

**Academic Procrastination Psychological Reactance and  
Locus of Control Among University Students**



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## Abstract

The present study aim to investigate the relationship between academic procrastination, psychological reactance and locus of control. Moreover, it also focused to determine the role of various demographics like (age, gender, family system, monthly income, mother and father work status) across study variables. Sample ( $N= 300$ ) comprised of university students. Sample was collected from different universities of Rawalpindi and Islamabad. Academic procrastination was measured with help of Lay Procrastination Scale (Lay, 1986), Psychological Reactance was measured with Salzburg State Reactance Scale (Hong & Felda, 1996), and locus of control with Rotter Locus of Control scale (Rotter, 1966). The results were analyzed using pearson correlation, reggresion,  $t$ -test and ANOVA. The results showed that there is positive relationship between academic procrastination and psychological reactance. But no significant difference was found between academic procrastination and locus of control. There were no significant differences found on the basis of gender in regards to these variables. There were significant differences found on the basis of percentage that individuals with low percentage procrastinate more than the individuals with high percentage. There are also significant differences found on the basis of family system on study variables individuals with joint family system procrastinate more than the individuals with nuclear family system in individuals with external locus of control. There were no significant differences found on basis of internal locus of control for family system. There are no significant differences found on the basis of working status of mother. There were significant differences found on basis of work status of father for procrastination that individuals with father non-working procrastinate more than the individuals with father working on basis of external locus of control. No significant differences were found on basis of internal locus of control. This study would be helpful in providing the direction that how much free choice is important for an individual to reduce procrastination in academic settings. In the light of findings of present research different programmes can be developed to reduce procrastination among students.

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**DEDICATED TO MY BELOVED NANO**

## Chapter 1

### Introduction

Education plays a significant role in human central formation and development. It increases the productivity and competence of individual and thus creates skilled manpower that is capable toward sustainable human development. Education is strongly linked to health and it is determinant of health behavior. It changes individual a lot and had a profound effect on an individual live (Comber, 2006).

On university level education is very important. University level education makes an individual prepared for practical and professional fields. The university level education encourages students to explore new fields and plays an important part in an individual life. But on other side university students also have more chance to indulge in pleasurable activities that put them away from their purpose of education. Various social and personnel problems are encounter by students in his university. The university students have more chance to engage in procrastination behavior. This is because they are independent and have more excess to things that put them in procrastination behavior. We chose sample of university students for this reason in our study because they have more resources to indulge in pleasurable activities (Becker, 2007).

When a student procrastinates then it effects the education progress of individual. Everyone procrastinates at some points in life. We put things off because we don't want to do them, or because we have too many other things on our plates. The procrastination by students is a deadly serious issue. Procrastination has diverse forms including private, decisional, anxious or habitual procrastination. The most prevalent form, however, is academic procrastination. Conceding concentrate to the night just before the test and then went with uneasiness and scramble can be depicted as the most clear and recognizable example of this type of procrastination. The procrastinator always tries to find reasons of their act. The procrastination creeps into roots of society and effects the society badly. The examinations will in general show procrastination as a social issue among college students. Ferrari exhibited that practically 20% of grown-ups experience ceaseless procrastination, while the assessed

pace of dangerous academic procrastination among college students is in any event 70-95 % (Ferrari, 1991). A lot of students can be seen procrastinating on assignments related to academics. There is a natural tendency of an individual when the freedom of someone is threatened or eliminated then he or she react as results. In academic settings when students did not have opportunity to made free choices then they react as a result and show procrastination. And in case of students they may show procrastination as results of this threat to freedom. In addition when students got fail or succeed they attribute this success and failure to different factors of environment. So attributes this success or failure to their own personnel reasons and some to external environmental factors. This predicts their behavior of procrastination (Deniz, 2009).

### **Literature review**

In the following section the study variables are defined and previous findings related to variables are discussed.

### **Procrastination**

The word procrastination consists of two components *pro* meaning *onward*, and *in support of* and *crastinus* meaning *tomorrow* and the *future*. The term procrastinate which means accepting, postponing, pulling, pausing, stop moving or suspending a job. The conduct of postponing assignments is procrastination (Burka & Yuen, 1983). Solomon and Rothblum (1984) therefore describe procrastination as the demonstration of pointlessly postponing assignments to point where individual uneasiness is experienced. This description describes procrastination with dilatory conduct (strictly speaking, procrastination), but also described by needlessness (Ellis & Knaus, 1984).

