was also done in phase II of main study. One-way MANOVA followed by univariate ANOVA was carried out to see the differences between nonprocrastinators, active procrastinators, and passive procrastinators in their time management behavior, self-efficacy, coping strategies, and personality traits. In addition the difference between different types of procrastinators regarding outcome variables was also explored such as depression, anxiety, stress, and life satisfaction. Findings revealed significant difference between different types of procrastinators in time management behavior, coping strategies, self-efficacy, personality traits, depression, anxiety, and life satisfaction. Some exploratory findings revealed the differences between different groups of procrastinators in their perception regarding procrastination being problematic and their academic achievement. Passive procrastinators viewed procrastination as more problem for them as compared to nonprocrastinators and active procrastinators. This finding substantiates the underlying premise of active procrastination, as due to being capable of managing their tasks and ability to achieve positive outcomes they do not find procrastination a problem for them. The ultimate outcomes of their behavior are satisfying and rewarding that gives them a sense of accomplishment and complacency (Chu & Choi, 2005; Choi & Moran, 2009).

In addition gender-wise, academic level-wise, age-wise and grade-wise differences were also explored and results revealed significant gender difference in active procrastination, passive procrastination, time management, self-efficacy, emotion-focused coping, and personality traits of extraversion, agreeableness, and conscientiousness. These findings are in line to the study of Ferrari and Steel (2013) who also found significant gender difference in procrastination tendencies of adolescents with males reporting higher level of procrastination than females. Moreover these findings support previous results of Drysdale and McBeath (2014) who also observed significant gender difference in traditional/passive procrastination level and self-efficacy of students. Significant gender difference was also found in level of anxiety and stress. Moreover girls perceived procrastination as significantly more problematic than boys. Significant difference in active and passive procrastination was observed with reference to academic level and different age groups. Grade-wise differences in active procrastination, passive procrastination, time management, and life satisfaction were also observed. Results also showed significant difference in depression, anxiety, and stress level of high and low achievers.

To explore the predictors of active and passive procrastination multiple logistic regression analysis was conducted and findings revealed that emotion-focused coping, self-efficacy, emotional stability, intellect/openness to experience and conscientiousness are significant predictors of active and passive procrastination. These findings are in accord to Strunk and Steele (2011) who also found self-efficacy as a significant predictor of procrastination. Linear regression analysis was also run to see the role of different types of procrastination in predicting various outcomes (i.e., depression, anxiety, stress, life satisfaction and perception of procrastination as a

problem). Findings illuminated that respondents' level of depression, anxiety, stress, life satisfaction and his/her perception of procrastination being problematic was significantly predicted by the category of procrastinators. Respondent's level of depression, anxiety and stress, and perception of procrastination as problematic for him increases as the category of procrastinator changes from active to passive whereas his level of life satisfaction decreases with this change.

On the whole findings of the study are prolific in nature and provide fruitful information to researchers, counselors, practitioners and educators. The study explores procrastination tendencies of adolescents in detail and therefore recommends that early intervention and prevention strategies may aid in the reduction of procrastination tendencies and associated negative outcomes experienced by the adolescents. Moreover, study has enabled the identification of different types of adolescent procrastinators and has highlighted the positive and negative aspects of procrastination.

Since coping is a complex construct and a significant mechanism in understanding how adolescents react to various stressors and make adjustments to the demands of situation so they are recognized as critical protective factors for adolescents associated with many health outcomes such as depression, anxiety and stress (Franko, Thompson, Affenito, Barton, & Striegel-Moore, 2008; Li, DiGiuseppe, Froh, 2006; Lubell & Vetter, 2006; Rodrigues & Kitzmann, 2007; Sveinbjornsdottir & Thorsteinsson, 2008; Zimmer-Gembeck & Skinner, 2008). Findings of the present study therefore suggest the need for enhancing self-efficacy, time management ability and coping skills to deal with stressors, thus enabling adolescents to do multitasking

and meeting deadlines as van Eerde (2003b) has also suggested that time management training can significantly decrease procrastination and improve performance.

The study has utilized new and advance mode of data collection as present age is an era of information technology and everyone wants to educate himself with the latest and advanced ways of communication. Previously researchers have also highlighted several benefits of online data collection despite being relatively new in educational sphere. Online data collection offers efficient and convenient choice to the more traditional method of collecting data from students, teachers and parents.

As earlier discussed that research exploring the positive aspect of procrastination lacks in both Eastern and Western settings and most of the studies conducted highlight the negative view of procrastination. Besides focusing on the negative view present study also focused on positive view of procrastination that has not been explored indigenously. Results of the study not only substantiate previous findings but also add to existing literature and theories of procrastination. Some of the findings that are the original contribution of the study are: exploring the predictors of both; active and passive procrastination which were emotion-focused coping, self-efficacy, emotional stability, and intellect/openness. Outcomes of different procrastinatory behaviors such as depression, anxiety, stress, life satisfaction, perception regarding procrastination being problem, gender-wise difference, age-wise difference, academic level-wise difference, and grade-wise difference in procrastination behavior also enhance our understanding of the phenomenon. Earlier studies indicate mixed findings regarding gender difference in procrastination behavior. Previous studies like Klassen et al. (2009) and Yong (2010) also reported higher level of passive procrastination among males as compared to females. Findings

of present study and Khan et al. (2014) indicate that in our cultural setting there is a significant gender difference in active procrastination, as boys were found to more actively procrastinate than girls. This may be attributed to the social values and parenting styles as boys are more encouraged to manage multiple tasks inside and outside the home simultaneously that enhance their ability to do multitasking. Contrary to that significant gender difference was also observed in passive procrastination as girls procrastinate more passively than boys, and this may be due to lack of encouraging attitudes from society.

Gender wise difference in coping strategies revealed that girls significantly employ more emotion-focused coping strategies than problem-focused coping and avoidance coping. Regarding time management boys were found to be more capable of managing their time as compared to girls. In personality traits boys are more extravert than girls whereas girls are more agreeable and conscientious than boys. Moreover current findings add to our knowledge that girls experience more anxiety and stress than boys.

A significant change was also observed between different age group adolescents with reference to active procrastination. Results of the study also highlight that with growing age the ability to do multi-tasking increases. Academic level-wise difference showed that graduate students more actively procrastinate than matriculates. Grade-wise differences showed that the level of active procrastination, time-management, and life satisfaction increases with improvement in grades and level of passive procrastination increases with fall in grades as those who obtained low grades tend to procrastinate passively.

As procrastination is a multifaceted phenomenon that entail cognitive, affective, and behavioral dimensions so current study followed the cognitive and behavioral perspectives, and trait based approach to dig out the underlying reasons of procrastination in local context. Findings of the present study conclude that there is no single perspective or approach that fully explains the phenomenon due to complexity of its nature. An eclectic approach must be adopted to fully comprehend the nature of procrastination. In present study while exploring procrastination an eclectic approach was adopted and all the three dimensions (i.e., cognitive, affective, and behavioral) were investigated. Current findings complement each other and present the researchers, practitioners, and readers a holistic view regarding the personality of an active and passive procrastinator. On the basis of present results one can have a thorough understanding about the phenomenon of procrastination in local context, that is how it operates, what are the underlying causes, and what might be the consequences of both types of procrastination.

With reference to Pakistan there is no such psychological research that has used both traditional and online data collection technique (i.e., web and paper questionnaire) to enhance the validity of its findings so in this way study is first of its kind that has used this type of mixed-mode approach for data collection. Online data was collected in phase I of main study to establish the psychometric properties of the procrastination measures so that in future measures can be used for self evaluation regarding procrastination tendencies and online counseling of procrastinators. No statistical comparison was carried out between online and inperson data as this was not the objective of study. In addition data was collected at two different time points and sample sizes were different, cross-sectional in nature and independent in both



phases as in phase II data was collected only from Islamabad and Rawalpindi whereas for online respondents belonged to 12 major and 26 small cities of Pakistan. So there was no point of statistical comparison between both samples. Another reason was the measures in both phases of main study were slightly different, as in phase I no measure of correlate variables was uploaded. Only outcome measures (i.e., DASS and SWLS) translated and back translated versions of New Active Procrastination Scale and Passive Procrastination Scale were used with author's permission (for detail see p.138 and Appendix-O). Therefore comparison between online and in person data was carried out only with discussion point of view. Future studies may incorporate a statistical comparison between online and in person data to add in existing findings.

Though online data collection technique is very popular in west for conducting personality and cognitive researches but in Pakistan being a developing country this advance mode of data collection has not yet received much popularity. A need exists to introduce latest and advance research techniques to the researchers and respondents as well which may prove to be economical and time saving. Therefore many websites that contain self-assessment measures related to personality and psychological health offer counseling services on the basis of assessment. Researchers have also highlighted number of potential benefits of computer-based interventions over face-to-face interventions such as anonymity and ease of access, individualized feedback, and active learning through interactive elements (Skinner, Poland, Goldberg, 2003).

For future researches findings of the study may prove beneficial to offer counseling services to passive procrastinators as results provide first hand knowledge regarding causes, correlates and outcomes of procrastination in indigenous context. Moreover study has also highlighted the positive type of procrastination and

indigenously explored the construct of active procrastination in depth. The construct of active procrastination has been proposed as an academically beneficial alternative to passive form of procrastination. That existence of more than one form of procrastination may challenge the assumption that the delay of tasks in academic setting is always maladaptive (Chu & Choi, 2005). Ferrari (2009) has also emphasized to make a paradigm shift and to opt for strength based approach borrowed from positive psychology that focuses on the strengths and virtues that enable individuals to thrive and highlights the positive aspects of procrastination instead of negative one. Following such approach will not only cultivate positive emotions but would also flourish positive individual traits, and positive institutions such as contentment with life, capacity for love and work, resilience, creativity, integrity, self-knowledge, and self-control which will in return foster better communities with high sense of commitment, responsibility, civility, and work ethic.

Procrastination patterns are consistent and predictable that may not always occur in same situation but often follow an identifiable sequence. The sequence follows a discomfort regarding the activity and drifting towards another activity that is irrelevant. Procrastination varies in its magnitude of environment. Findings of the present study are generalizable to adolescent population and provide us thorough understanding of the phenomenon in local context. On the basis of these findings following suggestions are offered that may prove helpful for passive procrastinators. Beyond implications that they can create for themselves, they may find the most valued part of curbing procrastination in the growing sense of competence and self-mastery.

- Make to-do lists so it may clarify the targets.

- Identify and work on priorities.
- Continually review priorities and progress.
- Avoid over scheduling yourself, if you find it difficult to manage things simultaneously.
- Prior to bed time lay out your plan for next day.
- Get routine documents out of the way by addressing them
- Use reminders for things you want to remember.
- Create a pleasant environment for wherever you work, so it may have pleasurable effect on your psychological health.
- Set process goals.
- Focus on the problems instead of avoiding them.
- Be realistic regarding your targets or milestones you set for yourself.
- Do not under estimate yourself, and don't let negative beliefs overpower you.
- Don't doubt your capabilities.
- Enhance your efficacy through positive self-statements e.g., I CAN DO THIS, I CAN MEET THE CHALLENGE etc.
- Use a cross out sheet, as you finish a task cross it off the list.
- Complete spontaneously arising tasks.
- Stick to your commitments.
- Focus on the cognitive, affective, and behavioral aspects of the outcomes in case of task completion.
- Reward yourself.

- Keep on following the cycle for next challenging tasks till the time it becomes a habit.

Findings of the study may also prove beneficial even for a layman working in any other setting such as education, banking, medicine, government / non government sector and etc. who wants to know about the reasons of their procrastinatory behavior. By overcoming these reasons he/she can beat procrastination and can show improvement in his/her performance. Furthermore how a positive trait of active procrastination can be fostered that has many positive implications not only in terms of health but in multitasking in their routine life.

### **Future Directions and Implications for Researchers and Practitioners**

Present study has indigenously explored the phenomenon of procrastination in detail, its correlates and outcomes and on the basis of these findings some future recommendations for practitioners and researchers are suggested. As procrastination has generally been viewed negatively and the construct of active procrastination is in its emerging stage so it would be interesting to see the construct and approach the idea in a more comprehensive manner to obtain a more accurate measure that identifies different procrastinator types. This will not only expose to which category a procrastinator belongs but also the different types of tasks on which adolescents usually procrastinate. Identifying the real procrastinator type may prove worthwhile as the areas that are tapped in intervention or counseling process should correspond with the type of procrastinator. This will assist researchers and counselors for a more idiosyncratic assessment of each individual and to dig out the underlying reasons

behind his/her procrastination, the challenges he/she faces while overcoming procrastination, and the skills one should have to tackle with the challenge.

The area of procrastination is yet to be explored in more detail and further research is needed regarding procrastination to determine the intricacies of procrastination and then to look at its role in several contexts. Though traditional (passive) procrastination has some short-term benefits for procrastinators such as lessened anxiety and stress but in the longer run the cost one has to pay is greater than its benefits. Future research should continue to find out the more positive aspects of active procrastination and highlight that major difference between the two types (i.e., active vs. passive) might be their degree of adaptiveness (Flett et al., 1995) as active procrastinators intentionally procrastinate and do not worry about it due to being confident of their success regardless of their engagement in the task now or later whereas passives are well aware of their being behind the schedule yet they still procrastinate because of feeling incompetent and afraid of being exposed. Additionally as procrastination is viewed a multifaceted phenomenon that has cognitive, affective and behavioral components (Rothblum, Solomon, & Murakami, 1986) it would be quite worth exploring to dig out the link between academic emotions and procrastination. As Goetz, Pekrun, Hall, and Haag (2006) found the link between academic emotions and cognitions and stressed the need to further explore this area as there is dearth of empirical research on students' emotional experiences. Anxiety, boredom, achievement pressures, and elaborative instructions from teacher were few components of academic emotions that previous literature indicates are also linked with procrastination.

Exploring the phenomenon of procrastination in depth may reveal the differences and similarities of findings between Pakistani adolescents and adolescents belonging to other cultures regarding their time management skills, coping strategies they employ in case of crisis and self-efficacy beliefs. Moreover, the social and cultural processes that result in these differences may also be interesting, worth exploring and equally important. Previous cross-cultural researches heavily emphasize on individualistic and collectivistic cultural frameworks to explain the dissimilarities which may be a functional perspective to understand cultural differences, but it may be less relevant when exploring procrastination, academic achievement, self-efficacy, and time management skills because the need of achievement and self-efficacy is not specific to individualistic cultures (Bandura, 1997).

Self-efficacy and academic achievement both are universally important for functioning, even procrastination also appears to afflict adolescents universally, and operates in similar manner in adolescents from individual and collectivist settings. In addition, though procrastination has long history and phenomena is universal but still a need exists to have a definition that proves to be universally acceptable both for individualistic and collectivistic cultures as understandings of what constitute task delay vary considerably for people following manana life style and people who believe in today and now. Role of self-efficacy in various coping strategies employed by adolescents that in turn affect their psychological health may prove to have pedagogical or treatment implications.

Future research should also explore indigenously the alternative activities that are performed while procrastinating as procrastination is not similar to idleness rather

it is related to performing other activities instead of the required one. Exploring those chosen activities will be helpful for counselors to emphasize the importance of required actions and undermine the value of preferred one as Pychyl et al. (2000) highlighted that majority of chosen activities by western adolescents while procrastinating are leisure activities (76%). In Pakistani context Hussain and Sultan (2010) found that student mostly procrastinate in preparing and submitting their assignments, presentations, preparing for the examinations. Moreover role of different personality traits in academic performance and psychological health may prove potentially valuable. Probing different domains of academic procrastination such as examinations, submission of assignments, meeting attendance requirements, administrative and general activities would be useful for school psychologists in offering a supportive role in applying the best psychological principles to school based interventions. In addition it will also be an exciting idea to explore the interaction of procrastination and other variables and their impact on team-based projects. It will be helpful for management and leadership not only in structuring the team but also in knowing how to maximize effective performance.

The focus of current study is on issues related to adolescence, because adolescents play a pivotal role in the process of globalization (Dasen, 2000; Schlegel, 2001). Unlike children, they are more mature and have access to information available around the world but like adults, they cannot evaluate the information in a judgmental way and are passing through moratorium period. They are more open to new and exciting experiences, have not yet developed ingrained habits and tend to have more interest in global media than either children or adults which have an effect on their perception. Administration of those institutions who are concerned with adolescent

student development and academic achievement, the results of the present study would be helpful in understanding individual differences (i.e., personality traits) which have important implications. It will be beneficial for teachers and instructors to help students in developing time management skills and in use of positive coping strategies to deal the stress associated with procrastination.

Moreover present study is concerned only with adolescent population not with adults, future research may emphasize on time management skills of adults in work settings especially for those who perceive time management as an issue in performing various tasks related to personal and occupational wellbeing. Adolescent students usually procrastinate specifically on those tasks that are perceived unpleasant, boring, effortful, anxiety producing and for which they do not have clear instructions and feedback. Krause and Freund (2011), and Malatincova (2011) highlighted that fear of failure, task aversiveness, reactance, disorganization and lack of persistence are some of the major reasons of students' procrastination and reducing fear of failure and task aversiveness may result in lessening procrastination. The underlying reasons for passive procrastination identified in present study and by Hussain and Sultan (2010) in Pakistani context were lack of time management skills, less focus on problem-focused coping strategies, lower level of self-efficacy, task aversiveness, certain personality traits, illness, lack of motivation, work inability, over confidence, laziness, teachers' attitude, lack of guidance, negative/lack of feedback, company, communication gap, and unforeseen problem. Keeping in view the underlying reasons it may prove beneficial for instructors and teachers to design tasks in a way that provide clear directions regarding how to perform and proceed on that task, are mastery oriented, pleasant and interesting, less anxiety provoking, nonthreatening and



have clear and definite deadlines. Krause and Freund (2011) found that procrastination increases with an approaching deadline so instructors should address the significance of deadlines for tasks to lessen the excuses made by students as the goal of education is to enhance personal growth of an individual and develop skills for life that must enable him to timely meet his obligations and commitments. Providing interim feedback, rewarding and encouraging comments may keep them motivated and raise their morale.

Since present study explored the construct of procrastination in quite detail both the positive and negative aspects of procrastination remained the focus of study. It not only explores the nature of both the constructs (i.e., active and passive procrastination) but also how they relate to different variables and in what regard both differ from each other. Research illuminates how the phenomenon operates in indigenous context, and how it validates the previous findings. Results of this study may prove to be helpful for practitioners working with adolescents as they may procrastinate in any type of setting and have to bear the negative consequences of task delay or avoidance. Counselors may promote timely task completion and raise the level of adolescent's beliefs that he or she can manage the timely task completion. Hocker, Haferkamp, Krumm, Engberding, and Rist (2011) emphasized that working on time restriction strategies improves pathological procrastination. Frings et al. (2011) stressed upon a substantial need for treatment of procrastinating students as in their routine clinical treatment they found greater commitment and compliance of treated students.

The intervention for problem procrastinators may stress upon providing the tools to enhance self-efficacy for self-regulation by emphasizing on successful

accomplishments in the past, verbal persuasive techniques, presenting the models, and discussing strategies to deal with procrastination tendencies. Some of the suggested modes to curb procrastination by Pakistani university students and teachers were guidance and counseling, positive comments, encouragement, academic relationships, and sharing of problems (Hussain & Sultan, 2010). Study also provides empirical support regarding negative effects of psychological problems on adolescents' academic achievement. Counselors, psychologists and educationists can benefit from these findings in designing and developing proper intervention programs to reduce psychological problems such as depression, anxiety and stress among adolescents.

### **Limitations and suggestions of the Study**

Although results of the present research are meaningful extension of existing research and are of great theoretical interest, still the study is not free from limitations and is constrained by its reliance on self-report measures. Measures of procrastination (i.e., NAPS & PPS) were not balanced in terms of negatively phrased items that might be a possible methodological limitation. Despite this limitation it was observed that almost all the measures had sound psychometric properties and there was no problem of restriction of range which is an added strength of the present work. In-person data was collected only from adolescents in urban and rural area of Islamabad and Rawalpindi. Adolescents from other cities were only included in online data sample due to which results may not generalize well to other adolescent populations residing in rural areas and different cities of Pakistan. The participation rate was lower for the rural adolescents whose contextual circumstances might be entirely different due to

which findings may not be generalizable on rural sample. Approaching participants from rural areas of Pakistan and comparing their responses with the participants from urban areas will be quite worth exploring. As participants from urban areas have more social activities and commitments to perform. Their perceived cost and worth of time might also differ from rural participants.

Sample was not selected randomly rather it was based on convenience sampling which may also have an effect on generalizability of findings. Small sample size in Phase I and Phase III of Part I and in Part II can also be a potential limitation of the study. Though power analysis was run to see the power of the test with prespecified sample size but instead of a priori compute required sample size, post hoc compute achieved power was calculated that revealed sample size as reasonably large. Future studies may run power analysis as a priori compute required sample size to determine the appropriate sample size for the study. Future studies should explore the role of age, gender, and academic level as moderators for active and passive procrastinators. Present study explored the correlation coefficient of NAPS and PPS scores with other variables in pilot study which was a relatively small sample future study may compute the correlation of NAPS and PPS scores with other study variables with larger sample to further enhance the validity of findings. Moreover exploring the role of procrastination in predicting outcomes and identifying the predictors of procrastination on the basis of NAPS and PPS scores may add fruitful findings. As in present research regression analysis was run only for exploratory purpose but certainly this research paves the way for any further study to be conducted in local context and provides a rationale to offer hypotheses regarding active procrastination as predictor.

In addition due to cross-sectional nature of study one cannot make causal interpretations and firm conclusions regarding dynamic relationship among personality, self, time management, and coping styles. Although this initial study of active procrastination in indigenous context provides useful opening data on procrastination yet future procrastination research should explore additional variables that are previously shown to be strongly related to procrastination, such as self-efficacy for self-regulation, self-esteem, parenting styles, impulsiveness, sensation seeking, distractibility, self-control, and task appeal.

One important limitation regarding online data collection is the quality of data which may be compromised by making multiple submissions. This can be resolved by recording participant IP address and deleting multiple data from the same address. Another easier way to handle this problem is to use password systems where participants are allocated unique identifiers used as passwords (Miller, Johnston, McElwee, Noble, 2007; Rodgers et al., 2001). Regarding comparability of responses Matz (1999) and Saphore (1999) observed similar pattern of responses between a web survey and an identical survey in paper form. It was noted that in a classroom-administered questionnaire, there is no assurance of respondents' true willingness to participate as at times they have to be considerate due to presence of researcher or administrative power of the institution because of which they have to forego their right to withdraw whereas in web survey respondents have the liberty to participate at their own ease and decision regarding when and where to complete the survey is entirely up to them. One ethical concern regarding online sampling is the true identity of the respondent in terms of demographics such as gender, age, education because absence of respondent does not allow researcher to verify the information provided by

him objectively. Another constraint of online studies is the availability of a computer to respondents. Studies have also highlighted a variety of caveats related to biases of variable population internet access, technical vulnerabilities such as multiple data submissions, lack of face-to-face interaction between participant and researcher, and credibility of running sophisticated analysis (Miller & Sondurland, 2010).