Academic procrastination is typically seen in academic exercises as in reading for test, and finishing scholastic assignments (Solomon & Rothblum, 1984; Steel, 2010), and is typical marvel in the secondary school and school level students (Rabin, Fogel, & Nutter-Upham, 2011; Wolters, 2003). A considerable measure of work conducted on procrastination in academic settings recommends that academic procrastination is common in female students as compared to male students (Balkis &

Duru, 2009; Khan, Arif, Noor, & Muneer, 2014; Ozer, Demir, & Ferrari, 2009; Prohaska, Morrill, Atilas, & Perez, 2000).

Academic procrastination is also defined as staying out of academic duties until tension level increases as these duties aren't completed in time. It is also defined as the conduct of avoiding academic activities which result to student academic failure. Academic procrastination is avoiding a task that is necessary to be accomplished on preference (Ellis & Knaus, 1997). According to Romano et al. (2005) describe the academic procrastination emphasize on delaying academic activities and related negative results. In other words, avoid academic concern such as preparing for an exam or studying for short time. Academic procrastination considerably wastes significant time. If there is something important supposed to be performed (Uzun, 2018).

Various studies identified with academic delaying have demonstrated the effect of three components. These variables incorporate dread of disappointment, avoiding working, and lethargy. Sluggishness is another word for procrastination when some work is required to perform. In Schraw's investigation, around 40 percent of students said that they would not pass the course if the educator had a lot of desire or was not flexible in the deadline for delivery of assignments. In this manner, hesitation might be joined by an extraordinary want to abstain from tutoring or apathy. Notwithstanding the referenced variables, situational elements of dawdling incorporate inborn characteristics of the assignments, for example, appeal, significance or trouble, and the instructors' qualities are also mentioned as the factors affecting academic procrastination (Haycock, McCarthy, & Skay, 1998).

### **Prevalence of Academic Procrastination**

Academic procrastination is the most prevalent of the kinds of procrastination. This form of Procrastination is explained as a prevailing tendency to put off academic operations and is related with anxiety. An evident instance is to delay studying the courses until the student is affected by the night of the test and the resulting rush. Academic procrastination in adults and university students is a comparatively common phenomenon. A research was conducted to determine students practice of procrastination conduct and it was proposed individuals undertake this conduct so as to prevent criticism (Barratt, 2010). Although procrastination is not constantly

considered an issue, it can be connected in most instances with undesirable and irrecoverable effects by stopping growth and not achieving the objectives (Moonaghi , 2015). It has been anticipated that 80-95% of the students procrastinate at some stage in their lives. 75% of them accept that they procrastinate towards meeting their investigation commitments half methodically procrastinates (Arif & Noor, 2014).

A few Authors present procrastination as contradiction among aim and conduct. The things planned by a person is entirely unexpected from what needs to do, and more the contrast among intention and actions, the higher level of procrastination. Delaying is an important aspect of procrastination. Delaying is not simply late escaping the house for a task or dates, yet conversing with companions as opposed to taking a shot at instructive assignments, delaying eating nourishment and exercise are on the whole instances of the lingering impact on the everyday lives of individuals (Zeidner, 1992).

Procrastination by and large has an opposite association with factors, for example, confidence, self-adequacy and inspiration. For the most part it appears that procrastination prompts negative outcomes and in some uncommon conditions it is considered as a positive conduct. Procrastination exists in the academic settings, so that students tend to delay the activities and projects. Individuals with stalling may postpone conveying new administrations or items to the shopper unnecessarily and put the organizations in unfavorable aggressive or money related conditions. Dissipated investigations on lingering are astounding. These investigations revealed that around one fourth of grown-ups are affected by hesitation and its general advancement in network has been encountering. In blend of expanding pattern of delaying with organized or structure free employments in America it appears that hesitation can transform into uncontrolled wooziness and interruption in the working environment (Klingsieck, 2013).

### **Causes of Academic Procrastination**

A significant point is despite of various definitions and thoughts with respect to procrastination, reasons of procrastination among students are as yet obscure, and even in some cases opposing discoveries have been accomplished in this connection. Consequently, the specialists have specified different purposes behind it including apprehension of accomplishment, dread of disappointment, pointless practices

(cognizant or oblivious practices that lead to person's disappointment/self-hurt), evasion of works that the individual wants to do, pessimistic authoritative structure, absence of information and aptitudes expected to take every necessary step, the impracticability and absence of versatility, terrible bodily condition, just as , for example, hairsplitting, low degree of resistance and capacity to manage issues and low hesitance among students (Orpen, 1998).

According to Klingsieck (2013) four major categorical dimensions of procrastination are as follows.

1. Different psychological view which perceives procrastination as a personality characteristic related to other similar characteristics and variables.
2. Motivational and re perspective that sees procrastination as disappointment in inspiration or force to do the work.
3. Clinical psychology put emphasis on different factors from clinical point of view to observe procrastination.
4. Situational view has recently become the most public view. This view examines the situational and contextual aspects of procrastination, such as characteristics of procrastination and teacher characteristics.

### **Characteristics of Academic procrastination**

Choi and Moran, (2017) have identified the following characteristics of academic procrastination.

**Distraction.** Studies regarding academic procrastination indicated that the students' procrastinated are easily diverted by interesting and fun activities. Along these lines they for the most part offer needs to most lovely exercises. Rather than most significant cases they want to rest, stare at the TV and different exercises this way. One reason that students procrastinate is that the assignments and activities bother them. It has been discovered that the more students don't care for a work, the more they procrastinate and supplant their work with pleasurable exercises. Low degrees of tirelessness and significant levels of interruption when taking a shot at assignments and lack of foresight abilities have been recognized as variables causes' procrastination.

**Lack of time of management.** Time management is recognized as capacity to influence exercises and behavior intentionally with the goal that the accessible time is maximized. Students with procrastination can't oversee time and there is very much contrast among their actual behavior and their perceived behavior. The time management problem has been stated as reason for procrastination in the study. Time management is an important factor for procrastination in academic complex. For success in an academic environment the students should perform their assignments timely and observe deadlines. Poor time the board may lead in overlooking undertaking; leave aside concentrating with no reason until the keep going minute or taking a shot at less significant exercises rather than academic working. The individual delays on accomplishing something on the ground that they genuinely don't have the foggiest thought how to carry out the responsibility they have not the fundamental abilities. Distinctive time individual; procrastinate on essential undertaking on the ground that they haven't the faintest idea how to manage their time so everything can be accomplished.

**Lack of Personnel Passion.** Passion is general status or capacity to begin on work with vitality. On the off chance that there is low enthusiasm in students there is no solid incitement for finishing task in due time. Lack of personnel motivation or passion was recognized as reason for procrastination. By and large when students are propelled, they will be increasingly productive academically. This inspiration is incitement for progress or can be outside and inner.

**Perfectionism.** Perfectionist tends to take so long in starting a task, that once they begin they cannot finish it in time. Sometime they take longer in finishing a task because it is not incredible. It is not seen as well informed to be appreciated and judged in the way that, individuals will think it is insufficient and they thought will enhance the work with more alterations.

**Delaying of Task.** These people have some significant obstacles when start anything. People in this type delaying on tasks for mixed sort of causes, for instance fatigue, busyness, self-benevolence lost appreciation toward oneself wrong packaging of mind.

**Emotional Problems.** The academic procrastination by and large falls into this class dread of accomplishment, caution of dissatisfaction, uninvolved hostility, adrenaline impulse (acknowledging crisis), insubordination, etc. It is placed in two

sub dimensions; hurt toward oneself it impacts and other harm delaying not simply change oneself it impacts others and might be a sign of disengaged compelling peril.

### **Dimensions of Academic Procrastination**

Despite of the fact that procrastination when all is sad in done is by all accounts identified with a few psychopathological indications, this connection be expected fundamentally to negative slackers and significantly less to hopeful optimistic slowpokes, who appear to deal with their issues sensibly well .Solomon and Rothblum (1984) distinguish 13 variables procrastination as following: assessment nervousness; hairsplitting; trouble deciding; reliance and help chasing; aversiveness of the assignment; sad low disappointment resistance, absence of self-assurance, apathy, inclination to feel overpowered and inadequately oversee time, defiance to control, hazard taking, and peer impact. At long, they make seven elements with factor loadings running from .56 to .98. They incorporate dread of disappointment, evasiveness of undertaking, trouble deciding, reliance, hazard taking, insubordination to control (Binder, 2000). These variables reflected as dimensions of procrastination (Beswick & Mann, 1994).