Despite these limitations, web-based surveys offer researchers a unique opportunity of data collection through Internet. This can be particularly helpful in collecting preliminary data, for pretesting of research design, and question comprehension. In addition to being advantageous for researchers working in other than education sector, online data collection can also be useful for in-school purposes such as collecting information or getting feedback from students, teachers, staff and parents for school improvement. Thus, the reviewed studies demonstrate that internet-based research can produce greater sample sizes, increase self-disclosure and reduce further common research predicaments such as social desirability and anxiety yet these opportunities entail risk both to research quality and to human subjects.

Viewing the certain limitations Cantrell and Lupinacci (2007) have suggested that while conducting web-based researches a review of traditional approaches and relevant adaptation to online environments must be made before hand. Considerations must be given to advertising the study, nature of data fields either optional or not, total number of questions to be answered and to seek support from a website administrator to advertize the study to increase the response rate. For future researchers it is important to pay attention to the methods of encouraging response rate in online data collection such as letters can be sent to school administrators asking them to encourage students to participate in the study, sending a flyer to

related institutions for pasting on notice boards and even if survey is at massive level and of common interest to public, can also be advertised on the local radio channels or channels of specific institutions, and through local cable operators. In online data collection the quality of the responses is better than the traditional pencil and-paper surveys because respondents freely choose to participate, which is a positive factor. In order to enhance the participation rate different incentives can be offered to potential participants and the request for participation can be made more interesting, appealing, and nonthreatening.

Lavoie and Pychyl (2001) indicated that keeping in view the nature of these limitations; future research should adopt a more active approach of data collection to reduce sampling bias. To approach a more random sample e-mail addresses of the general population can be sought through various free-access commercial e-mail directories accessible on the Internet (such as., Yahoo or Switchboard) whereas other populations like students of different colleges and universities, employees, and members of particular organizations can be approached via available central e-mail list. Nonetheless a number of issues need to be considered when using an available e-mail list such as the precision of the list which is affected by the frequent change of e-mail addresses by the users or having more than one e-mail address, and the frequency of updating (Litvin & Kar, 2001).

In experimental design participants can be employed through random sampling, which will reduce the susceptibility of targeting procrastinators compared to participants who discover a questionnaire on a Web page at their own. Highlighting the theoretical and practical significance of the research, and its relevance to the participants may increase response rate. As participation in Phase I (main study) of

the research was entirely voluntary, based on the intrinsic motivation of the respondents, so except six participants who did not complete the survey, all others who were falling in the age range of 13-21 years and attempted the whole survey was included in the analysis. Those from country other than Pakistan were not included in the analysis as number of respondents from different countries was small and they were from diverse cultural backgrounds, so it was not possible to have their comparison. In present study comparison between online and inperson data was carried out only with reference to discussion, no statistical comparison was run between online and in person data. The reason behind online data collection in phase I was to establish the psychometric properties of the procrastination measures so that it can be used for online population in future. It is suggested that future studies may run a statical comparison between online and in person data keeping in view the above cited limitations to reach a statistically meaningful conclusion which would add to the previous findings. Moreover valuing their participation by assuring them that their participation is worthy for enhancing the validity of the study and would add meaning to it. This will not only raise their motivation to participate but will also make them feel good.

Exploring procrastination tendencies and its outcomes among Pakistani university students and faculty will also add to future findings, though some of the researches have been conducted in university settings other than indigenous context (e.g., Baumeister et al., 1994; Kariv & Heiman, 2005) which indicate that due to lack of intrinsic self-control till graduate level many students have not learned the adaptive skills that may help them to overcome procrastination in certain academic areas but with growing age they develop schemes that help them to overcome procrastination

tendencies. But all these studies have explored the traditional/passive procrastination among university students and none of the study has explored the positive view of procrastination among university students and faculty. Futures research focusing on how students and faculty members can do multitasking by adopting the positive and active view of procrastination can achieve their targets and save their time will not only enhance the external validity of the construct but would also prove beneficial for both. Moreover it is important to have clear objective of the study in mind as for studies only relying on online data may be questioned for their validity and the generalizability. Lastly, it is important to design the research tool in a way that it may look appealing to the participants. Online questionnaires with minimum length keep the interest of respondent intact and make it easy to complete.

Use of self-report measures and 7-point likert scale are also limitations of the study as findings of the study rely on self-report measures that can increase the possibility of inflated relations and multicollinearity. In future developing a single measure that contains three kinds of items to identify three different types of procrastinators will be a worthy contribution such as levenson's locus of control scale that measures internal, external, and chance locus of control via one measure.

In addition there is difference in actual procrastinatory behavior and procrastination tendencies reported by adolescents as study did not incorporate any behavioral measure of procrastination. Including both the measures of procrastination such as, direct behavioral indices and self-reports may enhance the validity of findings. Similarly one cannot generalize from the results whether the use of coping strategies reported by respondents are also actually employed by them in real life situations or not, we only know that this is what subjects indicated they did, or usually



do, when coping behavior was required in their lives. It is also possible that high self-efficacy is the outcome of better overall adjustment and contentment in life which in turn leads to the use of more problem-focused coping styles and strategies or vice versa.

Being nascent in a theoretical space, the nomological network of construct of active procrastination can be further expanded of by exploring its relationship with other theoretically related variables such as, goal orientations, locus of control, and other social cognitive processes associated with performance management. Adopting longitudinal research design to study progressive changes involved in active procrastination patterns may prove worthy of exploration. Continuing research on the personality and cognitive profiles of the active and passive procrastinators may lead to better prognosis and adopting accurate intervention strategies.

## **Conclusion**

Procrastination is a universal phenomenon and its incidence is widely observed in all segments of society such as students, employees, in routine settings and among all age groups. Present study has made an effort to explore this phenomenon indigenously both with positive and negative viewpoint by following Chu and Choi's (2005) perspective of adaptive type of procrastination that has been previously viewed in negative connotation. Study highlighted the positive and negative nuances of procrastination and their outcomes. Findings of the study validate the distinctiveness of two types of procrastination (i.e., active and passive), apparently the behavior of both types of procrastinators seems to be similar in terms of delay but

the underlying reasons, motives, and associated outcomes are entirely different. Active procrastinators in comparison to passive procrastinators are more self-efficacious, better in time management, use problem focused coping, are more extravert and open to new experiences, more satisfied with their lives and give better performance due to which less vulnerable to depression, anxiety, and stress. Another interesting finding is that in terms of outcomes (e.g., depression, anxiety, stress, life satisfaction and academic performance) active procrastinators are somewhat similar to non procrastinators.

In addition study also provide researchers a new and advance mode of data collection which is equally reliable like in-person data collection and suggest further usage of online data collection technique in psychological researches to widen the scope of study. As study is an initiative toward devising an indigenous counseling program based on the findings from local sample therefore results may prove beneficial in developing such program. It is recommended that counselors and psychologists ought to work for early intervention which may prove beneficial in saving time and efforts and aid in the reduction of negative health issues in adolescents. Fostering trait of active procrastination that has positive implications may enable the adolescents to work under pressure and develop multi-tasking ability. Moreover, following such measures may increase the overall well-being and academic performance of adolescents. Finally findings from this study demonstrate the role of conceptualization and measurement of time management skills, self-efficacy, personality traits and art of coping in adolescent research and indicate a need for further exploration that will enhance our understanding of the constructs and will advance the usefulness of adolescent related data.

## **REFERENCES**

## REFERENCES

- Abid, I. (2004). *Study of Relationship between perceived parental attitude and life satisfaction among blind children* (Unpublished Master's thesis). National Institute of Psychology, Quaid-i-Azam University, Islamabad.
- Abesha, A. G. (2012). *Effects of parenting styles, academic self-efficacy, and achievement motivation on the academic performance of university students in Ethiopia* (Dissertation submitted in Fulfillment of the Requirements for the Award of Doctor of Philosophy, Edith Cowan University).
- Abruckle, J. A. (2007). *AMOS 18 user's guide*. Chicago: Amos Development Corporation.
- Absar, D. (2006). *Stress and stress coping strategies in relation to life-orientation among university students* (Unpublished Master's thesis). National Institute of Psychology, Quaid-i-Azam University, Islamabad.
- Ackerman, D. S., & Gross, B. L. (2005). My instructor made me do it: Task characteristics of procrastination. *Journal of Marketing Education*, 27(1), 5–13. doi: 10.1177/0273475304273842
- Ackerman, D. S., & Gross, B. L. (2007). I can start that JME manuscript next week, can't I? The task characteristics behind why faculty procrastinates. *Journal of Marketing Education*, 29(2), 97–110. doi: 10.1177/0273475307302012
- Adams, L. (1998). The effects of birth order on procrastination. *National Undergraduate Research Clearinghouse*, 1. Retrieved from <http://www.webclearinghouse.net/volume/>.

- Aftab, S. (2002). *Emotional development and life-satisfaction of working and school going children* (Unpublished Master's thesis). National Institute of Psychology, Quaid-i-Azam University, Islamabad.
- Ahren, N. R. (2005). Using the internet to conduct research. *Nurse Researcher*, 13(2), 55–70.
- Ainslie, G. (1992). *Pico economics: The strategic interaction of successive motivational states within the person*. New York: Cambridge University Press.
- Aitken, M. (1982). *A personality profile of the college student procrastinator* (Unpublished Doctoral Dissertation). University of Pittsburgh.
- Akhtar, M. (2005). *Student-life stress and its relationship with time management and adopted coping strategies* (Unpublished M. Phil dissertation). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.
- Akinsola, M. J., Tella, A., & Tella, A. (2007). Correlates of academic procrastination and mathematics achievement of university undergraduate students. *Eurasia Journal of Mathematics, Science & Technology Education*, 3(4), 363–370.
- Alexander, E. S., & Onwuegbuzie, A. J. (2007). Academic procrastination and the role of hope as a coping strategy. *Personality and Individual Differences*, 42(7), 1301–1310. doi:10.1016/j.paid.2006.10.008
- Ali, N, R. (2005). *Life satisfaction of younger and older professional women* (Unpublished Master's thesis). National Institute of Psychology, Quaid-i-Azam University, Islamabad.
- Altemus, M. (2006). Sex differences in depression and anxiety disorders: Potential biological determinants. *Hormones and Behavior*, 50, 534–538. doi:10.1016/j.yhbeh.2006.06.031

- Amjad, I. S. (2009). *Relationship between identity styles and coping strategies among adolescents* (Unpublished Master's thesis). National Institute of Psychology, Quaid-i-Azam University, Islamabad.
- Anastasi, A., & Urbina, S. (1997). *Psychological testing* (7th ed.). ND: Pearson, Inc.
- Andrews, F. M., & Withey, S. B. (1976). *Social indicators of well-being: The development and measurement of perceptual indicators*. New York: Plenum.
- Antonuccio, D. O. (1998). The coping with depression course: a behavioral treatment for depression. *Clinical Psychology, 51*, 3–5.
- Antonucci, T.C., Lansford, J. E. & Akiyama, H.A. (2001). Impact of Positive and Negative Aspects of Marital Relationships and Friendships on Well-Being of Older Adults.
- Anwer, N. (2000). *Relationship between self-efficacy and burnout among nurses* (Unpublished Master's thesis). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.
- Aslam, N. (2007). *Psychological disorders and resilience among earthquake affected individuals* (Unpublished M. Phil dissertation). National Institute of Psychology. Quaid-i-Azam University, Islamabad, Pakistan.
- Atta, M. (2009). *Emotional intelligence, self-efficacy and life satisfaction as predictors of negative career thoughts* (Unpublished M. Phil dissertation). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.
- Ayub, N. (2004). *Interplay of personality traits, life orientation, and social support in predicting suicidal ideation* (Unpublished M. Phil Dissertation). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.

- Babadogan, C. (2010). The impact of academic procrastination behaviors of the students in the certificate program in English language teaching on their learning modalities and academic achievements. *Procedia-Social and Behavioral Sciences*, 2(2), 3263–3269. doi:10.1016 /j.sbspro .2010.03.499
- Bandura, A. (1971). *Social learning theory*. NY: General Learning Press.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman.
- Bandura, A. (2000). Cultivate self-efficacy for personal and organizational effectiveness. In E. A. Locke (Ed.), *Handbook of principles of organization behavior*. (pp. 120–136). Oxford, UK: Blackwell.
- Basco, M. R. (2010). *The procrastinator's guide to getting things done*. NY: The Guilford Press.
- Bashir, A. (2009). *Prevalence, forms and antecedents of workplace bullying among telecommunication personnel* (Unpublished M.Phil dissertation). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.
- Bashir, A., Hanif, R., & Nadeem, M. (2014). Role of personal factors in perception of workplace bullying among telecommunication personnel. *Pakistan Journal of Commerce and Social Sciences*, 8(3), 817-829.
- Basir, A. (2006). *Personality traits and burnout among public sector university teachers* (Unpublished Master's thesis). National Institute of Psychology, Quaid-i-Azam University, Islamabad.
- Batool, S. (2006). *Decision making styles, stress and coping strategies among students while selecting their field of study* (Unpublished Master's thesis). National Institute of Psychology, Quaid-i-Azam University, Islamabad.

- Baumeister, R. F., Heatherton, T. F., & Tice, D. M. (1994). *Losing control: How and why people fail at self-regulation*. San Diego, CA: Academic Press.
- Beck, A. T. (1993). Cognitive therapy: past, present, and future. *Journal of Consulting and Clinical Psychology, 61*, 194–198.
- Beck, B. L., Koons, S. R., & Milgrim, D. L. (2000). Correlates and consequences of behavioral procrastination: The effects of academic procrastination, self-consciousness, self-esteem, and self-handicapping. *Journal of Social Behavior and Personality, 15*, 3–13.
- Beier, M. E., & Ackerman, P. (2001). Current-events knowledge in adults: An investigation of age, intelligence, and non ability determinants. *Psychology and Aging, 16*, 615–628.
- Berzonsky, M. (1992). Identity style and coping strategies. *Journal of Personality, 60*(4), 771–788. doi: 10.1111/j.1467-6494.1992.tb00273.x
- Berzonsky, M., & Ferrari, J. (1996). Identity orientation and decisional strategies. *Personality and Individual Differences, 20*(5), 597–606. doi:10.1016/0191-8869(96)00001-3
- Beswick, G., & Mann, L. (1994). State orientation and procrastination. In J. Kuhl & J. Beckmann (Eds.), *Volition and personality: Action versus state orientation* (pp. 391–396). Gottingen, Germany: Hogrefe & Huber.
- Beswick, G., Rothblum, E., & Mann, L. (1988). Psychological antecedents to student procrastination. *Australian Psychologists, 23*(2), 207–217. doi: 10.1080/00050068808255605
- Beutell, N. (2006). References & Research: Life Satisfaction (2006). Retrieved from the [www.http://wfnetwork.bc.edu/encyclopedia\\_entry.php?id=3283](http://wfnetwork.bc.edu/encyclopedia_entry.php?id=3283)



- Bilkis, M., & Duru, E. (2009). Prevalence of academic procrastination behavior among pre- service teachers, and its relationship with demographics and individual preferences. *Journal of Theory and Practice in Education*, 5(1), 18–32.
- Blatt, S. J., & Quinn, P. (1967). Punctual and procrastinating students: A study of temporal parameters. *Journal of Consulting Psychology*, 31, 169–174.
- Blonna, R. (2007). *Coping with stress in a changing world* (4th ed.). Boston: McGraw Hill.
- Blunt, A., & Pychyl, T. A. (1998). Volitional action and inaction in the lives of undergraduate students: State orientation, procrastination and proneness to boredom. *Personality and Individual Differences*, 24(6), 837–846. doi:10.1016/S0191-8869(98)00018-X
- Blunt, A., & Pychyl, T. A. (2000). Task-aversiveness and procrastination: a multi-dimensional approach to task-aversiveness across stages of personal projects. *Personality and Individual Differences*, 28(1), 153–167. doi:10.1016/S0191-8869(99)00091-4
- Blunt, A., & Pychyl, T. A. (2005). Project systems of procrastinators: A personal project-analytic and action control perspective. *Personality and Individual Differences*, 38(8), 1771–1780. doi:10.1016/j.paid.2004.11.019
- Board of Investment, Government of Pakistan. (n.d.). *About Pakistan*. Retrieved from [http://sapphirecs.net/clients/boi/index.php?option=com\\_content&view=article&id=128&Itemid=55](http://sapphirecs.net/clients/boi/index.php?option=com_content&view=article&id=128&Itemid=55)
- Boekaerts, M. (2003). Adolescence in Dutch culture: a self-regulation perspective. In F. Pajares & T. Urdan (Eds.), *Adolescence and Education*, vol. 3:

- International Perspectives on Adolescence*. (pp. 101–124). Greenwich, CT: Information Age Publishing.
- Bolgar, M. R., Janelle, C., & Giacobbi, P. J. (2008). Trait anger, appraisal, and coping differences among adolescent tennis players. *Journal of Applied Sport Psychology, 20*(1), 73–87.
- Bond, M. J., & Feather, N. T. (1988). Some correlates of structure and purpose in the use of time. *Journal of Personality and Social Psychology, 55*(2), 321–329.
- Bouchard, G., Guillemette, A., & Landry-LeGer, N. (2004). Situational and dispositional coping: An examination of their relation to personality, cognitive appraisals, and psychological distress. *European Journal of Personality, 18*(3), 221–238. doi: 10.1002/per.512
- Boyd C. J., Esteban McCabe S., & Teter, C. J. (2006). Medical and nonmedical use of prescription pain medication by youth in a Detroit-area public school district. *Drug Alcohol Depend, 81*(1), 37–45. doi: 10.1016/j.drugalcdep.2005.05.01
- Bradley, R. H., & Corwyn, R. F. (2004). Life satisfaction among European American, African American, Chinese American, Mexican American, and Dominican American adolescents. *International Journal of Behavioral Development, 28*(5), 385–400. doi: 10.1080/01650250444000072
- Braithwaite, D., Emery J., Lusignan, S., & Sutton, S. (2003) using the Internet to conduct surveys of health professionals: a valid alternative? *Family Practice, 20*(5), 545–551. doi: 10.1093/fampra/cm509
- Braun-Lewensohn, O., Celestin-Westreich, S., Celestin, L., Verleye, G., Vert ´ e, D., & Ponjaert-Kristoffersen, I. (2009). Coping styles as moderating the

- relationships between terrorist attacks and well-being outcomes. *Journal of Adolescence*, 32(3), 585–599.
- Brislin, D. (1976). *Translation applications and research*. New York: John Wiley & Sons, Inc.
- Brislin, R. W., & Kim, E. S. (2003). Cultural diversity in people's understanding and uses of time. *Applied Psychology*, 52(3), 363–382. doi: 10.1111/1464-0597.00140
- Brougham, R. R., Zail, C. M., Mendoza, C. M., & Miller, J. R. (2009). Stress, sex differences, and coping strategies among college students. *Current Psychology*, 28(2), 85–97. doi:10.1007/s12144-009-9047-0
- Brown, S. L., & Ireland, C. A. (2006). Coping style and distress in newly incarcerated male adolescents. *Journal of Adolescent Health*, 38(6), 656–661.
- Brown, L. V. (2007). *Psychology of motivation*. New York: Nova Science Publishers.
- Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. NY: The Guilford Press.
- Brown, T. A., Chorpita, B. F., Korotitsch, W., & Barlow, D. H. (1997). Psychometric properties of the Depression Anxiety Stress Scales (DASS) in clinical samples. *Behavior Research and Therapy*, 35, 79–89.
- Brownlow, S., & Reasinger, R. (2000). Putting off until tomorrow what is better done today: Academic procrastination as a function of motivation toward college work. *Journal of Social Behaviour and Personality*, 15, 15–34.
- Bui, N. H. (2007). Effect of evaluation threat on procrastination behavior. *The Journal of Social Psychology*, 147(3), 197–209.

- Bunevicius, A., Katkute, A., & Bunevicius, R. (2008). Symptoms of anxiety and depression in medical students and in humanities students: Relationship with Big-Five personality dimensions and vulnerability to stress. *International Journal of Social Psychiatry, 54*(6), 494–501. doi: 10.1177/0020764008090843
- Burka, J., & Yuen, L. (1983). *Procrastination: Why you do it, what to do about it*. Cambridge: Da Capo.
- Byrne, U. (2008). If you want something done, ask a busy person. *Business Information Review, 25*(3), 190–196. doi:10.1177/0266382108095043
- Campbell, D. T. (1960). Recommendations for APA test standards regarding construct, trait, and discriminant validity. *American Psychologist, 15*, 546–553.
- Cantrell, M. A., & Lupinacci, P. (2007). Methodological issues in online data collection. *Journal of Advanced Nursing, 60*(5), 544–549. doi: 10.1111/j.1365-2648.2007.04448.x
- Carbonaro, M., & Bainbridge, J. (2000). Design and development of a process for web-based survey research. *The Alberta Journal of Educational Research, 46*(4) 392–394.
- Carver, C. S. (1997). “You want to measure coping but your protocol's too long: Consider the Brief COPE.” *International Journal of Behavioral Medicine, 4*, 92–100.
- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach, *Journal of Personality and Social Psychology, 56*(2), 267–283. doi: 10.1037/0022-3514.56.2.267

- Cassady, J. C., & Johnson, R. E. (2002). Cognitive test anxiety and academic performance. *Contemporary Educational Psychology, 27*(2), 270–295. doi:10.1006/ceps.2001.1094
- Chapman, B. P., Duberstein, P. R., Sorensen, S., & Lyness, J. M. (2007). Gender Differences in Five Factor Model Personality Traits in an Elderly Cohort: Extension of Robust and Surprising Findings to an Older Generation. *Personality and Individual Differences, 43*(6), 1594–1603. doi: 10.1016/j.paid.2007.04.028
- Chase, L. (2003). Procrastination: the new master skill of time management. *Agency Sales, 33*(9), 60–62.
- Chaudhry, S. (2008). *Relationship between personality traits and procrastination among students* (Unpublished Master's thesis). National Institute of Psychology, Quaid-i-Azam University, Islamabad.
- Chen, G., Mathieu, J. E., & Bliese, P. D. (2004). A framework for conducting multilevel construct validation. In F. J. Yammarino & F. Dansereau (Eds.), *Research in multilevel issues: Multilevel issues in organizational behavior and processes* (Vol. 3, pp. 273–303). Oxford, UK: Elsevier.
- Children's Online Privacy Protection Act (1998). *XIII-Children's online privacy protection* (Sec. 1301). Retrieved from <http://www.ftc.gov/ogc/coppa1.htm>
- Choi, J., & Moran, S. (2009). Why Not Procrastinate? Development and Validation of a New Active Procrastination Scale. *The Journal of Social Psychology, 149*(2), 195–211.

- Chong, W. H. (2007). The role of personal agency beliefs in academic self-regulation. *School Psychology International*, 28(1), 63–76. doi: 10.1177/0143034307075681
- Chu, A. H. C., & Choi, J. N. (2005). Rethinking procrastination: Positive effects of “active” procrastination behavior on attitudes and performance. *The Journal of Social Psychology*, 145, 245–264.
- Clark, J., & Hill, O. (1994). Academic procrastination among African American college students. *Psychological Reports*, 75, 931–936.
- Coggeshall, J. (2006). *Knowledge > Solutions > Mastery, PHP 5*. New Delhi: Dorling Kindersley.
- Comer, R. J. (1992). *Abnormal psychology*. New York: W. H. Freeman & Company.
- Comber, R. (1997). Using the internet for survey research. *Sociological Research Online*, 2 (2).
- Comley, P. (2000). *Pop-up surveys: what works, what doesn't work and what will work in the future*. Retrieved from <http://www.virtualsurveys.com/news/papers/>
- Coon, D. & Mitterer, J. O. (2010). *Introduction to psychology: Gateways to mind and behavior with concept maps*. Belmont, CA: Wadsworth.
- Cooper, C., Katona, C., & Livingston, G. (2008). Validity and reliability of the Brief COPE in carers of people with dementia: The LASER-AD study. *The Journal of Nervous and Mental Disease*, 196(11), 838–843. doi: 10.1097/NMD.0b013e31818b504c
- Cooper, C., Owens, C., Katona, C., & Livingston, G. (2008). Attachment style and anxiety in carers of people with Alzheimer's disease: results from the LASER-

- AD study. *International Psychogeriatrics*, 20(3), 494–507. doi:10.1017/S104161020700645X
- Costa, P. T., & McCrae, R. R. (1992). *NEO-PI Professional Manual*. Odessa, Florida: Psychological Assessment Resources.
- Crawford, J. R., & Henry, J. D. (2003). The Depression Anxiety Stress Scales (DASS): Normative data and latent structure in a large non-clinical sample. *British Journal of Clinical Psychology*, 42, 111–131. doi: 10.1348/014466503321903544
- Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological Bulletin*, 52, 281–302.
- Cummins, R.A., & Nistico, H. (2002). Maintaining life satisfaction: The role of positive cognitive bias. *Journal of Happiness Studies*, 3(1), 37–63.
- Dasen, P. (2000). Rapid social change and the turmoil of adolescence: A cross cultural perspective. *International Journal of Group Tensions*, 29, 17–49.
- Davidson, K. W., Rieckmann, N., & Lesperance, F. (2004). Psychological theories of depression: Potential application for the prevention of acute coronary syndrome recurrence. *Psychosomatic Medicine*, 66, 165–173.
- Davis R. N. (1999). Web-based administration of a personality questionnaire: comparison with traditional methods. *Behavioral Research Methods Instruments Computer*; 31, 572–577.
- Dawson, A. E. (2009). *Negative coping strategies mediating the relationship of adolescent attachment classifications and future externalizing behaviors* (Distinguished majors thesis). Retrieved from

<http://www.virginia.edu/psychology/downloads/DMP%20Papers/Dawson-2009.pdf>

- Dawson, B. L. (2007). *An analysis of procrastination and flow experiences* (Unpublished master's thesis). Georgia Southern University Statesboro, Georgia.
- Daza, P., Novy, D. M., Stanley, M. A., & Averill, P. M. (2002). DASS-21: Spanish translation and validation of the Depression, Anxiety, and Stress Scale with a Hispanic sample. *Journal of Psychopathology & Behavioral Assessment, 24*, 195–205.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.
- DeLongis, A., Coyne, J. Dakof, G., Folkman, S., & Lazarus, R. (1982). Relationship of daily hassles, uplifts and major life events on health status. *Health Psychology, 1*, 119–136. doi: 10.1037/0278-6133.1.2.119
- DeRoma, V. M., Young, A., Mabrouk, S. T., Brannan, K. P., Hilleke, R. O., & Johnson, K. Y. (2003). Procrastination and student performance on immediate and delayed quizzes. *Education, 124*(1), 40–48.
- Dewitte, S., & Lens, W. (2000). Procrastinators lack a broad action perspective. *European Journal of Personality, 14*, 121–140. doi: 10.1002/(SICI)1099-0984(200003/04)14:2<121
- Dewitte, S., & Schouwenburg, H. (2002). Procrastination, temptation and incentives: The struggle between the present and the future in procrastination and the punctual. *European Journal of Personality, 16*(6), 469–489. doi: 10.1002/per.461



- Di Fabio, A. (2006). Decisional procrastination correlates: personality traits, self-esteem or perception of cognitive failure? *International Journal of Educational and Vocational Guidance*, 6, 109–122. doi: 10.1007/s10775-006-9000-9
- Di Matteo, M. R., & Martin, L. R. (2002). *Health psychology*. Boston: Allyn & Bacon.
- Diaz-Morales, J. F., Cohen, J. R., & Ferrari, J. R. (2008). An integrated view of personality styles related to avoidant procrastination. *Personality and Individual Differences*, 45(6), 554–558. doi:10.1016/j.paid.2008.06.018
- Diener, E., Sandvik, E., Seidlitz, L., & Diener, M. (1993). The relationship between income and subjective well-being: relative or absolute? *Soc. Indic. Res.* 28,195–223.
- Diener, E., & Diener, M. (1995). Cross cultural correlates of life satisfaction and self-esteem. *Journal of Personality and Social Psychology*, 68(4), 653–663. doi: 10.1037/0022-3514.68.4.653
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49, 71–75.
- Diener, E., Sandvik, E., Pavot, W., & Gallagher, D. (1991). Response artifacts in the measurement of subjective well-being. *Social Indicators Research*, 24, 35–56.
- Dietz, F., Hofer, M., & Fries, S. (2007). Individual values, learning routines and academic procrastination. *British Journal of Educational Psychology*, 77(4), 893–906. doi: 10.1348/000709906X169076

- Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology, 41*(1), 417–440. doi: 10.1146/annurev.ps.41.020190
- Dipboye, R. L., & Phillips, A. P. (1990). College students' time management: Correlations with academic performance and stress. *Journal of Educational Psychology, 82*(4), 760–768. doi:10.1037/0022-0663.82. 4.760
- Donnelly, D., Kovar, S. E., & Fisher, D. (2005). The mediating effects of time management on accounting students' perception of time pressure, satisfaction with the major and academic performance. Retrieved from <http://ssrn.com/abstract=644582> or <http://dx.doi.org/10.2139/ssrn.644582>
- Drysdale, M. T. B., & Mcbeath, M. (2014). Exploring hope, self-efficacy, procrastination, and study skills between cooperative and non-cooperative education students. *Asia Pacific Journal of Cooperative Education, 15*(1), 69–79.
- Dwight, S. A., Cummings, K. M., & Glenar, J. L. (2010). Comparison of Criterion-Related Validity Coefficients for the Mini-Markers and Goldberg's Markers of the Big Five Personality Factors. Retrieved from [http://www.tandfonline.com/doi/abs/10.1207/s15327752jpa7003\\_11#](http://www.tandfonline.com/doi/abs/10.1207/s15327752jpa7003_11#) doi: 10.1207/s15327752jpa7003\_11
- Effert, B. R., & Ferrari, J. R. (1989). Decisional procrastination: Examining personality correlates. *Journal of Social Behavior and Personality, 4*, 151–156. doi: 10.1007/s10775-006-9000-9

- Eijaz, F. (2008). *Test anxiety and coping strategies among college students* (Unpublished Master's thesis). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.
- Ellis, A., & Knaus, W. J. (1977). *Overcoming procrastination*. New York: Signet.
- Ellis, A., & Knaus, W. J. (2002). *Overcoming procrastination* (Revised ed.). NY: New American Library.
- Endler, N. S., & Parker, J. D. A. (1990). Multidimensional assessment of coping: A critical evaluation. *Journal of Personality and Social Psychology*, 58(5), 844–854. doi: 10.1037/0022-3514.58.5.844
- Endler, N. S., & Parker, J. D. A. (1994). Assessment of multidimensional coping: Task emotion, and avoidance strategies. *Psychological Assessment*, 6(1), 50–60. doi: 10.1037/1040-3590.6.1.50
- Eren, E., & Sirois, F. (2009). *Knowing the better and doing the worse: A philosophical analysis of procrastination, temptation, and making healthy changes*. Paper presented at the 6th Biennial Procrastination Research Conference Abstracts York University, Toronto. Retrieved from [http://web2.uwindsor.ca/courses/psychology/fsirois/Procrastination\\_Conference\\_files/2009\\_Abstracts.pdf](http://web2.uwindsor.ca/courses/psychology/fsirois/Procrastination_Conference_files/2009_Abstracts.pdf)
- Essau, C. A., Ederer, E. M., Callaghan, J. O., & Aschemann, B. (2008). *Doing it now or later? Correlates, predictors and prevention of academic, decisional and general procrastination among students in Austria*. Poster Presentation at the Presentation at the 8th Alps-Adria Psychology Conference, October 2–4, Ljubljana, Slovenia

- Eunkyung, K. & Seo, H. E. (2013). The relationship of flow and self-regulated learning to active procrastination. *Social behavior and personality: an international journal*, 41(7), 1099-1114.
- Farooqi, Y., & Habib, M. (2010). Gender differences in anxiety, depression and stress among survivors of suicide bombing, *PJSP*, 8(2), 145–153.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G\*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149-1160.
- Fatemah, G. (2001). *Relationship of perceived parental control with procrastination among adolescents* (Unpublished Master's thesis). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.
- Fatima, K. (2007). *Self-efficacy, self-regulation, and academic performance of intermediate students* (Unpublished M. Phil dissertation). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.
- Fee, R. L., & Tangney, J. P. (2000). Procrastination: A means of avoiding shame or guilt. *Journal of Social Behavior and Personality*, 15, 167–184. doi: [apa.org/?uid=2002-10572-013](https://doi.org/10.1002/978-1-4134-1057-2-013)
- Feingold, A. (1994). Gender differences in personality: A meta-analysis. *Psychological Bulletin*, 116, 429–526.
- Ferrans, C. E., & Powers, M. J. (1992). Psychometric assessment of the quality of life index. *Research in Nursing & Health*, 15(1), 29–38. doi: [10.1002/nur.4770150106](https://doi.org/10.1002/nur.4770150106)
- Ferrari, J. R. (1991a). Compulsive procrastination: Some self-reported personality characteristics. *Psychological Reports*, 68, 455–458.

- Ferrari, J. R. (1991b). Self-handicapping by procrastinators: Protecting self-esteem, social-esteem, or both? *Journal of Research in Personality*, *25*(3), 245–261. doi:10.1016/0092-6566(91)90018-L
- Ferrari, J. R. (1991c). A second look at behavioral self-handicapping among women. *Journal of Social Behavior & Personality*, *6*(2), 195–206.
- Ferrari, J. R. (1992). Procrastination in the workplace: Attributions for failure among individuals with similar behavioral tendencies. *Personality and Individual Differences*, *13*(3), 315–319. doi:10.1016/0191-8869(92)90108-2
- Ferrari, J. R. (1993). Procrastination and impulsiveness: Two sides of a coin? In W. G. McCown, J. L. Johnson, & M. B. Shure (Eds.), *The impulsive client: Theory, research, and treatment* (pp. 265–276). Washington, DC: American Psychological Association.
- Ferrari, J. R. (1994). Dysfunctional procrastination and its relationship with self-esteem, interpersonal dependency, and self-defeating behaviors. *Personality and Individual Differences*, *17*(5), 673–679. doi:10.1016/0191-8869(94)90140-6
- Ferrari, J. R. (2001). Procrastination as self-regulation failure of performance: Effects of cognitive load, self-awareness, and time limits on “working best under pressure.” *European Journal of Personality*, *15*(5), 391–406. doi: 10.1002/per.413
- Ferrari, J. R. (2004). Trait procrastination in academic settings: An overview of students who engage in task delays. In H. C. Schowuenburg, C. Lay, T. A. Pychyl, and J. R. Ferrari (Eds.), *Counseling the procrastinator in academic settings*, (pp. 19–28). Washington, DC: American Psychological Association.

- Ferrari, J. R. (2009). *I've been thinking ~~~ I (we) am (are) wrong: A better approach to understanding/dealing with procrastination*. Paper presented at the 6th Biennial Procrastination Research Conference Abstracts York University, Toronto. Retrieved from [http://web2.uwindsor.ca/courses/psychology/fsirois/Procrastination\\_Conference\\_files/2009\\_Abstracts.pdf](http://web2.uwindsor.ca/courses/psychology/fsirois/Procrastination_Conference_files/2009_Abstracts.pdf)
- Ferrari, J. R., Barnes, K. L., & Steel, P. (2009). Life regrets by avoidant and arousal procrastinators: Why put off today what you will regret tomorrow? *Journal of Individual Differences, 30*(3), 163–168. doi:10.1027/1614-0001.30.3.163
- Ferrari, J. R., & Diaz-Morales, J. F. (2007a). Perceptions of self-concept and self-presentation by procrastinators: Further evidence. *The Spanish Journal of Psychology, 10*(1), 91–96.
- Ferrari, J. R., & Díaz-Morales, J. F. (2007b). Procrastination: Different time orientations reflect different motives. *Journal of Research in Personality, 41*(3), 707–714. doi:10.1016/j.jrp.2006.06.006
- Ferrari, J. R., Diaz-Morales, J. F., O'Callaghan, J., Díaz, K., & Argumedo, D. (2007). Frequent behavioral delay tendencies by adults: International prevalence rates of chronic procrastination. *Journal of Cross-Cultural Psychology, 38*(4), 458–464. doi: 10.1177/0022022107302314
- Ferrari, J. R., & Dovidio, J. F. (2000). Examining behavioral processes in indecision: Decisional procrastination and decision-making style. *Journal of Research in Personality, 34*(1), 127–137. doi:10.1006/jrpe.1999.2247
- Ferrari, J. R., & Emmons, R. (1995). Methods of procrastination and their relation to self-control and self-reinforcement. *Journal of Social Behavior and Personality, 10*(1), 135–142. doi: [apa.org/?uid=1995-33032-001](http://apa.org/?uid=1995-33032-001)

- Ferrari, J. R., Harriott, J. S., Evans, L., Lecik-Michna, D. M., & Wenger, J. M. (1997). Exploring the time preferences of procrastinators: Night or day, which is the One? *European Journal of Personality*, *11*(3), 187–196. doi: 10.1002/(SICI)1099-0984(199709)
- Ferrari, J. R., Johnson, J. L., & McCown, W. G. (1995). *Procrastination and task avoidance Theory, research, and treatment*. New York: Plenum Press.
- Ferrari, J. R., & Olivetti, M. J. (1993). Perceptions of parental control and the development of indecision among late adolescent females. *Adolescence*, *28*(112), 963–970.
- Ferrari, J. R., & Olivetti, M. J. (1994a). Parental authority influences on the development of female dysfunctional procrastination. *Journal of Research in Personality*, *28*(1), 87–100. doi:10.1006/jrpe.1994.1008
- Ferrari, J. R., & Olivetti, M. J. (1994b). Dysfunctional procrastination and its relationship with self-esteem, interpersonal dependency, and self-defeating behaviors. *Personality and Individual Differences*, *35*(7), 1549–1557. doi:10.1016/0191-8869(94)90140-6
- Ferrari, J. R., Parker, J. T., & Ware, C. B. (1992). Academic procrastination: Personality correlates with Myers-Briggs types, self-efficacy, and academic locus of control. *Journal of Social Behavior and Personality*, *7*, 495–502.
- Ferrari, J. R., & Patel, T. (2004). Social comparisons by procrastinators: rating peers with similar or dissimilar delay tendencies. *Personality and Individual Differences*, *37*(7), 1493–1501. doi:10.1016/j.paid.2004.02.006
- Ferrari, J., & Pychyl, T. (2008). *Procrastination: Current issues and new directions*. *Journal of Social Behavior and Personality*, *15*(5), 15–34.

- Ferrari, J. R., & Steel, P. (2013). Sex, education, and procrastination: An epidemiological study of procrastinators' characteristics from a global sample. *European Journal of Personality, 27*, 51-58. doi: 10.1002/per.185
- Ferrari, J. R., & Tice, D. M. (2000). Procrastination as a self-handicap for men and women: A task-avoidance strategy in a laboratory setting. *Journal of Research in Psychology, 34*, 73–83. doi:10.1006/jrpe.1999.2261
- Field, A. (2005). *Discovering statistics using SPSS* (2<sup>nd</sup> ed.). New Delhi: Sage.
- Flett, G. (2009). *Procrastination cognitions in stress and distress*. Paper presented at the 6th Biennial Procrastination Research Conference Abstracts York University, Toronto. Retrieved from [http://web2.uwindsor.ca/courses/psychology/fsirois/Procrastination\\_Conference\\_files/2009\\_Abstracts.pdf](http://web2.uwindsor.ca/courses/psychology/fsirois/Procrastination_Conference_files/2009_Abstracts.pdf)
- Flett, G., Hewitt, P., & Martin, T. (1995). Dimensions of perfectionism and procrastination. In J. R. Ferrari, J. Johnson, & W. McCown, (Eds.), *Procrastination and task avoidance: Theory, research and practice* (pp. 113–136). New York: Plenum Press.
- Folkman, S., & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior, 21*, 219–239.
- Fraley, C. R. (2007) Using the internet for personality research, what can be done, how to do it, and some concerns. In Robins, R. W., Fraley, C. R., & Krueger, R. F. (Eds.), *Handbook of research methods in personality psychology* (pp. 130–148). NY: The Guilford Press.
- Franko, D.L., Thompson, D., Affenito, S.G., Barton, B.A., & Striegel-Moore, R. (2008). What mediates the relationship between family meals and adolescent



health issues? *Health Psychology*, 27(2), 109–117. doi: 10.1037/0278-6133.27.2

Freedman, J. L., & Edwards, D. R. (1988). Time pressure, task performance, and enjoyment. In J. E. McGrath (Ed.), *The social psychology of time* (pp. 113–133). Beverly Hills, CA: Sage.

Frings, E., Beck, L., Krumm, K., Hocker, A., Engberding, M., & Rist, F. (2011). *Routine clinical treatments for procrastinating students: clinical routines established characteristics of patients treated, and treatment success*. Paper presented at the 7th Biennial Procrastination Research Conference University of Amsterdam, Netherland.

Fritzsche, B.A., Young, B.R., & Hickson, K.C. (2003). Individual differences in academic procrastination tendency and writing success. *Personality and Individual Differences*, 35(7), 1549–1557. doi:10.1016/S0191-8869(02)00369-0

G.Power 3.1.2 (n.d.). Retrieved from [http://softadvice.informer.com/G-power\\_3.1.2.html](http://softadvice.informer.com/G-power_3.1.2.html)

Garcia, C. (2010). Conceptualization and measurement of coping during adolescence: A review of the literature. *Journal of Nursing Scholarship*, 42(2), 166–185. doi: 10.1111/j.1547-5069.2009.01327.x

Gelhaar, T., Seiffge-Krenke, I., Borge, A., Cicognani, E., Cunha, M., Loncaric, D... Metzke, C. W. (2007). Adolescent coping with everyday stressors: A seven-nation study with youth from central, eastern, southern and northern Europe. *European Journal of Developmental Psychology*, 4(2), 129–156. doi: 10.1080/17405620600831564

- Gendron, A. L. (2011). *Active procrastination, self-regulated learning and academic achievement in university undergraduates* (Unpublished master's thesis). Retrieved from <http://dspace.library.uvic.ca:8080/handle/1828/3524?show=full>
- Gerrig, R., & Zimbardo, P. G. (2010). *Psychology and life (19th ed.)*. Boston, MA: Allyn & Bacon.
- Goetz, T., Pekrun, R., Hall, N., & Haag, L. (2006). Academic emotions from a social-cognitive perspective: antecedents and domain specificity of students' affect in the context of Latin instruction. *British Journal of Educational Psychology*, 76(2), 289-308. doi:10.1016/j.learninstruc.2007.09.001
- Gilman, R. S., & Huebner, E. S. (2006). Characteristics of adolescents who report very high life satisfaction. *Journal of Youth and Adolescence*, 35, 311-319. doi: 10.1007/s10964-006-9036-7
- Goldberg, L. R. (1990). The development of markers for the Big-Five factor structure. *Psychological Assessment*, 4(1), 26-42.
- Goldberg, L. R. (1992). The development of the markers for the Big-Five factor structure. *Psychological Assessment*, 4, 26-42.
- Goodwart, D. E., & Zatura, A. (1990). Assessing quality of life in the community: An ecological approach. In W. O'Comer & Lubin (Eds.), *Ecological approaches to clinical and community psychology*. Florida: Robbert E. Krieger Publishing Company.
- Gould, F. L., Hussong, A.M., & Keeley, M. L. (2008). The adolescent coping process interview: Measuring temporal and affective components of adolescent

- responses to peer stress. *Journal of Adolescence*, 31(5), 641–657. doi: 10.1016/j.adolescence.2007.10.001
- Griffiths, M. D., & Parke, J. (2002). The social impact of Internet gambling. *Social Science Computer Review*, 20(3), 312–320. doi:10.1177/08939302020003008
- Groves, J. A. (2007). German adaptation and standardization of the Personality Assessment Inventory (PAI). *Journal of Personality Assessment*, 88, 49–56. Retrieved from <http://www.findarticle.com/public/english/goddness35>
- Guise, V., Chambers, M., Valimaki, M., & Makkonen, P. (2010). Mixed-mode approach to data collection: combining web and paper questionnaires to examine nurses' attitudes to mental illness. *Journal of Advanced Nursing*, 66(7), 1623–1632. doi: 10.1111/j.1365-2648.2010.05357.x
- Hammer, C. A., & Ferrari, J. R. (2002). Differential incidence of procrastination between blue and white-collar workers. *Current Psychology*, 21(4), 333–338. doi: 10.1007/s12144-002-1022-y
- Harriott, J., & Ferrari, J. (1996). Prevalence of procrastination among samples of adults. *Psychological Reports*, 78(2), 611–616.
- Hartman, R., & Betz, N. E. (2007). The five factor model and career self-efficacy, general and domain-specific relationships. *Journal of Career Assessment*, 15(2), 145–161. doi: 10.1177/1069072706298011
- Hassan, Z. (2008). *Relationship between affect intensity and personality traits* (Unpublished Master's thesis). National Institute of Psychology, Quaid-i-Azam University, Islamabad.
- Hassan, N., Malik, S. A., & Khan, M. M. (2013). Measuring relationship between students' satisfaction and motivation in secondary schools of Pakistan.