### **. Academic procrastination and gender**

Gender differences in frequency of procrastination has been one of the most discussed issue due to inconsistent research findings. Some studies have failed to find gender differences in procrastination (e.g. Hess, Sherman, & Goodman, 2000; Şirin, 2011). Some authors have argued that females are greater risk for procrastination (e.g. Doyle & Paludi, 1998; Washington, 2004). The other group researcher reported that males are greater risk for procrastination (e.g. Özer et al., 2009; Steel, 2007; Steel & Ferrari, 2013). For instance, in a recent study with large sample conducted by Steel and Ferrari (2013) confirmed that males more likely to procrastinate than females

**Negative impact of Academic Procrastination.** The procrastination can have a negative impact on your wellbeing; it could likewise damage your social connections. You are a setting a problem on general population around you by putting things off. The general population who relying upon you, for example your companions, family, class fellows can turn into distinctly annoy if you constantly give over behavior that is late or procrastinate until deadline (Green, 1997).



## **Types of academic procrastination**

The procrastination may have different forms. These includes following.

**Active or Passive.** Two sort of procrastination practice have been recognized by Chu and Choi (2015). One incapacitated by uncertainty and thus neglects to finish errands on time, so this is previously a negative conduct passive procrastinator. In any case one want to work under strain and settle on consider choices to tarry undertakings, by and by, they normally entire their errands on time are active procrastinators (Gafni & Geri, 2010).

**Optimistic and Pessimistic.** The optimistic procrastinator and pessimistic procrastinator were recognized by Lay (1987). Putting of their aims yet not stress over it are optimistic procrastinators. They are sure that they will prevail at last, paying little respect to their commitment in the proposed activity now or later. Besides, they overestimate their advance and their odds to succeed and belittle the time expected to.

## **Theories of Academic Procrastination**

In light of the theory of Freudian analysis, academic procrastination essentially is a consequence of uneasiness (Jaradt, 2004). Uneasiness or anxiety is an admonition sign for stifled oblivious wants of oneself, as soon as one perceives nervousness, it prepared to take a cautious position. Based on dynamic defensive mechanisms and avoidance of task assignments, incomplete tasks have primarily been abandoned because they are a threat to the self. In the school of analysis, any psychological issue is related with certain guard components. Another significant factor influencing academic procrastination is child rearing style. Every family receives a particular practice in their kid's close to home and social instruction, affected by social, social, political, financial, and different elements (Hardey et al., 1993). Parenting style encompasses parents' attitudes towards children leading to formation of an emotional atmosphere in which parents exhibit certain behaviors, including goal-directed behaviors that translate into parenting practices. In fact, parenting is a complex activity that has a profound effect on children (Ahmadi, 2012).

Behaviorists clarify delaying conduct dependent on nature and past encounters. Students have figured out how to procrastinate in finishing their preparation assignments (particularly if assignments are horrendous), and guide their

focus toward different exercises that appear to be alluring to them (Jaradat, 2004). One approach to clarify procrastination is propensity family chain of importance and Hull's unlearned conduct (Hull, 1952). Whatever reinforces a link in a behavioral chain take place later, the link's power to elicit a desired respond to that stimulus would be weaker. (Hull, 1952, p. 32). In fact, this principle reminds us that in any learning situation, there are many possible responses, and the response with the highest probability is the one that achieves reinforcement most promptly, and demands the least effort (Olson & Hargenhan, 1976). Frame's examination of unlearned behavior proposes that learning is important just when the natural neural systems and related reactions neglect to decrease a life form's need. As a rule, as long as inborn reactions are recently learned and play viable parts in satisfying needs, there is no motivation to adapt new reactions.

The promoters of cognitive theory see the underlying foundations of procrastinate conduct in nonsensical convictions. Students who base their incentive on their capacity to perform errands may take nonsensical activities, and abstain from finishing assignments, in this way evaluating their own real capacity to do schoolwork (Jaradat, 2004). Numerous psychological highlights like hanging tight for a positive achievement (Bainder, 2000), silly convictions (Flett et al., 2012), and dread of disappointment (Solomon & Rathblum, 1984) are found in stickler and careless individuals.