- Middle-East Journal of Scientific Research*, 18 (9), 1231-1239. doi: 10.5829/idosi.mejsr.2013.18.9.11928
- Hayat, I. (2007). *Stress life events, depression and coping strategies* (Unpublished M. Phil dissertation). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.
- Haycock, L. A. (1993). The cognitive mediation of procrastination: An investigation of the relationship between procrastination and self-efficacy beliefs (Doctoral dissertation, University of Minnesota, 1993). *Dissertation Abstracts International*, 54, 2261.
- Haycock, L. A., McCarthy, P., & Skay, C. L. (1998). Procrastination in college students: The role of self-efficacy and anxiety. *Journal of Counseling and Development*, 76(3), 317–324.
- Hayder, H., Maia, J. P., & Ghorgho, L. (2006). *Smarty PHP template programming and applications*. Birmingham: Packt Publishing Ltd.
- Heller, D., Watson, D., & Ilies, R. (2006). The dynamic process of life satisfaction. *Journal of Personality*, 74(5), 1421–1450. doi: 10.1111/j.1467-6494.2006.00415.x
- Hess, B., Sherman, M. F., & Goodman, M. (2000). Eveningness predicts academic procrastination: the mediating role of Neuroticism. *Journal of Social Behavior and Personality*, 15(5), 61–74.
- Hinkin, T. R. (1998). A brief tutorial on the development of measures for use in survey questionnaires. *Organizational Research Methods*, 1(1), 104–121. doi: 10.1177/109442819800100106

- Hittner, J. B. (1999). Fostering Critical Thinking in Personality Psychology: The Trait Paper Assignment. *Journal of Instructional Psychology, 26*(2), 92.
- Hocker, A., Haferkamp, R., Krumm, K., Engberding, M., & Rist, F. (2011). *Focused clinical treatment of procrastination: The method of working time restriction*. Paper presented at the 7th Biennial Procrastination Research Conference University of Amsterdam, Netherland.
- Howell, A. J., & Watson, D. C. (2007). Procrastination: Associations with achievement goal orientation and learning strategies. *Personality and Individual Differences, 43*(1), 167–178. doi:10.1016/j.paid.2006.11.017
- Howell, A. J., Watson, D. C., Powell, R. A., & Buro, K. (2006). Academic procrastination: The pattern and correlates of behavioral postponement. *Personality and Individual Differences, 40*(8), 1519–1530. doi:10.1016/j.paid.2005.11.023
- Hu, J., Huhmann, B. A., & Hyman, M. R. (2007). The relationship between task complexity and information search: The role of self-efficacy. *Psychology & Marketing, 24*(3), 253–270. doi: 10.1002/mar.20160
- Huebner, E. S., Drane, J. W., & Valois, R. F. (2000). Levels and demographic correlates of adolescent life satisfaction reports. *School Psychology International, 21*, 281–292.
- Hussain, I., & Sultan, S. (2010). Analysis of procrastination among university students. *Procedia -Social and Behavioral Sciences, 5*, 1897–1904. doi:10.1016/j.sbspro.2010.07.385
- Ilieva, J., Baron, S., & Healey, H. M. (2002). Online surveys in marketing research: pros and cons. *International Journal of Market Research, 44*(3), 362–380.

- Insel, P. M., & Roth, W. T. (2002). *Core concepts in health*. (9th ed.). New York: McGraw Hill.
- Internet World Stats (2010). Usage and population statistics. Retrieved from <http://www.internetworldstats.com/asia/pk.htm>
- Iram, G. (2007). *Perceived social support and life-satisfaction among elderly people* (Unpublished Master's thesis). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.
- James, W. (1890). *Principles of psychology* (Vol. 1). New York: Holt.
- Janssen, T., & Carton, J. S. (1999). The effects of locus of control and task difficulty on procrastination. *Journal of Genetic Psychology, 160*(4), 436–442. doi: 10.1080/00221329909595557
- Johnson, J. L., & Bloom, A. M. (1995). An analysis of the contribution of the five factors of personality to variance in academic procrastination. *Personality and Individual Differences, 18*(1), 127–133. doi:10.1016/0191-8869(94)00109-6
- Judge, T. A., & Bono, J. E. (2001). Relationship of core self-evaluations traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability—with job satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology, 86*, 80–92.
- Kachgal, M., Hansen, L. S., & Nutter, K. J. (2001). Academic procrastination prevention/intervention strategies and recommendations. *Journal of Developmental Education, 25*(Fall), 14–24.
- Kagan, M., Cakir, O., Ilhan, T., & Kandemir, M. (2010). The explanation of the academic procrastination behaviour of university students with perfectionism,

- obsessive– compulsive and five factor personality traits. *Procedia-Social and Behavioral Sciences*, 2(2), 2121–2125. doi:10.1016/j.sbspro.2010.03.292
- Kalsoom, S. (2008). *Stereotypes, self-concept and self efficacy of married and unmarried working women* (Unpublished M. Phil dissertation). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.
- Kapteyn, A., Smith, J. P., & Van Soest, A. (2009, Feb). *Life satisfaction*. IZA Discussion Paper No. 4015. Institute for the Study of Labor, Bonn, Germany.
- Kariv, D., & Heiman, T. (2005). Task-oriented versus emotion-oriented coping strategies: The case of college students. *College Student Journal*, 39, 72–84.
- Khan M, J., Arif, H., Noor, S. Sumbul., & Muneer, S. (2014). Procrastination among male and female university and college students. *FWU Journal of Social Sciences*, 8(2), 65-70.
- Khurshid, F. (2011). Personlaity's Big Five factors of the university teachers. *British Journal of Humanities and Social Sciences*, 2(2), 80-90.
- Klassen, R. M. (2007). Using predictions to learn about the self-efficacy of early adolescents with and without learning disabilities. *Contemporary Educational Psychology*, 32(2), 173–187. doi:10.1016/j.cedpsych.2006.10.001
- Klassen R. M., Ang, R. P., Chong, W. H., Krawchuk, L. L., Huan, V. S., Wong, I. Y. F., & Yeo, L. S. (2009). A Cross-Cultural Study of Adolescent Procrastination. *Journal of Research in Adolescence*, 19(4), 799–811. doi: 10.1111/j.1532-7795.2009.00620.x
- Klassen, R. M., Ang, R. P., Chong, W. H., Krawchuk, L. L., Huan, V. S., Wong, I. Y.F...Yeo, L. S. (2010). Academic procrastination in two settings: Motivation correlates, behavioral patterns, and negative impact of procrastination in

- Canada and Singapore. *Applied Psychology: An International Review*, 59(3), 361–379. doi: 10.1111/j.1464-0597.2009.00394.x
- Klassen, R. M., Krawchuk, L. L., & Rajani, S. (2008). Academic procrastination of undergraduates: Low self-efficacy to self-regulate predicts higher levels of procrastination. *Contemporary Educational Psychology*, 33(4), 915–931. doi:10.1016/j.cedpsych. 2007. 07. 001
- Klein J. (2002) Issues surrounding the use of Internet for data collection. *American Journal of Occupational Health*, 56(3), 340–343.
- Kline, P. (2000) *Handbook of Psychological Testing* (2nd ed.). London: Routledge.
- Knaus, W. J. (1979). *Do it now*. Englewood Cliffs, NJ: Prentice Hall.
- Knaus, W. J. (2000). Procrastination, blame, and change. *Journal of Social Behavior and Personality*, 15, 153–166.
- Knaus, W. J. (2010). *End procrastination now! Get it done with a proven psychological approach*. NY: The McGraw-Hill Companies.
- Koivumaa, H. H., Kaprio, J., Honkanen, R., Vijnamak, H., & Koskenvuo M. (2004). Life and depression in 15 years follow up of healthy adults. *Social psychiatry psychiatry psychiatric epidemiology*, 39(12) 994-9.
- Kosic, A. (2004). Acculturation strategies, coping process and acculturative stress. *Scandinavian Journal of Psychology*, 45(4), 269–278. doi: 10.1111/j.1467-9450.2004.00405.x
- Kovacs, M., & Beck A. T. (1986). Maladaptive cognitive structures in depression. In J. C. Coyne, (Ed.), *Essential papers on depression* (pp. 240–258). New York: New York Univ. Press.



- Kraaij, V., Garnefski, N., & Schroevers, M. J. (2009). Coping, goal adjustment, and positive and negative effect in definitive infertility. *Journal of Health Psychology, 14*(1), 18–26. doi: 10.1177/1359105308097939
- Krause, K., & Freund, A. (2011). *Delayed or done-the positive relationship between procrastination and subjective urgency*. Paper presented at the 7th Biennial Procrastination Research Conference University of Amsterdam, Netherland.
- Kraut, R. E., Olson, J., Banaji, M., Bruckman, A., Cohen, J., & Couper, M. (2004). Psychological research online: report of board scientific affairs; advisory group on the conduct of research on the internet. *American Psychologist, 59*(2), 105–117.
- Krumm, K., Patzelt, J., Spieker, C., Frank, I., Enberding, M., Hocker, A., & Rist, F. (2011). *Switching to bachelor and master format in the German university system-does it affect procrastination?* Paper presented at the 7th Biennial Procrastination Research Conference University of Amsterdam, Netherland.
- Kuhl, J. (1984). Volitional aspects of achievement motivation and learned helplessness: Toward a comprehensive theory of action control. In B. Maher (Ed.), *Progress in experimental personality research* (pp. 99–171). New York: Academic Press.
- Lahmers, G. A., & Zulauf, C. R. (2000). Factors associated with academic time use and academic performance of college students: A recursive approach. *Journal of College Student Development, 41*(5), 544–556.
- Lakeman, R. (1997). Using the Internet for data collection in nursing research. *Computers in Nursing, 15*(5), 269–275.

- Lawrence, J., Ashford, K., & Dent, P. (2006). Gender differences in coping strategies of undergraduate students and their impact on self-esteem and attainment. *Active Learning in Higher Education, 7*(3), 273–281. doi: 10.1177/1469787406069058
- Lawton, M. P. (1975). The Philadelphia Geriatric Center Morale Scale: A revision. *Journal of Gerontology, 30*, 85–89.
- Lay, C. H. (1986). At last, my research article on procrastination. *Journal of Research in Personality, 20*(4), 474–495. doi:10.1016/0092-6566(86)90127-3
- Lay, C. H. (1988). The relation of procrastination and optimism to judgments of time to complete an essay and anticipation of setbacks. *Journal of Social Behavior and Personality, 3*(3), 201–214.
- Lay, C. H. (1990). Working to schedule on personal projects: An assessment of person-object characteristics and trait procrastination. *Journal of Social Behavior and Personality, 5*, 91–104.
- Lay, C. H. (1992). Trait procrastination and the perception of person-task characteristics. *Journal of Social Behavior and Personality, 7*, 483–494.
- Lay, C. H., & Brokenshire, R. (1997). Conscientiousness, procrastination, and person-task characteristics in job searching by unemployed adults. *Current Psychology, 16*(1), 83–96. doi: 10.1007/s12144-997-1017-9
- Lay, C. H., Edwards, J. M., Parker, J. D. A., & Endler, N. S. (1989). An assessment of appraisal, anxiety, coping, and procrastination during an examination period. *European Journal of Personality, 3*(3), 195–208. doi: 10.1002/per.2410030305

- Lay, C. H., Knish, S., & Zanata, R. (1992). Self-handicapping and procrastinators: A comparison of their practice behavior prior to an evaluation. *Journal of Research in Personality, 26*(3), 242–257. doi:10.1016/0092-6566(92)90042-3
- Lay, C., Kovacs, A., & Danto, D. (1998). The relation of trait procrastination to the big-five factor conscientiousness: an assessment with primary-junior school children based on self-report scales. *Personality and Individual Differences, 25*(2), 187–193. doi:10.1016/S0191-8869(98)00005-1
- Lay, C. H., & Schouwenburg, H. C. (1993). Trait procrastination, time management, and academic behavior. *Journal of Social Behavior and Personality, 8*, 647–662.
- Lay, C., & Silverman, S. (1996). Trait procrastination, anxiety, and dilatory behavior. *Personality and Individual Differences, 21*, 61–67. doi:10.1016/0191-8869(96)00038-4
- Lee, D., Kelly, K. R., & Edwards, J. K. (2006). A closer look at the relationships among trait procrastination, neuroticism, and conscientiousness. *Personality and Individual Differences, 40*(1), 27–37. doi:10.1016/j.paid.2005.05.010
- Lee, E. (2005). The relationship of motivation and flow experience to academic procrastination in university students. *Journal of Genetic Psychology, 166*(1), 5–14. doi: 10.3200/GNTP.166.1.5-15
- Lefever, S., Dal, M., & Matthíasdóttir, Á. (2007). Online data collection in academic research: advantages and limitations. *British Journal of Educational Technology, 38*(4), 574–582. doi:10.1111/j.1467-8535.2006.00638.x

- Leganger, A., Kraft, P., & Roysamb, E. (2000). Perceived self-efficacy in health behavior research: Conceptualisation, measurement and correlates. *Psychology and Health, 15*, 51–69.
- Lewis, R. A., & Gilhousen, M. R. (1981). Myths of career development: A cognitive approach to vocational counseling. *The Personnel and Guidance Journal, 59*, 296–299.
- Li, C. E., DiGiuseppe, R., & Froh, J. (2006). The roles of sex, gender, and coping in adolescent depression. *Adolescence, 41*(163), 409–415.
- Liberman, N., Trope, Y., McCrea, S. M., & Sherman, S. J. (2007). The effect of level of construal on the temporal distance of activity enactment. *Journal of Experimental and Social Psychology, 43*, 143–149. doi:10.1016/j.jesp.2005.12.009
- Litman, J. A., & Lunsford, G. D. (2009). Frequency of use and impact of coping strategies assessed by the COPE Inventory and their relationships to post-event health and well-being. *Journal of Health Psychology, 14*(7), 982–991. doi: 10.1177/1359105309341207
- Litvin, S. W., & Kar, G. H. (2001). E-surveying for tourism research: Legitimate tool or a researcher's fantasy? *Journal of Travel Research, 39*(3), 308–314. doi: 10.1177/004728750103900309
- Liu, O. L., Rijmen, F., MacCann, C., & Roberts, R. (2009). The assessment of time management skills in middle-school students. *Personality and Individual Differences, 47*, 174–179. doi:10.1016/j.paid.2009.02.018
- Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice Hall.

- Locker, J., & Cropley, M. (2004). Anxiety, depression and self-esteem in secondary school children: An investigation into the impact of Standard Assessment Tests (SATs) and other important school examinations. *School Psychology International, 25*(3), 333–345. doi: 10.1177/0143034304046905
- Lovullo, W. R. (2005). *Stress and health: Biological and psychological interactions*. (2nd ed.). Thousand Oaks, CA: Sage.
- Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the Depression Anxiety Stress Scales*. (2nd ed.). Sydney: Psychology Foundation.
- Lowry, M. E. (1984). *Major depression: Prevention & treatment*. St. Louis: Warren H. Green, Inc.
- Lubell, K. M., & Vetter, J. B. (2006). Suicide and youth violence prevention: The promise of an integrated approach, *Aggression and Violent Behavior, 11*(2), 167–175.
- Luszczynska, A., Gutierrez-Dona, B., & Schwarzer, R. (2005). General self-efficacy in various domains of human functioning: Evidence from five countries. *International Journal of Psychology, 40* (2), 80–89.
- Luszczynska, A., Mohamed, N. E., & Schwarzer, R. (2005). Self-efficacy and social support predict benefit finding 12 months after cancer surgery: The mediating role of coping strategies. *Psychology, Health and Medicine, 10*(4), 365–375.
- Macan, T. H. (1994). Time management: Test of a process model. *Journal of Applied Psychology, 79*(3), 381–391. doi: 10.1037/0021-9010.79.3.381
- Macan, T. H. (1996). Time-management training: Effects on time behaviors, attitudes, and job performance. *The Journal of Psychology, 130*(3), 229–236.

- Macan, T. H., Shahani, C., Dipboye, R. L., & Phillips, A. P. (1990). College students' time management: Correlations with academic performance and stress. *Journal of Education Psychology, 82*(4), 760–768. doi: 10.1037/0022-0663.82.4.760
- Mahmood, T., & Shaukat, M. (2014). Life Satisfaction and Psychological Well-being among Young Adult Female University Students. *International Journal of Liberal Arts and Social Science, 2*(5).
- Malatincova, T. (2011). *Re-establishing the freedom of choice: A causal model of academic procrastination based on the theory of psychological reactance*. Paper presented at the 7th Biennial Procrastination Research Conference University of Amsterdam, Netherland.
- Mancina, K., & Ferrari, J. R. (2009). *In the eye of the beholder: Regret and life satisfaction for the chronic procrastinator*. Paper presented at the 6th Biennial Procrastination Research Conference Abstracts York University, Toronto. Retrieved from [http://web2.uwindsor.ca/courses/psychology/fsirois/Procrastination\\_conference\\_files/2009\\_Abstracts.pdf](http://web2.uwindsor.ca/courses/psychology/fsirois/Procrastination_conference_files/2009_Abstracts.pdf)
- Mann, L. (1982). *Decision-making questionnaire*. Unpublished inventory. Flinders University of South Australia, Australia.
- Manzoor, A. (2000). *Relationship between early recollections and personality characteristic* (Unpublished M.Phil dissertation). National Institute of Psychology, Quaid-i-Azam University, Islamabad.
- Marano, H. E. (2003, August). Procrastination: Ten things to know. *Psychology Today*. Retrieved from <http://psychologytoday.com/rss/pto-20030823-000001.html>

- Martin, T., Flett, G., Hewitt, P., Krames, L., & Szanto, G. (1996). Personality correlates of depression and health symptoms: A test of a self-regulation model. *Journal of Research in Personality, 30*(2), 264–277. doi:10.1006/jrpe.1996.0017
- Matz, C. M. (1999). *Administration of Web versus paper surveys: mode effects and response rates* (Unpublished Master's thesis), University of North Carolina. Retrieved from ERIC database.
- McBurney, D. H., & White, T. L. (2004). *Research Methods* (6th ed.). CA: Wadsworth Thomson Learning, Inc.
- McCabe S. E. (2004). Comparison of web and mail surveys in collecting illicit drug use data: a randomized experiment. *Journal of Drug Education, 34*, 61–72.
- McCown, W., Petzel, T., & Rupert, P. (1987). An experimental study of some hypothesized behaviors and personality variables of college student procrastinators. *Personality and Individual Differences, 8*(6), 781–786. doi:10.1016/0191-8869(87)90130-9
- McCrae, R. R. (1996). Social consequences of experiential openness. *Psychological Bulletin, 120*, 323–337. doi: 10.1037/0033-2909.120.3.323
- McCrea, S. M., Liberman, N., Trope, Y., & Sherman, S. J. (2008). Construal Level and procrastination. *Psychological Science, 19*(12), 1308–1314. doi:10.1111/j.14679280.2008.02240.x
- McCullough, G., & Huebner, E. S. (2003). Life satisfaction reports of adolescents with learning disabilities and normally achieving adolescents. *Journal of Psycho-educational Assessment, 21*, 311–324. doi: 10.1177/073428290302100401

- McGorry, S. Y. (2000). Measurement in cross-cultural environment: survey translation issues. *Qualitative Market Research: An International Journal*, 2, 74–81.
- Meulman, J. J., Heiser, W. J., & SPSS Inc. (2004). *Categories 13.0*. Chicago: SPSS Inc.
- Michles, R., & Marzuk, P. M. (1993). Progress in psychiatry. *The New England Journal of Medicine*, 329(8), 552–557.
- Midgley, C., & Urdan, T. (2001). Academic self-handicapping and achievement goals: A further examination. *Contemporary Educational Psychology*, 26(1), 61–75. doi: 10.1006/ceps.2000.1041
- Milgram, N. A., Batori, G., & Mowrer, D. (1993). Correlates of academic procrastination. *Journal of School Psychology*, 31, 487–500. doi:10.1016/0022-4405(93)90033-F
- Milgram, N. A., Dangour, W., & Raviv, A. (1992). Situational and personal determinants of academic procrastination. *The Journal of General Psychology*, 119, 123–133. doi:10.1080/00221309.1992.9921166
- Milgram, N. A., Marshevsky, S., & Sadeh, C. (1995). Correlates of academic procrastination: Discomfort, task-aversiveness, and task capability. *The Journal of Psychology*, 129, 145–155.
- Milgram, N. A., Mey-Tal, G., & Levison, G. M. Y. (1998). Procrastination, generalized or specific, in college students and their parents. *Personality and Individual Differences*, 25(2), 297–316. doi: 316. 10.1016/S0191-8869(98)000440



- Milgram, N. A., Sroloff, B., & Rosenbaum, M. (1988). The procrastination in everyday life. *Journal of Research in Personality*, 22(2), 197–212. doi: 10.1016/0092-6566(88)90015-3
- Miller, P. G., & Sonderlund, A. L. (2010). Using the internet to research hidden populations of illicit drug users: a review. *Addiction*, 105, 1557–1567. doi:10.1111/j.1360-0443.2010.02992.x\_2992 1557..1567
- Miller, P. G., Johnston, J., McElwee, P. R., & Noble, R. (2007). A pilot study using the internet to study patterns of party drug use: processes, findings and limitations. *Drug and Alcohol Review*, 26 (2), 169-174. doi: 10.1080/09595230601146629
- Misra, R., & McKean, M. (2000). College students' academic stress and its relation to their anxiety, time management, and leisure satisfaction. *American Journal of Health Sciences*, 16(1), 41–52.
- Mitchell, M., & Jolley, J. (2001) Research design explained (Fourth edition). USA: Harcourt College Publishers.
- Moon, S. M., & Illingworth, A. J. (2005). Exploring the dynamic nature of procrastination: A latent growth curve analysis of academic procrastination. *Personality and Individual Differences*, 38, 297–309. doi:10.1016/j.paid.2004.04.009
- Moos, R. H., & Holahan, C. J. (2003). Dispositional and contextual perspectives on coping: Toward an integrative framework. *Journal of Clinical Psychology*, 59(12), 1387–1403. doi: 10.1002/jclp.10229
- Morales, R. A. (2011). Confirmatory factor analysis of the academic procrastination scale. *The International Journal of Research and Review*, 6(2), 83-93.

- Murray, C., & Wren, C. T. (2003). Cognitive, Academic, and Attitudinal Predictors of the Grade Point Averages of College Students with Learning Disabilities. *Journal of Learning Disabilities, 36*(5), 407–415. doi: 10.1177/0022219403060050201
- Naushine, S. (2008). *Depression, anxiety and stress among the mothers of special and normal children* (Unpublished Master's thesis). National Institute of Psychology, Quaid-i-Azam University, Islamabad.
- Nawaz, N. (2004). *Effects of depression on self-efficacy of stroke patients* (Unpublished M. Phil dissertation). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.
- Naz, G. (2013). *Academic procrastination and self-regulation among adolescents*. (Unpublished Master's thesis). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.
- Nazish. (2001). *Relationship between self-efficacy and procrastination among college students* (Unpublished Master's thesis). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.
- Neugartn, B. L. (1961). The measurement of life satisfaction. *Journal of Gerontology, 16*, 134–143.
- Ng, F., Trauer, T., Dodd, S., Callaly, T., S Campbell, S., & Berk, M. (2007). The validity of the 21-item version of the Depression Anxiety Stress Scales as a routine clinical outcome measure. *Acta Neuropsychiatrica, 19*(5), 304–310.
- Nieuwenhuijsen, K., de Boer, A. G. E. M., Verbeek, J., Blonk, R., & van Dijk, F. J. H. (2003). The Depression Anxiety Stress Scales (DASS): Detecting anxiety disorder and depression in employees absent from work because of mental

- health problems. *Occupational & Environmental Medicine*, 60(1), 77–82. doi: 10.1136/oem.60.suppl\_1.i77
- Nolen-Hoeksema, S. (2001). Gender differences in depression. *Current Directions in Psychological Science*, 10, 173–176. Reprinted in T.S. Oltmanns & R.E. Emery (In Press) (Eds.), *Abnormal psychology reader* (pp. 49–55). New York: Prentice Hall.
- O'Donoghue, T., & Rabin, M. (1999). Incentives for procrastinators. *Quarterly Journal of Economics*, 114(3), 769–816. doi:10.1162/003355399556142
- O'Donoghue, & Rabin, M. (2008). Procrastination on long-term projects. *Journal of Economic Behavior & Organization*, 66(2), 161–175.
- Onwuegbuzie, A. J. (2000). Academic procrastination and perfectionist tendencies among graduate students. *Journal of Social Psychology and Personality*, 15, 103–110.
- Owens, A., & Newbegin, I. (1997). Procrastination in high school achievement: A causal structural model. *Journal of Social Behavior and Personality*, 12, 869–887.
- Ozer, B. U., Demir, A., & Ferrari, J. R. (2009). Exploring academic procrastination among Turkish students: Possible gender differences in prevalence and reasons. *The Journal of Social Psychology*, 149(2), 241–257. doi: 10.3200/SOCP.149.2.241-257
- Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research*, 66(4), 543–578. doi: 10.3102/00346543066004543
- Pajares, F. (2005). Self-efficacy beliefs during childhood and adolescence: Implications for teachers and parents. In F. Pajares & T. Urdan (Eds.),

*Adolescence and education, Vol. 5: Self-efficacy beliefs of adolescents* (pp. 339–367). Greenwich, CT: information Age Publishing.

Paludi, M. A., & Frankell-Hauser, J. (1986). An idiographic approach to the study of women's achievement striving. *Psychology of Women Quarterly, 10*, 89–100.

Park, C. L., Edmondson, D., Fenster, J. R., & Blank, T. O. (2008). Positive and negative health behavior changes in cancer survivors: A stress and coping perspective. *Journal of Health Psychology, 13*(8), 1198–1206. doi: 10.1177/1359105308095978

Pascal, C., Claude, F., Jean, M. (2010). Individual differences in undergraduate student athletes: The roles of perfectionism and trait anxiety on perception of procrastination behavior. *Social Behavior and Personality: An international journal, 38*(8), 1041–1056. doi: 10.2224/sbp.2010.38.8.1041

Pavot, W., & Diener, E. (1993). Review of the Satisfaction with Life Scale. *Psychological Assessment, 5*, 164–172.

Pavot, W., & Diener, E. (2008). The Satisfaction With Life Scale and the emerging construct of life satisfaction. *Journal of Positive Psychology, 3*, 137–152

Peeters, M. A. G., & Christel, G. R. (2005). Time management behavior as a moderator for the job demand-control interaction. *Journal of Occupational Health Psychology, 10*(1), 64–75. doi:10.1037/1076-8998.10.1.64

Perez, J. E., Chartier, M., Koopman, C., Vosvick, M., Gore-Felton, C., & Spiegel, D. J. (2009). Spiritual striving, acceptance coping, and depressive symptoms among adults living with HIV/AIDS. *Journal of Health Psychology, 14*(1), 88–97. doi: 10.1177/1359105308097949

- PHP. (n.d.). *In Wikipedia the free encyclopedia*. Retrieved from <https://en.wikipedia.org/wiki/PHP>
- Pittman, T. S., Tykocinski, O. E., Sandman-Keinan, R., & Matthews, P. A. (2008). When bonuses backfire: an inaction inertia analysis of procrastination induced by a missed opportunity. *Journal of Behavioral Decision Making, 21*, 139–150. doi: 10.1002/bdm.576
- Popoola, B. I. (2005). A study of the relationship between procrastinatory behaviour and academic performance of undergraduate students in a Nigerian University. *African Symposium: An Online Journal of Educational Research Network*. Retrieved from <http://www2.csu.edu/ncsu/aern/TAS5.1.htm>.
- Perera, K. (2007). *Life satisfaction and self-esteem*. Retrieved from: [www.moreselfesteem.com/self\\_esteem.htm](http://www.moreselfesteem.com/self_esteem.htm)
- Procrastination (n.d.). *Characteristics of procrastination*. Retrieved from [psychology.wikia.com/wiki/procrastination](http://psychology.wikia.com/wiki/procrastination)
- Prohaska, V., Morrill, P., Atilas, I., & Perez, A. (2000). Academic procrastination by nontraditional students. *Journal of Social Behavior and Personality, 15*, 125–134.
- Puskar, K. R., & Grabiak, B.R. (2008). Rural adolescents' coping responses: Implications for behavioral health nurses. *Issues in Mental Health Nursing, 29*(5), 523–535. doi: 10.1080/01612840801981413
- Pychyl, T. A., Lee, J. M., Thibodeau, R., & Blunt, A. (2000). Five days of emotion: an experience sampling study of undergraduate student procrastination. *Journal of Social Behavior and Personality, 15*, 239–254.

- Pychyl, T. A., Morin, R. W., & Salmon, B. R. (2001). Procrastination and the planning fallacy: An examination of the study habits of university students. *Journal of Social Behavior and Personality, 16*, 135–151.
- Qureshi, M. S. (2007). *Relationship between parental acceptance, self-efficacy, and academic achievement of adolescents* (Unpublished Master's thesis). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.
- Renn, R. W., Allen, D. G., & Huning, T. M. (2009). Empirical examination of the individual-level personality-based theory of self-management failure. *Journal of Organizational Behavior, 32*(1), 25–43. doi: 10.1002/job.667
- Rew, L. (2005). *Adolescent health A multidisciplinary approach to theory, research, and intervention*. Thousand Oaks, CA: Sage Publications.
- Rey, J. M., & Birmaher, B. (2009). *Treating child and adolescent depression*. Baltimore: Lippincott Williams & Wilkins.
- Rodgers J., Buchanan T., Scholey A. B., Hefferman T. M., Ling J., & Parrott A. (2001). Differential effects of ecstasy and cannabis on self-reports of memory ability: a web-based study. *Hum Psychopharmacology: Clinical and Experimental, 16*, 619–25. doi: 10.1002/hup.345
- Rodrigues, L.N., & Kitzmann, K.M. (2007). Coping as a mediator between interparental conflict and adolescents' romantic attachment. *Journal of Social and Personal Relationships, 24*(3), 423–439. doi: 10.1177/0265407507077230
- Roig, M., & DeTommaso, L. (1995). Are college cheating and plagiarism related to academic procrastination? *Psychological Reports, 77*, 691–698.
- Romano, J., Wallace, T. L., Helmick, I. J., Carey, L. M., Adkins, L. (2005). Study procrastination, achievement, and academic motivation in web-based and

- blended distance learning. *Internet and Higher Education*, 8, 299–305.  
doi:10.1016/j.iheduc.2005.09.003
- Rosario, P., Costa, M., Nunez, J. C., Gonzalez-Pianda, J., Solano, P., & Valle, A. (2009). Academic Procrastination: Associations with Personal School, and Family Variables. *The Spanish Journal of Psychology*, 12(1), 118–127.
- Rosario, P., Mourao, R., Nunez, J.C., Gonzalez-Pianda, J.A., & Solano, P. (2006). Is it possible to have a reciprocal and positive effect? *Papeles del Psicólogo*, 27, 171–179.
- Rosenthal, R., & Rosnow, R. L. (1991). *Essentials of behavioral research: Methods and data analysis* (2nd ed.). New York: McGraw-Hill.
- Rotenstein, A., Davis, H. Z., & Tatum, L. (2010). Early Birds versus Just-in-Timers: The effect of procrastination on academic performance of accounting students. *Journal of Accounting Education*. Advance online publication. doi:10.1016/j.jaccedu.2010.08.001
- Rothblum, E., & Mann, L. (1986). Psychological antecedents of student procrastination. *Australian Psychologist*, 23(2), 7–217. doi: 10.1080/00050068808255605
- Rothblum, E., Solomon, L., & Murakami, J. (1986). Affective, cognitive, and behavioural differences between high and low procrastinators. *Journal of Counseling Psychology*, 33, 387–394. doi: 10.1037/0022-0167.33.4.387
- Ruiz-Caballero, J. A., & Bermudez, J. (1995). Neuroticism, mood, and retrieval of negative personal memories. *Journal of General Psychology*, 122, 29–35.
- Sabih, F. (2006). *Coping strategies and psychological well being among parents having children with autism and down syndrome* (Unpublished M.Phil

- dissertation). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.
- Saddler, C. D., & Buley, J. (1999). Predictors of academic procrastination in college students. *Psychological Reports, 84*(2), 686–688. doi: 10.2466/PRO.84.2.686-688
- Saddler, C. D., & Sacks, L. (1993). Multidimensional perfectionism and academic procrastination: Relationships with depression in university students. *Psychological Reports, 73*(3), 863–871.
- Sadock, B. J., & Sadock, V. A. (2008). *Concise textbook of clinical psychology* (3rd ed.). Philadelphia: Lippincott Williams & Wilkins.
- Sadock, B. J., & Sadock, V. A. (2009). *Concise textbook of child and adolescents psychiatry*. Philadelphia: Lippincott Williams & Wilkins.
- Saklofske, D. F., Kelly, I. W., & Janzen, B. L. (1995). Neuroticism, depression, and depression proneness. *Personality and Individual Differences, 18*, 27–31. doi:10.1016/0191-8869(94)00128-F
- Saleem, N. (2004). *Relationship of stress and coping strategies among university students* (Unpublished Master's thesis). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.
- Saleem, M., & Rafique, R. (2012). Procrastination and self-esteem among university students. *Pakistan Journal of Social and Clinical Psychology, 10*(2), 50-53.
- Sampson, J. P., Jr., Peterson, G. W., Lenz, J. G., Reardon, R. C., & Saunders, D. E. (1996). *Manual for the Career Thoughts Inventory*. Odessa, FL: Psychological Assessment Resources.



- Saphore, R. B. (1999). A psychometric comparison of an electronic and classical survey instrument. *Dissertation Abstracts International*, 60, 3976.
- Sarafino, E. P. (2008). *Health psychology* (6th ed.). NJ: John Wiley & Sons.
- Sarid, M., & Peled, Y. (2010). The effect of procrastination on multi-drafting in a web-based learning content management environment. *Interdisciplinary Journal of E-Learning and Learning Objects*, 6, 345–354.
- Saucier, G. (1994). Mini-Markers: A Brief Version of Goldberg's Unipolar Big-Five Markers. *Journal of Personality Assessment*, 63 (3), 506–516.
- Scher, S., & Ferrari, J. (2000). The recall of completed and non completed tasks through daily logs to measure procrastination. *Journal of Social Behavior and Personality*, 15, 255–265.
- Scher, S., & Osterman, N. (2002). Procrastination, conscientiousness, anxiety, and goals: Exploring the measurement and correlates of procrastination among school-aged children. *Psychology in the Schools*, 39, 385–398. doi: 10.1002/pits.10045
- Schimmack, U., Oishi, S., Furr, R. M., & Funder, D. C. (2004). Personality and life satisfaction: A facet-level analysis. *Personality Social Psychology Bulletin*, 30(8), 1062–1075. doi: 10.1177/0146167204264292
- Schlegel, A. (2001). The global spread of adolescent culture. In L. J. Crockett & R. K. Silbereisen (Eds.), *Negotiating adolescence in times of social change* (pp. 71–88). NY: Cambridge University Press.
- Scholz, U., Doña, B. G., Sud, Shonali., & Schwarzer, R. (2002). Is general self-efficacy a universal construct? Psychometric findings from 25 countries.

*European Journal of Psychological Assessment*, 18(3), 242–251. doi: 10.1027//1015-5759.18.3.242.

Schonlau M., Fricker R. D., & Elliott M. N. (2001). *Conducting research surveys via e-mail and the web*. New York: RAND.

Schouwenburg, H. C. (1992). Procrastinators and fear of failure: An exploration of reasons for procrastination. *European Journal of Personality*, 6(3), 225–236. doi: 10.1002/per. 2410060305

Schouwenburg, H. C. (1995). Academic procrastination: Theoretical notions, measurement, and research. In J. R. Ferrari, J. L. Johnson, & W. G. McCown (Eds.), *Procrastination and task avoidance: Theory, research, and treatment* (pp. 71–96). New York, NY: Plenum Press.

Schouwenburg, H. C. (2004). Procrastination in academic settings: general introduction. In H. C. Schouwenburg, C. H. Lay, T. A. Pychyl, & J. R. Ferrari (Eds.), *Counseling the procrastinator in academic settings* (pp. 3–17). Washington: American Psychological Association.

Schouwenburg, H. C., & Lay, C. H. (1995). Trait procrastination and the big five factors of personality. *Personality and Individual Differences*, 18(4), 481–490. doi:10.1016/0191-8869(94)00176-S

Schouwenburg, H. C., Lay, C. H., Pychyl, T. A., & Ferrari, J. R. (2004). *Counseling the procrastinator in academic settings*. Washington: APA.

Schraw, G., Wadkins, T., & Olafson, L. (2007). Doing the things we do: A grounded theory of procrastination. *Journal of Educational Psychology*, 99(1), 12–25. doi:10.1037/0022-0663.99.1.12

- Schwartz, A., & Schwartz, R. (1993). *Depression: Theories & treatments*. New York: Columbia University Press.
- Schwartz, R. M., Hogben, M., Liddon, N., Augenbraun, M., McCormack, W. M., Rubin, S...Wilson, T. E. (2008). Coping with a diagnosis of C trachomatis or N gonorrhoeae: Psychosocial and behavioral correlates. *Journal of Health Psychology, 13*, 921–929. doi: 10.1177/1359105308095066
- Schwarzer, R., & Born, A. (1997). Optimistic self-beliefs: Assessment of general perceived self-efficacy in thirteen cultures. *World Psychology, 3*, 177–190.
- Schwarzer, R., & Hallum, S. (2008). Perceived Teacher Self-Efficacy as a Predictor of Job Stress and Burnout: Mediation Analyses. *Applied Psychology: An International Review, 57*, 152–171. doi: 10.1111/j.1464-0597.2008.00359.x
- Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy Scale. In: Weinman, J, S Wright, and M Johnson (Eds.), *Measures in health psychology: A user's portfolio, Causal and control beliefs* (pp. 35–37). Windsor England: Nfer-Nelson.
- Schwarzer, R., Mueller, J., & Greenglass, E. (1999). Assessment of perceived general self-efficacy on the Internet: Data collection in cyberspace. *Anxiety, Stress, and Coping, 12*, 145–161.
- Seaward, B. L. (2002). *Managing stress*. London: Jones & Bartlett.
- Seo, E. H. (2012). Cramming, active procrastination and academic achievement. *Social Behavior and Personality: an international journal, 40*(8), 1333-1340.
- Seo, E. H. (2013). A comparison of active and passive procrastination in relation to academic motivation. *Social Behavior and Personality: an international journal, 41*(5), 777-786.

- Seiffge-Krenke, I., Aunola, K., & Nurmi, J. E. (2009). Changes in stress perception and coping during adolescence: The role of situational and personal factors. *Child Development, 80*(1), 259–279. doi: 10.1111/j.1467-8624.2008.01258.x
- Seligman, M. E. P. (1975). *Helplessness, on depression: Development and death*. San Francisco: Freeman.
- Senecal, C., Koestner, R., & Vallerand, R. (1995). Self-regulation and academic procrastination. *The Journal of Social Psychology, 135*(5), 607–619. doi:10.1080/00224545.1995.9712234
- Senecal, C., Lavoie, K., & Koestner, R. (1997). Trait and situational factors in procrastination: An interactional model. *Journal of Social Behavior and Personality, 12*(4), 889–903.
- Shah, M., Hasan, S., Malik, S., Sreeramareddy, C. T. (2010). Perceived Stress, sources and Severity of Stress among medical undergraduates in a Pakistani Medical School. *BMC Medical education, 10*(2), 1-8.
- Shahani, C., Weiner, R., & Streit, M. K. (1993). An investigation of the dispositional nature of the time management construct. *Anxiety, Stress & Coping: An International Journal, 6*(3), 231–243. doi: 10.1080/10615809308248382
- Shahid, H. (2006). *Impact of organizational culture and personality traits on organizational identification* (Unpublished M. Phil dissertation). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.
- Shaikh, B. T., Kahloon, A., Kazmi, M., Khalid, H., Nawaz, K., Khan, N., Khan, S. (2004). Students, stress and coping strategies: a case of Pakistani medical school. *Educ Health (Abingdon), 17*(3), 346-53.

- Shanahan, M. J., Pychyl, T. A. (2007). An ego identity perspective on volitional action: Identity status, agency, and procrastination. *Personality and Individual Differences, 43*, 901–911. doi:10.1016/j.paid.2007.02.013
- Sheeran, P. (2002). Intention–behavior relations: A conceptual and empirical review. In W. Stroebe & M. Hewstone (Eds.), *European Review of Social Psychology, 12*, (pp. 1–30). New York: Wiley.
- Siddiq, M. (2001). *Relationship between emotional expression and life satisfaction among university students* (Unpublished Master's thesis). National Institute of Psychology, Quaid-i-Azam University, Islamabad. Pakistan.
- Simpson, K., & Pychyl, T. (2009). *In search of the arousal procrastinator: an investigation of the relation between procrastination, arousal-based personality traits and beliefs about procrastination motivations*. Paper presented at the 6th Biennial Procrastination Research Conference Abstracts York University, Toronto. Retrieved from [http://web2.uwindsor.ca/courses/psychology/fsirois/Procrastination\\_Conference\\_files/2009\\_Abstracts.pdf](http://web2.uwindsor.ca/courses/psychology/fsirois/Procrastination_Conference_files/2009_Abstracts.pdf)
- Sirin, E. F. (2011). Academic procrastination among undergraduates attending school of physical education and sports: Role of general procrastination, academic motivation and academic self-efficacy. *Educational Research and Reviews, 6*(5), 447–455. Retrieved from <http://www.academicjournals.org/ERR>
- Sirois, F. M. (2004). Procrastination and intentions to perform health behaviors: The role of self-efficacy and the consideration of future consequences. *Personality and Individual Differences, 37*(1), 115–128.

- Sirois, F. M. (2007). "I'll look after my health, later": A replication and extension of the procrastination–health model with community-dwelling adults. *Personality and Individual Differences, 43*, 15–26. doi:10.1016/j.paid.2006.11.003
- Sirois, F. M. (2014). Out of sight, out of time? A meta-analytic investigation of procrastination and time perspective. *European Journal of Personality, 28*, 511–520. doi: 10.1002/per.1947
- Sirois, F. M., & Pychyl, T. (2013). Procrastination and the priority of short term mood regulation: consequences for future self. *Social and Personality Psychology Compass, 7*(2), 115–127. doi:101111/spc3.12011
- Sirois, F., Voth, J., & Pychyl, T. (2009). "I'll look after my health, later": A prospective study of the linkages of procrastination to health and well-being in undergraduate students. Paper presented at the 6th Biennial Procrastination Research Conference Abstracts York University, Toronto. Retrieved from [http://web2.uwindsor.ca/courses/psychology/fsirois/Procrastination\\_Conference\\_files/2009\\_Abstracts.pdf](http://web2.uwindsor.ca/courses/psychology/fsirois/Procrastination_Conference_files/2009_Abstracts.pdf)
- Skinner, E. A., & Zimmer-Gembeck, M. (2007). The development of coping. *Annual Review of Psychology, 58*, 119–144. doi: 10.1146/annurev.psych.58.110405.085705
- Skinner, H. B., Poland, B., & Goldberg, E. H. (2003). How adolescents use technology for health information: implications for health professionals from focus group studies. *Journal of Medical Internet Research, 5*(4), doi:10.2196/jmir.5.4.e32
- Skitka, L. J., & Sargis, E. G. (2005). Social psychological research and the Internet: The promise and the peril of a new methodological frontier. In Y. Amichai-

- Hamburger (Ed.), *The social net: The social psychology of the Internet* (pp. 1–26). UK: Oxford University Press.
- Sliviakova, A., & Klimusova, H. (2011). *Active procrastination, passive procrastination and personality context*. Paper presented at the 7th Biennial Procrastination Research Conference University of Amsterdam, Netherland.
- Smith, M. C., & Dust, C. M. (2006). An exploration of the influence of dispositional traits and appraisal on coping strategies in African American college students. *Journal of Personality, 74*(1), 145–174. doi: 10.1111/j.1467-6494.2005.00372.x
- Solomon, L. J., & Rothblum, E. D. (1984). Academic procrastination: Frequency and cognitive behavioral correlates. *Journal of Counseling Psychology, 31*, 503–509. doi: 10.1037/0022-0167.31.4.503
- Solomon, L. J., & Rothblum, E. D. (1988). Procrastination Assessment Scale. In M. Hersen & A. S. Bellack (Eds.), *Dictionary of behavioral assessment techniques*. New York: Pergamon Press.
- Spera, C. (2006). Adolescents' Perceptions of Parental Goals, Practices, and Styles in Relation to their motivation and achievement. *The Journal of Early Adolescence, 26*(4), 456–490. doi: 10.1177/0272431606291940
- Stanton J. M. (1998). An empirical assessment of data collection using the internet. *Personnel Psychology, 51*, 709–25.
- Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin, 133*(1), 65–94. doi: 10.1037/0033-2909.133.1.65

- Steel, P. (2009). *On the definition and measurement of procrastination*. Paper presented at the 6th Biennial Procrastination Research Conference Abstracts York University, Toronto. Retrieved from [http://web2.uwindsor.ca/courses/psychology/fsirois/procrastination\\_Conference\\_files/2009\\_Abstracts.pdf](http://web2.uwindsor.ca/courses/psychology/fsirois/procrastination_Conference_files/2009_Abstracts.pdf)
- Steel, P., Brothen, T., & Wambach, C. (2001). Procrastination and personality performance and mood. *Personality and Individual Differences, 30*, 95–106. doi:10.1016/S0191-8869(00)00013-1
- Stetina B. U., Jagsch R., Schramel C., Maman T. L., & Kryspin-Exner, I. (2008). Exploring hidden populations: Recreational drug users. *Cyber-psychology: Journal of Psychosocial Research on Cyberspace, 2*(1), article 1. Retrieved from <http://cyberpsychology.eu/view.php?cisloclanku=2008060201&article=1>
- Strongman, K. T., & Burt, C. D. B. (2000). Taking breaks from work: An exploratory inquiry. *Journal of Psychology, 134*(3), 229–242. doi: 10.1080/00223980009600864
- Strunk, K. K., & Steele, M. R. (2011). Relative contributions of self-efficacy, self-regulation, and self-handicapping in predicting student procrastination. *Psychological Reports, 109*, 983-989. doi: 10.2466/07.09.20.PR0.109.6.983-989
- Sukantarat, K. T., Williamson, R. C. N., & Brett, S. J. (2007). Psychological assessment of ICU survivors: a comparison between the Hospital Anxiety and Depression scale and the Depression, Anxiety and Stress scale. *Anaesthesia, 62*(3), 239–243. doi: 10.1111/j.1365-2044.2006.04948.x



- Sumner, E., & Ferrari, J. R. (2009). *Procrastination, rumination and savouring: An exploration of the cognitive underpinnings of task delay*. Paper presented at the 6th Biennial Procrastination Research Conference Abstracts York University, Toronto. Retrieved from [http://web2.uwindsor.ca/courses/psychology/fsirois/Procrastination\\_Conference\\_files/2009\\_Abstracts.pdf](http://web2.uwindsor.ca/courses/psychology/fsirois/Procrastination_Conference_files/2009_Abstracts.pdf)
- Sveinbjornsdottir, S., & Thorsteinsson, E. B. (2008). Adolescent coping scales: A critical psychometric review. *Scandinavian Journal of Psychology*, 49(6), 533–548. doi: 10.1111/j.1467-9450.2008.00669.x
- Tallat, G. (2008). *The impact of downward and upward social comparison on the perceived quality of marital relationship satisfaction* (Unpublished Doctoral dissertation). National Institute of Psychology, Quaid-i-Azam University, Islamabad.
- Tan, C. X., Ang, R. P., Klassen, R. M., Yeo, L. S., Wong, I. Y. F., Huan, V. S., & Chong, W. H. (2008). Correlates of Academic Procrastination and Students' Grade Goals. *Current Psychology*, 27(2), 135–144. doi: 10.1007/s12144-008-9028-8
- Tice, D. M., Bratslavsky, E., & Baumeister, R. F. (2001). Emotional distress regulation takes precedence over impulse control: If you feel bad, do it! *Journal of Personality and Social Psychology*, 80(1), 53–67. doi: 10.1037/0022-3514.80.1.53
- Tice, D., & Baumeister, R. (1997). Longitudinal study of procrastination, performance, stress, and health: The costs and benefits of dawdling.

*Psychological Science*, 8(6), 454-458. doi: 10.1111/j.1467-9280.1997.tb00460.x

Tuckman, B. W. (1991). The development and concurrent validity of the Procrastination Scale. *Education and Psychological Measurement*, 51(2), 473–480. doi: 10.1177/0013164491512022

Tuckman, B. W. (2002). *Academic Procrastinators: Their Rationalizations and Web-Cours Performance*. APA Symposium Paper, Chicago. Retrieved from [http://all.successcenter.ohiostate.edu/references/procrastinator\\_APA\\_paper.htm](http://all.successcenter.ohiostate.edu/references/procrastinator_APA_paper.htm)

Usher, E. L., & Pajares, F. (2006b). Sources of academic and self-regulatory efficacy beliefs of entering middle school students. *Contemporary Educational Psychology*, 31(2), 125–141. doi:10.1016/j.cedpsych.2005.03.002

Van Eerde, W. (2000). Procrastination: Self-regulation in initiating aversive goals. *Applied Psychology: An International Review*, 49(3), 372–389. doi: 10.1111/1464-0597.00021

Van Eerde, W. (2003a). A meta-analytically derived nomological network of procrastination. *Personality and Individual Differences*, 35(6), 1401–1418. doi:10.1016/S0191-8869(02)00358-6

Van Eerde, W. (2003b). Procrastination at work and time management training. *Journal of Psychology*, 137(5), 421–435. doi: 10.1080/00223980309600625

Van Eerde, W. (2004). Procrastination in academic settings and the Big Five model of personality: a meta-analysis. In H. C. Schouwenburg, C. H. Lay, T. A. Pychyl, & J. R. Ferrari (Eds.), *Counseling the procrastinator in academic settings* (pp. 29–40). Washington: American Psychological Association.

- Wadden, T. A., Brownell, K. D., & Foster, G. D. (2002). Obesity: Responding to the global epidemic. *Journal of Consulting and Clinical Psychology, 70*, 510–525. doi:10.1037/0022-006X.70.3
- Walsh, J. J., & Ugumba-Agwunobi, G. (2002). Individual differences in statistics anxiety: the roles of perfectionism, procrastination and trait anxiety. *Personality and Individual Differences, 33*(2), 239–251. doi:10.1016/S0191-8869(01)00148-9
- Wang, Y. C., Lee C. M., Lew-Ting C. Y., Hsiao C. K., Chen D. R., & Chen W. J. (2005). Survey of substance use among high school students in Taipei: Web-based questionnaire versus paper and-pencil questionnaire. *Journal of Adolescent Health, 37*(4), 289–95. doi:10.1016/j.jadohealth.2005.03.017.
- Watson, D. C. (2001). Procrastination and the five-factor model: a facet level analysis. *Personality and Individual Differences, 30*(1), 149–158. doi:10.1016/S0191-8869(00)00019-2
- Werner, O., & Campbell, D. T. (1970). Transalting, workingthrough interpreters, and the problem of decentring. In: Naroll R, Cohen R (Eds.), *A handbook of method in cultural anthropology* (pp. 398-420). NY: The Natural History Press.
- Weisberg, Y. J., DeYoung, C. G., & Hirsh, J. B. (2011). *Gender differences in personality across the ten aspects of the Big Five*. *Frontiers in Psychology*. Retrieved from www.frontiersin.org. doi: 10.3389/fpsyg.2011.00178
- Weissman M. M., & Markowitz J. C. (1994). Interpersonal psychotherapy: current status. *Archives of General Psychiatry, 51*, 599–606.

- Weiton, W. (2001). *Psychology: Themes and variations*. (5th ed.). United States: Thomson Learning, Inc.
- Wesley, J. (1994). Effects of ability, high school achievement, and procrastinatory behavior on college performance. *Educational and Psychological Measurement*, 54(2), 404–408. doi: 10.1177/0013164494054002014
- Wilson, G. S., Pritchard, M. E., & Revalee, B. (2005). Individual differences in adolescent health symptoms: The effects of gender and coping. *Journal of Adolescence*, 28(3), 369–379.
- Wolters, C. A. (2003). Understanding procrastination from a self-regulated learning perspective. *Journal of Educational Psychology*, 95(1), 179–187. doi: 10.1037/0022-0663.95.1.179
- Wolters, C. A. (2004). Advancing achievement goal theory: Using goal structures and goal orientations to predict students' motivation, cognition, and achievement. *Journal of Educational Psychology*, 96(2), 236–250.
- World Bank Report (2012). *Internet users in Pakistan*. Retrieved from <http://www.tradingeconomics.com/pakistan/internet-users-wb-data.html>
- Wyk, V. L. (2004). *The relationship between procrastination and stress in the life of high school teachers*. (Unpublished M. Sc thesis). Faculty of Economic and Management Sciences, University of Pretoria,
- Yasin, M, A, S., & Dzulkifli, M, A. (2011). Differences in depression, anxiety and stress between low-and high-achieving students. *Journal of Sustainability Science and Management*, 6(1), 169–178.

- Yasmin, R., Asim, S. S., Ali, H., Quds, T., Zafar, F. (2013). Prevalence of perceived stress among pharmacy students in Pakistan. *Int. J. Pharm. Sci. Rev. Res*, 23(2), 343-347.
- Yong, F. L. (2010). A study on the assertiveness and academic procrastination of English and Communication students at a private university. *American Journal of Scientific Research*, 9, 62–72.
- Yoshioka M. R. (n.d.). *Satisfaction With Life Scale*. Psychosocial measures for Asian Americans: Tools for practice and research. Retrieved from <http://www.columbia.edu/cu/ssw/projects/pmap/adults.htm>
- Vuong, M., Brown-Welty, S., & Tracz, S. (2010). The effects of self-efficacy on academic success of first-generation college sophomore students. *Journal of College Student Development*, 51(1), 50-64.
- Zafar, M. (2013). *Relationship between meta-cognitive beliefs and procrastination among university students* (Unpublished M. Sc thesis). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.
- Zahid, G. (2002) *Self-assertiveness and life-satisfaction: A comparison of men and women* (Unpublished M. Phil dissertation). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.
- Zeenath, S., & Orcullo, D. J. (2012). Exploring academic procrastination among undergraduates. *International Proceedings of Economics Development & Research; September*, 47, 42.
- Zhang, H. M., & Zhang, Z. J. (2007). Usability of Tuckman procrastination scale in Chinese college students. *Chinese Journal of Clinical Psychology*, 15, 10–12.

- Zimmer-Gembeck, M. J., & Skinner, E. A. (2008). Adolescents' coping with stress: development and diversity [Introduction to special issue on adolescent coping]. *Prevention Researcher*, *15*(4), 3–7.
- Zoe, C. (2009). Chronic persistent pain. In B. Helen, K. Paul, & L. Susan (Eds.), *Clinical psychology in practice* (pp. 138–151). UK: Blackwell Publishing Ltd.

## **APPENDICES**

اسلام وعلیم!

میں قائد اعظم یونیورسٹی میں پی ایچ ڈی سکالر ہوں اور لوگوں کے پڑھنے اور کام کرنے کے طریقہ کار اور ان کی شخصیت کے مختلف انداز پر تحقیق کر رہی ہوں۔ اس تحقیق کا کوئی اور پوشیدہ مقصد نہیں ہے۔ ریسرچر کی دلچسپی محض آپ کے پڑھنے اور کام کرنے کے طریقہ کار سے متعلق آپ کی رائے جاننے میں ہے اور یہ کہ یہ سب شخصیت کے مختلف انداز کو کس طرح سے متاثر کرتا ہے۔

اطمینان رکھیے، آپ کی فراہم کردہ معلومات کو صیغہ راز میں رکھا جائے گا اور یہ معلومات صرف ریسرچر تک ہی محدود ہوں گی اور ان تمام معلومات کو محض تحقیقی مقصد کے لیے ہی استعمال کیا جائے گا۔ اس تحقیق میں حصہ لینے کے لئے آپ کو اپنے چند بنیادی کوائف (مثلاً نام، عمر، جنس، تعلیم، پیشہ، ادارہ وغیرہ) مہیا کرنے ہوں گے۔

تمام سوالنامے مکمل ہونے کے بعد اگر ضرورت پڑی تو اس تحقیق کے کسی اور پہلو سے متعلق معلومات حاصل کرنے کے سلسلے آپ سے دوبارہ رابطہ کیا جاسکتا ہے۔ آپ سے حاصل کردہ معلومات آپ کو اپنی شخصیت کو بہتر طور پر جاننے میں اور آپ کے پڑھنے اور کام کرنے کے طریقہ کار کو مزید بہتر بنانے میں مددگار ثابت ہو سکتی ہیں

اس تحقیق کے سلسلے میں آپ کی رائے اور تجاویز میرے لیے بہت اہم ہیں۔ آپ کے تعاون کا بے حد شکریہ۔

سعدیہ عزیز

پی۔ ایچ۔ ڈی سکالر

قائد اعظم یونیورسٹی، اسلام آباد

## تحقیق میں شمولیت پر رضامندی

میں نے تحقیق کے مقصد اور اس کے بارے میں اوپر دی گئی تمام تفصیل کو اچھی طرح سے پڑھا اور سمجھ لیا ہے اور میں اس تحقیق میں حصہ لینے کے

لیے رضامند ہوں۔

نام	عمر	جنس
تعلیم	ادارہ	حاصل کردہ گریڈ
والد کی تعلیم	والدہ کی تعلیم	



**Appendix - B**

**New Active Procrastination Scale**

Ser.	Statements	Not at							Very True
		all True							
1.	My performance tends to suffer when I have to race against deadlines.	1	2	3	4	5	6	7	
2.	I don't do well if I have to rush through a task.	1	2	3	4	5	6	7	
3.	If I put things off until the last moment, I'm not satisfied with their outcomes.	1	2	3	4	5	6	7	
4.	I achieve better results if I complete a task at a slower pace, well ahead of a deadline.	1	2	3	4	5	6	7	
5.	It's really a pain for me to work under upcoming deadlines.	1	2	3	4	5	6	7	
6.	I'm upset and reluctant to act when I'm forced to work under pressure.	1	2	3	4	5	6	7	
7.	I feel tense and cannot concentrate when there's too much time pressure on me.	1	2	3	4	5	6	7	
8.	I'm frustrated when I have to rush to meet deadlines.	1	2	3	4	5	6	7	
9.	To use my time more efficiently, I deliberately postpone some tasks.	1	2	3	4	5	6	7	
10.	I intentionally put off work to maximize my motivation.	1	2	3	4	5	6	7	
11.	In order to make better use of my time, I intentionally put off some tasks	1	2	3	4	5	6	7	
12.	I finish most of my assignments right before deadlines because I choose to do so.	1	2	3	4	5	6	7	
13.	I often start things at the last minute and find it difficult to complete them on time.	1	2	3	4	5	6	7	
14.	I often fail to accomplish goals that I set for myself.	1	2	3	4	5	6	7	
15.	I'm often running late when getting things done.	1	2	3	4	5	6	7	
16.	I have difficulty finishing activities once I start them.	1	2	3	4	5	6	7	

## New Active Procrastination Scale

(نیفاعال تاخیری پیمانہ)

نیچے دیے گئے بیانات کو غور سے پڑھیں اور اس کے سامنے دیے گئے درجات 1 سے لے کر 7 میں سے اس درجہ پر نشان ( ) لگائیں جو آپ سمجھتے / سمجھتی ہیں کہ آپ کے کام کرنے کے انداز کی بہترین ترجمانی کرتا ہے۔

۱۔ میری کارکردگی اُس وقت متاثر ہوتی ہے، جب مجھے مقررہ وقت کے اندر کام کرنا پڑے۔

بالکل درست  
بالکل بھی درست نہیں / بالکل غلط

۱ ۲ ۳ ۴ ۵ ۶ ۷

۲۔ اگر مجھے جلدی میں کوئی کام کرنا پڑے تو میں اسے صحیح نہیں کر پاتا / پاتی۔

بالکل درست  
بالکل بھی درست نہیں / بالکل غلط

۱ ۲ ۳ ۴ ۵ ۶ ۷

۳۔ اگر میں چیزوں کو آخری لمحے تک چھوڑے رکھوں تو میں ان کے نتائج سے مطمئن نہیں ہوتا / ہوتی۔

بالکل درست  
بالکل بھی درست نہیں / بالکل غلط

۱ ۲ ۳ ۴ ۵ ۶ ۷

۴۔ اگر میں آہستہ آہستہ کام کرتے ہوئے مقررہ وقت کے اندر اسے مکمل کر لوں تو بہتر نتائج حاصل کرتا / کرتی ہوں۔

بالکل درست  
بالکل بھی درست نہیں / بالکل غلط

۱ ۲ ۳ ۴ ۵ ۶ ۷

۵۔ مقررہ وقت کے اندر کام کرنا میرے لئے حقیقتاً تکلیف دہ ہے۔

بالکل درست  
بالکل بھی درست نہیں / بالکل غلط

۱ ۲ ۳ ۴ ۵ ۶ ۷

۶۔ مجھے اس کام کو کرنے میں پریشانی اور آکٹاہٹ ہوتی ہے، جو مجھے مجبوراً دباؤ کے تحت کرنا پڑے۔

بالکل درست  
بالکل بھی درست نہیں / بالکل غلط

۱ ۲ ۳ ۴ ۵ ۶ ۷

۷۔ جب میرے پر وقت کا بہت زیادہ دباؤ ہو، میں تناؤ محسوس کرتا ہوں، اور توجہ نہیں دے پاتا / پاتی۔

بالکل درست  
بالکل بھی درست نہیں / بالکل غلط

۱ ۲ ۳ ۴ ۵ ۶ ۷

۸۔ میں بے چین ہو جاتا ہوں جب مجھے مقررہ وقت پر ہی کام کرنا پڑے۔

بالکل درست  
بالکل بھی درست نہیں / بالکل غلط

۷ ۶ ۵ ۴ ۳ ۲ ۱

۹۔ میں اراداً کچھ کاموں کو ملتوی کرتا کرتی ہوں تاکہ میں اپنے وقت کو زیادہ بہتر انداز میں استعمال کر سکوں۔

بالکل درست  
بالکل بھی درست نہیں / بالکل غلط

۷ ۶ ۵ ۴ ۳ ۲ ۱

۱۰۔ میں اپنا شوق اجنبی بڑھانے کی خاطر جان بوجھ کر کام میں تاخیر کرتا کرتی ہوں۔

بالکل درست  
بالکل بھی درست نہیں / بالکل غلط

۷ ۶ ۵ ۴ ۳ ۲ ۱

۱۱۔ میں اپنے وقت کے بہتر استعمال کے لئے اراداً کچھ کاموں کو چھوڑے رکھتا رکھتی ہوں۔

بالکل درست  
بالکل بھی درست نہیں / بالکل غلط

۷ ۶ ۵ ۴ ۳ ۲ ۱

۱۲۔ میں اپنی خواہش کے مطابق اپنے اکثر کام مقررہ اوقات سے پہلے مکمل کر لیتا لیتی ہوں۔

بالکل درست  
بالکل بھی درست نہیں / بالکل غلط

۷ ۶ ۵ ۴ ۳ ۲ ۱

۱۳۔ میں اکثر کام آخری لمحے شروع کرتا کرتی ہوں اور انہیں وقت پر مکمل کر لینے میں مشکل محسوس کرتا کرتی ہوں۔

بالکل درست  
بالکل بھی درست نہیں / بالکل غلط

۷ ۶ ۵ ۴ ۳ ۲ ۱

۱۴۔ میں اکثر اپنے طے شدہ مقاصد کو حاصل کرنے میں ناکام رہتا رہتی ہوں۔

بالکل درست  
بالکل بھی درست نہیں / بالکل غلط

۷ ۶ ۵ ۴ ۳ ۲ ۱

۱۵۔ مجھے اپنے کام مکمل کرنے میں اکثر دیر ہو رہی ہوتی ہے۔

بالکل درست  
بالکل بھی درست نہیں / بالکل غلط

۷ ۶ ۵ ۴ ۳ ۲ ۱

۱۶۔ ایک مرتبہ کاموں کو شروع کرنے کے بعد مجھے ان کو مکمل کرنے میں مشکل پیش آتی ہے۔

بالکل درست  
بالکل بھی درست نہیں / بالکل غلط

۷ ۶ ۵ ۴ ۳ ۲ ۱

**Appendix - D****Passive Procrastination Scale**

<b>Ser.</b>	<b>Statements</b>	<b>Not at all True</b>							<b>Very True</b>
		1	2	3	4	5	6	7	
1.	I tend to finish tasks well ahead of deadlines.	1	2	3	4	5	6	7	
2.	Even after I make a decision I delay acting upon it	1	2	3	4	5	6	7	
3.	I prepare to study at some point of time but don't get any further.	1	2	3	4	5	6	7	
4.	I tend to leave things until the last minute.	1	2	3	4	5	6	7	
5.	I often find myself performing tasks I intended to do days earlier.	1	2	3	4	5	6	7	
6.	I generally delay before starting on work I have to do.	1	2	3	4	5	6	7	

## Passive Procrastination Scale

## غیر فعال تاخیری پیمانہ

نیچے دیے گئے بیانات کو غور سے پڑھیں اور اس کے سامنے دیے گئے درجات 1 سے لے کر 7 میں سے اس درجہ پر نشان ( ) لگائیں جو آپ سمجھتے / سمجھتی ہیں کہ آپ کے کام کرنے کے انداز کی بہترین ترجمانی کرتا ہے۔

۱۔ میں اپنے کام مقررہ وقت سے کافی پہلے ختم کر لیتا رہتی ہوں۔

بالکل درست  
بالکل بھی درست نہیں بالکل غلط

۱ ۲ ۳ ۴ ۵ ۶ ۷

۲۔ اگر میں کوئی فیصلہ کر بھی لوں، تو اس پر عمل کرنے میں دیر کرتا کرتی ہوں۔

بالکل درست  
بالکل بھی درست نہیں بالکل غلط

۱ ۲ ۳ ۴ ۵ ۶ ۷

۳۔ میں بعض اوقات اپنے آپ کو پڑھائی کے لئے تیار کرتا کرتی ہوں، لیکن اس سے آگے بڑھ نہیں پاتا پاتی۔

بالکل درست  
بالکل بھی درست نہیں بالکل غلط

۱ ۲ ۳ ۴ ۵ ۶ ۷

۴۔ میں آخری وقت تک چیزوں کو چھوڑے رکھتا رکھتی ہوں۔

بالکل درست  
بالکل بھی درست نہیں بالکل غلط

۱ ۲ ۳ ۴ ۵ ۶ ۷

۵۔ میں اکثر ایسے کاموں میں اپنے آپ کو مصروف پاتا پاتی ہوں، جو میں گزرے دنوں میں کرنے کا ارادہ رکھتا رکھتی ہوں۔

بالکل درست  
بالکل بھی درست نہیں بالکل غلط

۱ ۲ ۳ ۴ ۵ ۶ ۷

۶۔ جو کام مجھے کرنا ہوتا ہے میں اسے شروع کرنے میں عموماً تاخیر کرتا کرتی ہوں۔

بالکل درست  
بالکل بھی درست نہیں بالکل غلط

۱ ۲ ۳ ۴ ۵ ۶ ۷

**Back translation of New Active Procrastination Scale**

1. My performance is affected when I have to work against deadlines.
2. If I have to do some task in hurry, I am unable to do it properly.
3. If I keep on pending the things last moment I am not satisfied with their outcomes.
4. I achieve better results if I complete a task steadily within a given time frame.
5. It is really painful for me working against the deadlines.
6. I am disturbed and tense when I have to work under pressure.
7. I feel tense and cannot concentrate on my studies when there is too much time pressure on me.
8. I feel irritated while working against the deadlines.
9. I intentionally put off some tasks to use my time more effectively.
10. I intentionally delay in order to enhance my motivation.
11. In order to make better use of my time I intentionally put off some tasks.
12. I finish my tasks before deadlines as I intend to do so.
13. I often start my work at last minute and find it difficult to finish in time.
14. I often fail in achieving my goals.
15. I am often running short of time in completing my tasks.
16. I face difficulty in completing tasks once I have started them.

## **Back Translation of Passive Procrastination Scale**

1. I finish my task before given deadlines.
2. Even after making a decision, I delay on acting upon them.
3. Sometimes I prepare myself for studies but cannot proceed further.
4. I keep on pending the things till last minute.
5. I often find myself performing those tasks that I intend to do earlier.
6. I generally delay in initiating the task I had to do.

## Time Management Behavior Scale

درج ذیل بیانات کس حد تک آپ کے کام کے دوران آپ کی سرگرمیوں اور تجربات کو بیان کرتے ہیں۔ متبادل جوابی صورتوں میں سے کسی ایک کا انتخاب کر کے نشاندہی کریں کہ وہ بیان آپ کے بارے میں کس حد تک درست ہے۔ یہ کوئی ٹیسٹ نہیں ہے۔ اس میں کوئی صحیح یا غلط جوابات نہیں ہیں۔ برائے مہربانی تمام بیانات کے سامنے دیئے گئے خانوں میں نشان ( ) لگا کر اپنے جواب کا اظہار کریں۔

نمبر	بیانات	کبھی درست نہیں	بہت کم درست	کبھی کبھی درست	اکثر درست	ہمیشہ درست
1	جب میں تھوڑے وقت میں کچھ حاصل/مکمل کرنے کا فیصلہ کرتا/کرتی ہوں تو میں لمبے عرصے کے مقاصد اپنے ذہن میں رکھتا رکھتی ہوں۔					
2	میں اہم نکات اور خیالات تحریر کرنے کے لئے ایک نوٹ بک اپنے ساتھ رکھتا/رکھتی ہوں۔					
3	میں پیچیدہ اور مشکل منصوبوں کو آسان اور قابل انتظام ٹکڑوں میں تقسیم کر لیتا/ لیتی ہوں۔					
4	ہر روز کے کام کے اختتام پر میں صاف اور بہترین ترتیب والی جگہ چھوڑتا/چھوڑتی ہوں۔					
5	میں اپنے مقاصد پر نظر ثانی یہ جاننے کے لئے کرتا/کرتی ہوں کہ ان میں ترمیم کی ضرورت تو نہیں					
6	میں کم از کم ایک ہفتہ پہلے ہی کاموں کا شیڈول بنا لیتا/ لیتی ہوں۔					
7	جو وقت میں اپنے کاموں کو ترتیب دینے اور شیڈول بنانے میں صرف کرتا/کرتی ہوں، وہ وقت کا ضیاع ہے۔					
8	میں کام کرنے کے لئے ایسی جگہیں تلاش کرتا/کرتی ہوں جہاں مداخلت اور شور سے بچاؤ ممکن ہو۔					
9	مجھے اپنا شیڈول برقرار رکھنے میں مشکل ہوتی ہے کیونکہ دوسرے لوگ مجھے میرے کام سے ہٹا لیتے ہیں۔					
10	جب میں چند دنوں یا ہفتوں میں کچھ مکمل کرنا چاہتا/چاہتی ہوں تو مختصر مدت کے مقاصد طے کر لیتا/ لیتی ہوں					
11	جب میں کسی کے ساتھ بہت زیادہ رابطہ کر رہا ہوتا/ہوتی ہوں تو میں اس شخص کا نام، پتہ اور فون نمبر ایک خاص فائل میں درج کر لیتا/ لیتی ہوں					
12	کسی کام کو مکمل کرنے کے لئے جو وقت مجھے درکار ہوتا ہے میں اس کا غلط (کم) اندازہ لگاتا ہوں					
13	میں اپنے ساتھ ایک ڈائری رکھتا/رکھتی ہوں جس میں لوگوں کے ساتھ ملاقات کے اوقات لکھے ہوتے ہیں					
14	جب میں کام کی تکمیل کا فیصلہ کرتا/کرتی ہوں تو اس کے لئے ایک مقرر وقت طے کر لیتا/ لیتی ہوں					
15	میں کاغذی کام کو منظم رکھنے کے لئے ضروری اور غیر ضروری کاغذات کو علیحدہ علیحدہ جگہوں پر رکھتا/رکھتی ہوں۔					
16	میں محسوس کرتا/کرتی ہوں کہ میں اپنے وقت کے قابو میں ہوں۔					
17	میں ایسے ذرائع تلاش کرتا/کرتی ہوں جس سے اپنے کام کرنے کی صلاحیت کو بہتر بنایا جاسکے۔					
18	میں یاد دہانی کے لئے نوٹ کر لیتا/ لیتی ہوں کہ مجھے کیا کرنے کی ضرورت ہے۔					
19	جو چیزیں مجھے کام کے لئے درکار ہوتی ہیں وہ مجھے اس وقت زیادہ آسانی سے مل جاتی ہیں جب میرے کام کرنے کی جگہ بے ترتیب اور گڈ مڈ ہوتی ہے بجائے اس کے کہ وہ صاف اور منظم ہو۔					



نمبر	بیانات	کبھی درست نہیں	بہت کم درست	کبھی کبھی درست	اکثر درست	ہمیشہ درست
20	مجھے محسوس ہوتا ہے کہ میں اس صورت میں اچھا کام کر سکتا/سکتی ہوں کہ ناپسندیدہ کاموں کو چھوڑ دوں برعکس اس کے کہ میں انہیں اہمیت کے لحاظ سے ترتیب میں کرنے کی کوشش کروں۔					
21	میں اپنے روزانہ کے کاموں کا ریکارڈ رکھتا/رکھتی ہوں۔					
22	جب میں کسی حد تک غیر منظم ہوں تو میں زیادہ بہتر طریقے سے غیر متوقع واقعات سے نمٹنے کے قابل ہوتا / ہوتی ہوں۔					
23	میں کم اہم کاموں کی طرف جانے سے پہلے زیادہ اہم کاموں کو ختم کرتا/کرتی ہوں۔					
24	میں ہر روز کے کاموں کی ایک فہرست بنا لیتا/ لیتی ہوں اور جب کوئی کام مکمل ہو جاتا ہے تو اس پر نشان لگا دیتا/ دیتی ہوں۔					
25	وقت کی زیادہ حد تک منصوبہ بندی کرنا میرے لئے کافی مشکل ہے کیونکہ ہر روز میرے کام انتہائی غیر متوقع ہوتے ہیں۔					
26	اگر مجھے علم ہو کہ مجھے کچھ وقت انتظار کرتے ہوئے گزارنا ہوگا تو میں کچھ کام اپنے ساتھ لے جاتا/ جاتی ہوں۔					
27	میں اپنی روزانہ کی سرگرمیوں کا جائزہ لیتا/ لیتی ہوں کہ جان سکوں میں کہاں وقت ضائع کر رہا/ رہی ہوں۔					
28	میں روزمرہ کے کاموں کے شیڈول میں سے اپنے معمول کے کاموں کے لئے وقت بچا لیتا/ لیتی ہوں۔					
29	میں اپنے ان کاموں کو ٹالتا/ ٹالتی رہتی ہوں جنہیں کرنا ضروری ہے مگر مجھے پسند نہیں۔					
30	دن بھر کام کے دوران میں جائزہ لیتا/ لیتی ہوں کہ میں کتنے بہتر طریقے سے اپنے بنائے ہوئے شیڈول کے مطابق کام کر رہا/ رہی ہوں۔					
31	دن کے آغاز پر کرنے والے کاموں کی جوسٹ میں بنانا/ بناتی ہوں، آخر میں وہ بھول جاتا/ جاتی ہوں۔					
32	مجھے ہر روز جو کام کرنے ہوتے ہیں اس کی ترتیب جاننے کے لئے میں ترجیحات طے کر لیتا/ لیتی ہوں۔					
33	مجھے زیادہ تخلیقی خیالات اس وقت آتے ہیں جب میں غیر منظم ہوتا/ ہوتی ہوں۔					
34	میں غیر ضروری کاموں پر زیادہ وقت صرف کرتا/ کرتی ہوں۔					

## General Self-Efficacy Scale

ذیل میں دیے گئے بیانات کو غور سے پڑھیں ہر بیان کے سامنے چار درجات دیئے گئے ہیں آپ سے درخواست ہے کہ ہر بیان کے سامنے دیئے گئے درجات میں سے اس درجہ پر ( ) نشان لگائیں جو آپ کی شخصیت سے زیادہ مطابقت رکھتا ہے۔

1- اگر میں کوشش کروں تو میں ہمیشہ مشکل مسائل کو حل کر سکتا / سکتی ہوں۔

4 3 2 1

بالکل درست بالکل بھی درست نہیں

2- اگر کوئی میری مخالفت کرے تو میں ایسے طریقے ڈھونڈ لیتا / لیتی ہوں جن سے میں اپنا مقصد حاصل کر لوں۔

4 3 2 1

بالکل درست بالکل بھی درست نہیں

3- میرے لیے یہ آسان بات ہے کہ میں اپنے مقاصد پر ڈٹا / ڈٹی رہوں اور انہیں حاصل کر لوں۔

4 3 2 1

بالکل درست بالکل بھی درست نہیں

4- مجھے یقین ہے کہ میں غیر متوقع حالات کو بہترین طریقے سے نبرد آزما ہو سکتا / سکتی ہوں۔

4 3 2 1

بالکل درست بالکل بھی درست نہیں

5- میں اپنی صلاحیتوں کا کی شکر گزار ہوں جن کی وجہ سے میں غیر متوقع حالات کا مقابلہ کرنا جانتا / جانتی ہوں

4 3 2 1

بالکل درست بالکل بھی درست نہیں

6- اگر میں کوشش کروں تو میں زیادہ تر مسائل حل کر سکتا / سکتی ہوں۔

4 3 2 1

بالکل درست بالکل بھی درست نہیں

7- میں مشکلات میں بھی پرسکون رہ سکتا / سکتی ہوں کیونکہ میں اپنی صلاحیتوں پر بھروسہ کر سکتا / سکتی ہوں۔

4 3 2 1

بالکل درست بالکل بھی درست نہیں

8- جب میں کسی مسئلے سے دوچار ہوتا/ ہوتی ہوں تو عموماً میں اس کے بہت سے حل تلاش کر سکتا / سکتی ہوں۔

4 3 2 1  
بالکل درست بالکل بھی درست نہیں

9- اگر میں کسی مشکل میں ہوں تو عموماً میں اس کا حل سوچ سکتا / سکتی ہوں۔

4 3 2 1  
بالکل درست بالکل بھی درست نہیں

10- میں عموماً ہر قسم کے حالات کا سامنا کر سکتا / سکتی ہوں۔

4 3 2 1  
بالکل درست بالکل بھی درست نہیں

## BRIEF COPE

درج ذیل بیانات ان تمام طریقوں کے متعلق ہیں جو آپ اپنی زندگی میں ذہن دباؤ سے نمٹنے کے لئے استعمال کرتے ہیں۔ ہر بیان ذہن دباؤ سے نمٹنے کے ایک خاص طریقے کی نشاندہی کرتا ہے۔ میں یہ جاننا چاہتی ہوں کہ ہر بیان جس طریقے کی نشاندہی کرتا ہے آپ اس کو کس حد تک استعمال کرتے رہے ہیں۔ (کتنا زیادہ یا کتنی دفعہ)۔ اس بنیاد پر جواب ندریں کہ طریقہ مفید ہے کہ نہیں۔ صرف اس بنیاد پر جواب دیں کہ آپ نے وہ طریقہ اختیار کیا یا نہیں۔ ہر بیان کے سامنے متبادل جوابی صورتوں میں سے کسی ایک کا انتخاب اس خانے میں نشان ( ) لگا کر کریں۔

نمبر شمار	بیانات	کبھی نہیں	بہت کم	کبھی کبھی	بہت زیاد
1	میں اپنے ذہن سے کچھ چیزوں کو نکالنے کے لئے دوسرے کاموں یا مشاغل کی طرف متوجہ ہو جاتا/ جاتی رہی ہوں۔				
2	میں جس صورت حال میں ہوں اس سے نکلنے کے لئے میں اپنی تمام کوششیں صرف کرتا/ کرتی رہی ہوں۔				
3	میں اپنے آپ سے کہتا رہا/ رہی ہوں کہ یہ حقیقت نہیں۔				
4	میں بہتر محسوس کرنے کے لئے سکون آور اور نشہ آور ادویات استعمال کرتا/ کرتی رہی ہوں۔				
5	مجھے دوسروں سے جذباتی سہارا ملتا رہا ہے۔				
6	میں اس صورت حال سے نمٹنے کی کوشش ترک کر دیتا/ دیتی رہی ہوں۔				
7	میں صورت حال کو بہتر بنانے کی کوشش میں اقدامات کرتا/ کرتی رہی ہوں۔				
8	میں یہ یقین کرنے سے انکار کرتا/ کرتی رہی ہوں کہ ایسا ہو چکا ہے۔				
9	میں ایسی باتیں کہتا/ کہتی رہی ہوں جن سے میرے ناخوشگوار جذبات میں کمی آسکے۔				
10	میں دوسروں سے مشورہ/ مدد حاصل کرتا/ کرتی رہی ہوں۔				
11	میں اس صورت حال سے نمٹنے کے لئے سکون آور اور نشہ آور ادویات استعمال کرتا/ کرتی رہی ہوں۔				
12	میں اس صورت حال کو مختلف پہلوؤں سے دیکھنے کی کوشش کرتا/ کرتی رہی ہوں تاکہ یہ زیادہ مثبت نظر آئے۔				
13	میں اپنے آپ پر تنقید کرتا/ کرتی رہی ہوں۔				
14	میں صورت حال کے بارے میں کچھ کرنے کے لئے ایک حکمت عملی تلاش کرنے کی کوشش کرتا/ کرتی رہی ہوں۔				
15	میں کسی دوسرے سے آرام اور ہم خیالی حاصل کرتا/ کرتی رہی ہوں۔				
16	میں اس صورت حال پر قابو پانے کی کوشش ترک کرتا/ کرتی رہی ہوں۔				
17	جو کچھ ہو رہا ہے میں اس میں سے کچھ بہتر پہلو دیکھنے کی کوشش کرتا/ کرتی رہی ہوں۔				
18	میں اس صورت حال کے بارے میں مزاج پیدا کرتا/ کرتی رہی ہوں				
19	میں اس صورت حال کے بارے میں کم سوچنے کے لئے کچھ نہ کچھ کرتا/ کرتی رہی ہوں جیسے فلم کے لئے جانا، ٹی وی دیکھنا، پڑھنا، دن میں خواب دیکھنا، سونا یا خیر پیداری کرنا۔				
20	میں اس حقیقت کو تسلیم کرتا/ کرتی رہی ہوں کہ ایسا رونما ہو چکا ہے۔				
21	میں اپنے منفی جذبات کا اظہار کرتا/ کرتی رہی ہوں۔				
22	میں اپنے مذہب یا روحانی عقائد میں سکون تلاش کرنے کی کوشش کرتا/ کرتی رہی ہوں۔				
23	صورت حال کے متعلق کچھ کرنے کے لئے میں دوسرے لوگوں سے مدد اور مشورہ لینے کی کوشش کرتا/ کرتی رہی ہوں۔				
24	میں اسی صورت حال کے ساتھ گزارہ کرنا سیکھتا/ سیکھتی رہی ہوں۔				
25	میں اس بارے میں بہت غور کرتا/ کرتی رہی ہوں کہ کیا اقدامات لوں۔				
26	جو کچھ ہوا اس کے لئے میں اپنے آپ کو قصور وار ٹھہراتا/ ٹھہراتی ہوں۔				
27	میں عبادت اور دعا کرتی رہی ہوں۔				
28	میں حالات کو مذاق میں اڑاتا/ اڑاتی رہی ہوں۔				

## منی مارکر سیٹ

اپنے ذاتی تجزیہ میں آپ کس حد تک درست ہیں؟

### ہدایات:

- ۱۔ یہ ایک آسان لیکن نہایت دلچسپ آزمائش ہے جس میں دیکھنا یہ ہے کہ آپ اگلے صفحہ پر دی گئی ذاتی صفات کی مدد سے اپنی شخصیت کا کس حد تک درست تجزیہ کر سکتے ہیں
- ۲۔ تجزیہ کرتے ہوئے صرف ان باتوں کو سامنے رکھیں جو موجودہ وقت میں آپ کی شخصیت کا حصہ ہیں نہ کہ وہ باتیں جو آپ مستقبل میں اپنے آپ میں دیکھنے کی خواہش رکھتے ہیں۔
- ۳۔ آپ کو یہ بتانا ہے کہ آپ نے اپنے ہم جنس اور ہم عمر دوسرے افراد کے مقابلے میں کون کون سے پہلو کس حد تک موجود ہیں یا کس حد تک موجود نہیں ہیں۔
- ۴۔ ان تمام باتوں کو مد نظر رکھتے ہوئے آپ اگلے صفحہ پر دی گئی فہرست میں موجود ہر صفت کے سامنے دیئے گئے جوابات میں سے صحیح جواب پر ( ) کا نشان لگائیں گے۔ اگر آپ سمجھتے ہیں کہ آپ کسی حد تک محتق ہیں تو آپ (کسی حد تک درست) کے نیچے ( ) کا نشان لگائیں اور اگر آپ کے خیال میں آپ بالکل محتق نہیں ہیں تو (بالکل غلط) کے نیچے نشان لگائیں۔

نمبر	صفات	بالکل درست	کسی حد تک درست	غیر واضح	کسی حد تک غلط	بالکل غلط	نمبر	صفات	بالکل درست	کسی حد تک درست	غیر واضح	کسی حد تک غلط	بالکل غلط
1	متوازن						15	کرخت					
2	نڈر						16	تخیلاتی					
3	لا پروہ						17	غیر مستعد					
4	ٹھنڈا						18	چڑچڑا					
5	پچیدہ						19	حاسد					
6	معاون						20	مہربان					
7	تخلیقی						21	موڈی					
8	گہرا						22	منظم					
9	غیر منظم						23	فلسفیانہ					
10	کند						24	عملی					
	ذہن												
11	مستعد						25	خاموش					
12	جذباتی						26	پرسکون					
13	توانا						27	بدمزاج					
14	یار باش						28	حاسس					

نمبر	صفات	بالکل درست	کسی حد تک درست	غیر واضح	کسی حد تک غلط	بالکل غلط	نمبر	صفات	بالکل درست	کسی حد تک درست	غیر واضح	کسی حد تک غلط	بالکل غلط
29	بے ترتیب						35	شرمیلا					
30	ہمدرد						36	باتونی					
31	با ترتیب						37	بزدل					
32	غیر تخلیقی						38	غیر جذباتی					
33	بے رحم						39	گرم جوش					
34	متفلسف						40	الگ تھلگ					

## Appendix - K

### Depression, Anxiety and Stress Scale-21

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement.

*The rating scale is as follows:*

0-	Did not apply to me at all.				
1-	Applied to me to some degree, or some of the time				
2-	Applied to me to a considerable degree, or a good part of time				
3-	Applied to me very much, or most of the time				
1	I found it hard to wind down.	0	1	2	3
2	I was aware of dryness of my mouth.	0	1	2	3
3	I couldn't seem to experience any positive feeling at all.	0	1	2	3
4	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5	I found it difficult to work up the initiative to do things.	0	1	2	3
6	I tended to over-react to situations.	0	1	2	3
7	I experienced trembling (eg, in the hands).	0	1	2	3
8	I felt that I was using a lot of nervous energy.	0	1	2	3
9	I was worried about situations in which I might panic and make a fool of myself.	0	1	2	3
10	I felt that I had nothing to look forward to.	0	1	2	3
11	I found myself getting agitated.	0	1	2	3
12	I found it difficult to relax.	0	1	2	3
13	I felt down-hearted and blue.	0	1	2	3
14	I was intolerant of anything that kept me from getting on with what I was doing.	0	1	2	3
15	I felt I was close to panic.	0	1	2	3
16	I was unable to become enthusiastic about anything.	0	1	2	3
17	I felt I wasn't worth much as a person.	0	1	2	3
18	I felt that I was rather touchy.	0	1	2	3
19	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat).	0	1	2	3
20	I felt scared without any good reason.	0	1	2	3
21	I felt that life was meaningless.	0	1	2	3

## DASS

نوٹ: مندرجہ ذیل سوالات کو غور سے پڑھیں اور جو فقرہ آپ کی کیفیت، خیالات اور احساسات کا مظہر ہو اس کے سامنے 0, 1, 2, 3 میں سے کسی ایک ہندسہ پر دائرہ لگائیں جو آپ کے لیے شدت کے لحاظ سے پچھلے ہفتے کی کیفیت کو مناسب طور سے ظاہر کرے۔ آپ کے جوابات کو صحیح یا غلط تصور نہیں کیا جائے گا کسی بھی فقرے پر غور و فکر کرنے کے لیے زیادہ وقت ضائع نہ کریں کسی بھی جواب سے شدت کے معیار کو جاننے کے لیے پیمانہ درج ذیل ہے۔

3	2	1	0	0- یہ مجھ پر ہرگز لاگو نہیں ہوتا ہے
3	2	1	0	1- کبھی کبھار کسی حد تک مجھ پر لاگو ہوتا ہے
3	2	1	0	2- زیادہ تر وقت مناسب حد تک مجھ پر لاگو ہوتا ہے
3	2	1	0	3- اکثر اوقات بہت زیادہ حد تک مجھ پر لاگو ہوتا ہے۔
3	2	1	0	1- میرے لیے غصے پر قابو پانا مشکل ہو جاتا تھا۔
3	2	1	0	2- مجھے یوں محسوس ہوتا رہا جیسے میرا منہ خشک ہوتا رہا ہو۔
3	2	1	0	3- میں ہرگز خوشگوار احساسات محسوس نہیں کر سکا۔
3	2	1	0	4- میں نے جسمانی تھکاوٹ محسوس کیے بغیر سانس لینے میں دقت محسوس کی۔
3	2	1	0	5- مجھے کسی کام کے کرنے کے لیے پہل کرنا مشکل محسوس ہوا
3	2	1	0	6- میں نے بعض صورتحال میں غیر مناسب رویے کا اظہار کیا
3	2	1	0	7- میں نے اپنے بدن میں کچپکپاہٹ محسوس کی۔
3	2	1	0	8- میں نے محسوس کیا کہ میں نے کام کرنے کے لیے بہت زیادہ ذہنی توانائی صرف کی۔
3	2	1	0	9- میں ایسے حالات کے متعلق پریشان ہوا جن میں میرے بیوقوف بننے اور میری بے چینی بڑھنے کا خدشہ تھا۔
3	2	1	0	10- میں نے محسوس کیا کہ میرا مستقبل تاریک ہے۔
3	2	1	0	11- میں نے خود کو ضدی محسوس کیا۔
3	2	1	0	12- میں نے ذہنی طور پر بہت کم سکون محسوس کیا۔
3	2	1	0	13- میں نے محسوس کیا کیسے میرے دل بیٹھ گیا اور ذہن ماؤف ہو گیا۔
3	2	1	0	14- میرے لیے اس چیز یا شخص کو برداشت کرنا مشکل تھا جو میرے کام میں رکاوٹ پیدا کرے۔
3	2	1	0	15- میں نے محسوس کیا جیسے میری پریشانی حد سے بڑھ گئی تھی۔
3	2	1	0	16- میں کسی بھی کام کے بارے میں پر جوش نہیں رہا۔
3	2	1	0	17- میں نے محسوس کیا کہ میری کوئی اہمیت نہیں ہے۔
3	2	1	0	18- میں بے حد جذباتی ہو جاتا تھا۔
3	2	1	0	19- بغیر کسی جسمانی مشقت کے میرے دل کی دھڑکن تیز ہو گئی
3	2	1	0	20- مناسب وجہ کے بغیر بھی خوفزدہ ہو جاتا تھا۔
3	2	1	0	21- میں نے محسوس کیا کہ زندگی بے معنی اور مقصد ہے۔



**Appendix - M**

**Satisfaction With Life Scale**

For each of the following statements, indicate the number that represents you the most by encircling the appropriate number. 1 represents to “strongly disagree” and 5 to “strongly agree”.

Ser.	Statements	Strongly Disagree			Strongly Agree	
		1	2	3	4	5
1.	In most ways my life is close to my ideal.	1	2	3	4	5
2.	The conditions of my life are excellent.	1	2	3	4	5
3.	I am satisfied with my life.	1	2	3	4	5
4.	So far I have gotten the important things I want in life.	1	2	3	4	5
5.	If I could live my life over, I would change almost nothing.	1	2	3	4	5

## SWLS

## (Satisfaction With Life Scale)

نیچے دیے گئے بیانات کو غور سے پڑھیں یہ آپ کی اپنی زندگی سے مطمئن ہونے کی کیفیت سے متعلق ہیں۔ ہر بیان کے سامنے پانچ ممکنہ جوابات دیے گئے ہیں آپ سے درخواست ہے کہ ہر بیان کے سامنے دیے گئے درجات میں سے اس درجہ پر نشان لگائیں جو آپ کی اپنی زندگی سے طمانیت کی بہترین ترجمانی کرتا ہے

بالکل بھی متفق نہیں

بالکل متفق

1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

-1 میری زندگی بہت حد تک ایک مثالی زندگی ہے۔

-2 میں بہترین زندگی گزار رہا رہی ہوں۔

-3 میں اپنی زندگی سے مطمئن ہوں۔

-4 میں نے زندگی میں جن اہم چیزوں کی خواہش کی وہ مجھے مل گئیں۔

-5 اگر مجھے نئے سرے سے زندگی گزارنے کا موقع ملے تو میں

اس میں کوئی خاص تبدیلی نہیں کروں گا رگی۔

**Procedure of Website Development**

The procedure of website development was completed out in five steps.

Step I: Developing a Database Structure

Step II: Designing Web Pages

Step III: Coding of Website

Step IV: Testing the Website

Step V: Launching the Website

Overall eight individuals remained involved in the process of website development and made their valuable contribution by giving maximum input in each step of website development. Among those who contributed in this part, one was the present researcher, another was a senior psychologist, a web developer, a communication specialist, a bilingual who had sound command in both languages (i.e., Urdu and English), and three adolescents (one who was studying in English medium of instruction and two from Urdu medium of instruction). Purpose behind developing the website and nature of the research was explained to them. They were requested to give their maximum feedback, and to indicate any sort of ambiguity in the nature of content comprehension.

After having a literature review about online data collection technique, procrastination researches, and the work so far being done in this area using online data collection technique, it was found deemed essential to keep the content as simple, clear, free from ambiguities as possible. As the major difference in online data collection and in-person data collection is physical presence of the respondent. Traditional in-person data collection method allows the researcher to physically approach the respondent, clarify the queries, help him to overcome the ambiguities and comprehend the material adequately whereas online data collection does not

have this additional advantage of clarifying the ambiguities and satiating the queries of respondents while they are working on it. So for this reason the content of the questionnaires and instructions should be obvious, clear, self-explanatory, and lucid in its nature.

Keeping in view certain limitation and caveats it was decided to clearly explain the nature of the research by uploading all the content in English and Urdu language, and to ensure the confidentiality and anonymity of respondents. For this purpose an option of “about survey” (see Appendix-P) was given in both languages on home page as anyone who accesses the website may come to know all about the nature of the research. Another option titled as “purpose of the research” (see Appendix-Q; Urdu & Appendix- R; English) explained the objectives of the study, provided information about research institute, researcher’s contact information, confidence assurance, process of registration and consent from respondent. Feedback option provided them an opportunity to send their feedback to the researcher on her e-mail address.

Participation in the research was entirely voluntary based on their intrinsic motivation to volunteer and participate in the study as intrinsic motivation refers to the reason for performing certain activities for inherent satisfaction or pleasure that may be reinforcing in-and-of itself (Brown, 2007). Comley (2000) has pointed out the three major factors that affect the response rate in online data collection: style and format of the opening page of the survey; the relationship with website/brand; and respondent’s personal interest and relevance of the survey. The registration process required the respondent to enter some of the basic demographic information such as his/her full name, user name, password, sex, age, e-mail address, qualification, occupation, country and city (see Appendix-S).

To obtain input regarding name, user id, password, and e-mail address, text box was used where user could freely type the information into the space provided whereas to acquire input for sex, age, qualification, occupation, country and city, a pull down menu was used in which the

user clicks on the menu to see the available response option, and makes selection. All the fields were mandatory to enter except full name. It was left on respondents' choice to mention it if they want to, but if they wanted to remain anonymous they had the liberty to do so. After registration one was able to proceed ahead and participate in research by filling out the questionnaires. Respondents had to indicate the option that best described them by clicking on radio button, an input option that is commonly used in Likert-type rating scales. Only one radio button within a set of buttons can be selected at once. This was all done on frontend side.

To proscribe the respondent from changing his responses, a command restricted his/her tendency to attempt the questionnaires again and to make any sort of change in the response once they have already responded. Respondents were sent a thank note for participating in the study. Moreover a respondent's entry with the same log in and user name was also restricted. Side by side their responses were automatically saved, scored and recoded in case of reverse scoring. To retrieve the results of the respondents' researcher could view and retrieve the results from admin panel. With the help of selection criteria researcher could retrieve the results based on selection criteria such as, entering female in search criteria may reveal only the results of female participants.

As the study aimed to explore the positive and negative effects of procrastination on Pakistani adolescents so the ultimate focus was on adolescents falling in the age range of 13 to 21 years. In order to avoid any deception on the part of respondent in revealing the true identity in terms of age, gender, education, location and profession, no sample restriction to participation was imposed and it was kept open for all who were willing to participate in the study. The exception was for those less than 13 years of age based on the principal of ethical concern and **Children's Online Privacy Protection Act (1998) which explains that** no information in any form, from anyone under 13 years of age will be collected. So in **compliance to this Act**

the responses of only those participants were stored who were at least 13 years old or older. Their participation was restricted by the auto exclusion criteria while developing the website. Similarly they were given the option to remain anonymous by not entering their name in the related text box. As the results were retrieved intermittently and after two weeks interval so on the basis of the participation criteria the responses of only those cases were included for further analysis that fall in the adolescence age range (i.e., 13-21 years).

In order to communicate about the study a message was posted on different education related community groups to participate in the study. A brief note about the nature and purpose of the study was also included in the message with an advance thanks note. The important point about the sample of this part of the study is that as there was no active recruitment of participants and participation was limited to those adolescents who had access to the internet and participated on their own motivation. The nonrandom nature of sample limit the interpretation of any complex statistical analysis performed on the data and one cannot interpret the tests of significance in conventional terms of probabilities and replicate the strength of relationship under resampling. In present part also statistical tests are conducted and presented using a standard criterion for statistical significance (i.e.,  $p < .05$ ) for their value as a useful and arbitrary cut-off criterion. The detail of the website development procedure is as following:

#### *Step I: Developing a Database Structure*

In order to develop a website a database had to be developed for purpose of data storage. Data base is software that organizes data in a way that allows first and easy access to data (Capron, 1995). For present research a database was developed with the help of web developer. The database structure consisted of following tables:

- Admin
- CMS (Content Management System)
- Questionnaires
- Statements
- Users
- User Results

Most websites are database interfaces, the hub of the application needs to be very adequately designed and implemented. Analysts play an important role because a complete analysis and a smart database design guarantee more than 90% the success of the site. The website must contain tools for content administration. This helps the researcher to manage the content of the site by himself so there will be no further need for the programmers or designers on this project, unless the researcher needs some changes in business logic or in presentation. Website maintenance is the responsibility of system administrator (Hayder, Maia, & Gheorghe, 2006).

The present website consisted of two panels.

- Admin Panel
- Main/Front side

Admin panel is used for the purpose of administration of the main site. It also works in uploading the questionnaires and statements. More over it is helpful in searching users on the basis of different criteria and in viewing their results as well. From front side visitors can view

the website and register themselves via filling the mandatory fields that require some basic demographic information from the participant. Frontend refers to any aspect of the design process that appears in or relates directly to the browser. The following tasks are commonly considered to be frontend disciplines: graphic design, interface design, and information design as it pertains to the user's experience of the site, site production, including HTML documents, style sheets and JavaScript. Backend refers to the programs and scripts that work on the server behind the scenes to make web pages dynamic and interactive. In general, experienced programmers work in backend web development but at times web designers have also good familiarity with backend functionality. The tasks that take place on the backend are information design as it pertains to how the information is organized on the server, forms processing, database programming and content management systems.

### *Step II: Designing Web Pages*

This step was aimed for designing of web pages for website. This was done with the help of web developer by using designing software of Adobe Photo Shop. Web designing include graphic design, information design, interface design, HTML, style sheet, graphic production, scripting and programming and multimedia. As web is a visual medium, web pages require a great deal of attention to presentation and design. The graphic designer has to decide everything that one can see on a web page (i.e., graphics, type, colors, layout, etc.). Information design refers to the organization of content and how one would get to it. Graphic design is concerned with how the page looks whereas interface design focuses on how the page works such as concept of usability, the ease with which visitors can accomplish their goals on the site, as well as the general experience of using the site, is a function of the interface design.



The interface of a web site includes functional organization of the page and the methods for doing things on a site such as buttons, links, navigation devices, and so forth. Document production refers to the creation and troubleshooting of the documents, style sheets, scripting, and images that make up a site and a core of web design process. The processes of writing HTML and style sheet documents requires an intricate knowledge of HTML (the markup language used to make web documents) and style sheets, and often additional scripting or programming skills are commonly known as authoring. Scripting and programming requires advanced web functionality such as, forms, dynamic content, and interactivity. It also deals with web scripts and sometimes special programs and applications running behind the scenes. Scripting and programming is handled by web programmers or developers (Fraley, 2007).

### *Step III: Coding of Website*

In this step coding of website was done by using PHP5 and HTML. PHP represents a powerful web-scripting language (Coggeshall, 2006). PHP: Hypertext Preprocessor is a widely used, general-purpose scripting language that was originally designed for web development to produce dynamic web pages. For this purpose, PHP code is embedded into the HTML source document and interpreted by a web server with a PHP processor module that generates the web page document. As a general-purpose programming language, PHP code is processed by an interpreter application in command-line mode performing desired operating system operations and producing program output on its standard output channel. It may also function as a graphical application (PHP, n.d.).

The primary purpose of the PHP script is to generate HTML content. HTML stands for Hyper Text Markup Language used to create web page documents. HTML is not a programming language rather it is a markup language, which means it is a system for identifying and

describing the various components of a document. It provides source to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists as well as for links, quotes, and other items. It incorporates images and objects and can be used to create interactive forms. It is written in the form of HTML elements consisting of "tags" surrounded by angle brackets within the web page content (Fraley, 2007).

#### *Step IV: Testing the Website*

In order to test the website it is important to perform user testing. This process can be performed by seeing people sitting down with your site and observing them how easily they can use the site, get themselves registered, comprehend the content, find information and complete tasks. Ideally, user testing is conducted as early in the development process as possible so the site design can be adjusted before the serious production begins. It is also beneficial to do additional usability testing at regular intervals throughout the production process and even after the site has been launched, so that the site can be tweaked to better serve the needs of its visitors. Carbonaro and Bainbridge (2000) pointed out that web surveys must be designed in such a way that they are simple and easy to complete and must have a built-in security system that could ensure credibility and anonymity and most importantly, one with minimum of computer skills might be able to complete the web surveys. Generally there are two kinds of user testing, general observed behavior and task-oriented testing.

In present research general observed behavior method was adopted for testing the website in which researcher sits besides the testing subject down with the site and let him explore it on his/her own. Respondent provide feedback as he/she goes along, noting what he/she liked, did not like, what was clear to him and what was confusing (Fraley, 2007). In this study three adolescents ( $M_{\text{age}} = 15$  years: age range = 13-17 years) were approached and were requested to

cooperate in the study. They were told about the purpose of the study and about the website. They were asked to follow the link ([www.procrastination-research.edu.pk](http://www.procrastination-research.edu.pk)) and go through the purpose of the study, get themselves registered, and participate in the study. Their behavior in general was observed. They were asked to provide feedback about the study regarding any difficulty in getting registered, comprehension of the content and choosing the option, and so forth. On the basis of their feedback some minor changes were incorporated through content management system.

#### *Step V: Launching the Website*

In order to launch a website the domain had to be registered. A domain name is a human-readable name associated with a numeric IP address (Internet Protocol) on the Internet. There are number of companies that provide web hosting to register domain names as part of the process of setting up an account. Some basic information was provided to the domain registration company such as, an administrative contact for the account (name and address), billing contact for the account (name and address), technical contact for the account (name and address of hosting service) and two IP addresses. For this purpose a domain with the name of [www.procrastination-research.edu.pk](http://www.procrastination-research.edu.pk) was registered. After launching the website domain was subscribed for hosting. Hosting helps to upload all the files (e.g., PHP and Html files) and created database. Hosting of the website was subscribed through Nexus Company. Once all the links worked out for the site, it was uploaded to the final server and was made available to users. To make the website successful attention to details is essential. For this purpose a final round of testing was done to ensure that everything was transferred successfully and the pages function properly under the configuration of the final server. Klein's (2002) and Lakeman's (1997) suggested techniques for web research were also incorporated while developing the web site.

میں قائد اعظم یونیورسٹی میں پی ایچ ڈی سکالر ہوں اور لوگوں کے پڑھنے اور کام کرنے کے طریقہ کار اور ان کی شخصیت کے مختلف انداز پر تحقیق کر رہی ہوں۔ اس تحقیق کا کوئی اور پوشیدہ مقصد نہیں ہے۔ ریسرچر کی دلچسپی محض آپ کے پڑھنے اور کام کرنے کے طریقہ کار سے متعلق آپ کی رائے جاننے میں ہے اور یہ کہ یہ سب کس طرح سے شخصیت کے مختلف انداز کو متاثر کرتا ہے۔

اطمینان رکھیے، آپ کی فراہم کردہ معلومات کو صیغہ راز میں رکھا جائے گا اور یہ معلومات صرف ریسرچر تک ہی محدود ہوں گی اور ان تمام معلومات کو اسی طرح استعمال کیا جائے گا جیسا کہ آپ کو بتایا گیا ہے۔ حاصل کردہ معلومات کسی بھی طرح سے آپ کی شناخت کو ظاہر نہیں کریں گی۔ اس تحقیق میں حصہ لینے کے لئے آپ کو اپنے چند بنیادی کوائف (مثلاً عمر، جنس، تعلیم، پیشہ، ای میل ایڈریس، قومیت، اور ملک کا نام وغیرہ) مہیا کرنے ہوں گے اگر آپ اپنی شناخت ظاہر نہ کرنا چاہیں تو بے شک اپنا نام نہ لکھیں

اگر آپ اس تحقیق میں حصہ لینے اور دیے گئے سوالات کا جواب دینے پر آمادہ ہیں تو براہ مہربانی نیچے دیے گئے **تحقیق میں شمولیت** پر جا کر تحقیق کا حصہ بنیے۔ اور اگر اس تحقیق سے متعلق اگر آپ کے ذہن میں کوئی بھی سوال ہے تو مجھے اس کا جواب دے کر خوشی ہوگی۔ اس بارے میں اگر آپ کوئی رائے یا تجویز دینا چاہیں تو اس ای میل ایڈریس پر بھیجا سکتے ہیں [saziz\\_qau@yahoo.com](mailto:saziz_qau@yahoo.com)

### تحقیق میں شمولیت پر رضامندی

میں نے تحقیق کے مقصد اور اس کے بارے میں اوپر دی گئی تمام تفصیل کو اچھی طرح سے پڑھا اور سمجھ لیا ہے اور میں اس تحقیق میں حصہ لینے کے لیے رضامند ہوں۔

نوٹ: یہ معلومات آپ سے ایک تحقیق کے سلسلے میں اکٹھی کی جا رہی ہیں اور محض تحقیقی مقصد کے لیے ہی استعمال ہوں گی براہ مہربانی یہ دیکھ لیں کہ آپ نے اس تحقیق کے بارے میں تمام معلومات پڑھ لیں ہیں۔

تمام سوالنامے مکمل ہونے کے بعد اگر ضرورت پڑی تو اس تحقیق کے کسی اور پہلو سے متعلق معلومات حاصل کرنے سلسلے آپ سے دوبارہ رابطہ کیا جاسکتا ہے۔ آپ سے حاصل کردہ معلومات آپ کو اپنی شخصیت کو بہتر طور پر جاننے میں اور آپ کے پڑھنے اور کام کرنے کے طریقہ کار کو مزید بہتر بنانے میں مددگار ثابت ہو سکتی ہیں۔

اس تحقیق کے سلسلے میں آپ کی رائے اور تجاویز میرے لیے بہت اہم ہیں۔ آپ کے تعاون کا بے حد شکریہ۔

الیں۔ عزیز

پی۔ ایچ۔ ڈی سکالر

قائد اعظم یونیورسٹی، اسلام آباد

پاکستان

اس تحقیق میں تاخیری رویے اور ان کے ہونے والے اثرات کے بارے میں جاننے کے لیے یہ سوالنامے استعمال کیے جا رہے ہیں : نیا فعال تاخیری پیمانہ (New Active Procrastination Scale) ، غیر فعال تاخیر پیمانہ (Passive Procrastination Scale) ڈپریشن-تشویش-تناؤ کا پیمانہ (DASS) ، اور مطمئن زندگی کا پیمانہ (Life Satisfaction Scale)۔

تاخیری رویے سے مراد کام کو چھوڑ دینا، اس میں دیر کرنا، اس کو لٹکا رکھنا، یا بلا آخر اس کو ترک کر دینا ہے۔ یہ فعال بھی ہو سکتا ہے اور غیر فعال بھی، اور اس کے اثرات بھی مثبت یا منفی دونوں ہو سکتے ہیں۔ یہ سوالنامہ فرد کی وقتی دباؤ کے تحت کام کرنے کی قابلیت، ارادتا تاخیر، مقررہ وقت کے اندر کام کرنے کی صلاحیت، ڈپریشن، تشویش، تناؤ اور یہ کہ وہ اپنی زندگی سے وہ کس حد تک مطمئن ہے، سے متعلق ہے۔ کوشش کریں کہ سوالوں کے جوابات جس حد تک ہو سکے ایماندارانہ طور پر دیں۔

الیس۔ عزیز

پی۔ ایچ۔ ڈی سکالر

قائد اعظم یونیورسٹی، اسلام آباد

پاکستان

## Appendix-R

Assalam-o-Alaikum.

I am a Ph.D scholar in QAU, Islamabad and conducting research on study/work styles and personality patterns of people. There is no hidden purpose of this research. Researcher is merely interested to know your opinion regarding your study/work styles and how it is influenced by different personality traits. Be assured, the information provided by you will be confidential and restricted only to the researcher. All this information will be used only for the purpose you are briefed about it. In no case, information provided by you will reveal your identity. To participate in this research you have to fill in your demographic details (e.g., age, gender, education, e.mail address, nationality, city, and name of country). If you do not want to reveal your identity you may not mention your name.

If you want to be part of this research and ready to answer the given questions then choose and click “ **volunteer to participate**” and be part of the research. In case of any query or suggestion related to this research, you can contact me via this e.mail address: [saziz\\_qau@yahoo.com](mailto:saziz_qau@yahoo.com)

### **Volunteer to Participate**

I have read all the details and know the purpose of this research and am ready to participate as volunteer.

**Note:** please read carefully all the details of this reaserch.

After completing all the questionnaires, you may be contacted again in case some more is required regarding any other aspect of the research. The information provided by you may help you to know your personality in a better way, and improve you study/work style. Your opinion/suggestions related to this research are quite valuable to me. Thank you for your cooperation.

S-Aziz (Ph.D Scholar)  
Quaid-i-Azam University, Isbd.

**Demographic Information for Web data**

Following demographic information had to be entered in given text box or selected from pull down menu.

**Name**-----

**Username**-----

**Password**-----

**e-mail address**-----

**Age**-----

**Gender**-----

**Qualification** -----

**Occupation** -----

**Country**-----

**City** -----

## Appendix- T

**Me**

To azizsadi@gmail.com

Dec 21 at 9:44 PM

On Monday, April 20, 2009 11:07 PM, Jin Nam Choi (최진남) <jnchoi@snu.ac.kr> wrote:

Hi, Ms. Aziz.

Thanks for your interest in my work.

You can just use the items you developed based on my scale (in fact you don't need to get my approval!).

For the cutoff point, 4.33 was based on the data I had for the study. It's not an absolute number nor a norm that can be used in other studies. You can set a score in accordance with your research goal (e.g., identifying a group with above average level of procrastination) using median split of your own data set.

Good luck to your research!

Jin Nam Choi, PhD  
College of Business Administration  
Seoul National University  
599 Gwanangno, Gwanak-gu  
Seoul 151-916, South Korea  
Office: 82-2-880-2527  
Email: [jnchoi@snu.kr](mailto:jnchoi@snu.kr)



## **APPENDIX-U**