There are enormous gathering of apprehension related reasons that thought to procrastination. Basically, individuals are accepted to hesitate on assignments on the grounds that the errand itself is aversive or distressing. Therefore, the individuals who are increasingly defenseless to encountering pressure ought to tarry more. There are assortments of conditions that make individuals restless, particularly unreasonable convictions. Unreasonable convictions, perception, or thought is a wide term that incorporates a few broken or uneasiness inciting perspectives. Ellis (1973) describes them as: (1) very likely impeding the quest for joy and satisfaction of wants, and (2) totally subjective and unprovable.

### **Psychological Reactance**

Is a disagreeable stimulation (reaction) to peoples, rules, or systems that warn or reduce definite behavioral opportunities. Reactance take place when an individual

feels that somebody or somewhat is taking back their choices or restraining the variety of alternatives. The original (Brehm, 1966) definition of psychological reactance says that every attempt on the elimination or restriction of a subject's freedom of choice produces a motivational state in the subject which directs him/her towards the restoration of this freedom. This manifests itself mainly as an increased tendency to choose the alternatives eliminated or in danger with elimination. If the direct choice of a behavior is impossible, the tendency is expressed through variably persistent preference change. Initial perception of freedom of choice is necessary for reactance to be aroused. Psychological reactance is an aversive excited reaction to rules or inconveniences which influence unrestrained choice and self-sufficiency (Brehm, 1972). This response is particularly frequent when a person feel compelled to follow a particular view or participate in a particular behavior.

Specifically, a perceived diminution in freedom ignites an emotional state, called psychological reactance that elicits behaviors intended to restore this autonomy (Brehm, 1966, 1972, Brehm & Brehm, 1981; Wicklund, 1974). Reactance, for instance, consistently urges people to embrace a view that restricts the conviction or approach they were supported. As a result, reactance repeatedly augments confrontation to coaxing (Brehm & Brehm, 1981). Reactance explains the unfriendly impacts of prohibition were introduced to explain several common instances of interference in the public eye. Reactance may happen when somebody is feeling the squeeze to acknowledge a specific view or attitude. Reactance can cause the person to adopt or strengthen a view or attitude that is contrary to what was intended, and also increases resistance to persuasion. People with reverse psychology are playing on reactance; attempt to pressure someone to select the contradictory of what they ask for.

Reactance relating to student is when ask them to do a thing they just do the opposite; this is commonly known as reverse psychology. Usually, we think of children behaving in this manner, but the phenomenon has been observed in adults, as well. In psychology, this type of behavior is an example of reactance.

### **Causes of Psychological Reactance**

Reactance occurs when free behavior of an individual is threatened or eliminated. In this context a free conduct is any demonstration or activity that an

individual may take now or very soon. Free actions or behavior that is professed as particularly significant that is more significant than that of other free behaviors remind appreciable reactance if disenchanted. Also, when an immense scope of free practices is controlled, reactance rises observably (Berkowitz & Harmon-Jones, 2004).

### **Types of Psychological Reactance**

**Trait Reactance.** Occasionally called reactance inclination is an individual contrast variable that theoretically taps an individual inclination to reactance. Theory of Psychological Reactance (PRT; Brehm, 1966; Brehm & Brehm, 1981) predicts that when apparent sense of independence is in endangered, the person will be motivated to restore that freedom. Whereas state reactance functions as an outcome variable, generally itself a precursor to message outcomes in its mediating role, trait reactance is conceptualized as an antecedent variable that guides message processing and reactions (Dillard & Shen, 2005).

**State Reactance.** State reactance is a circumstance explicit mental condition consequential from a drive to reject the support embedded in influential communication. State reactance is a vital idea in Psychological Reactance Theory (PRT), which explicitly addresses a procedure that predicts people's protection from enticing messages (Gardner, 2010, p. 14).

### **Psychological reactance in students**

Psychological reactance theory suggests that when behavioral freedoms are threatened with elimination or reduction, people are motivated to protect or restore their sense of freedom. In this way when students freedom is eliminated they react as a result to restore their freedom. The students in some cases show psychological reactance when teacher impose some condition on students. In summarizing the results of several studies (i.e., Dowd & Wallbrown, 1993; Dowd, Wallbrown, Sanders, & Yesenosky, 1994), Dowd (1999) stated that reactant people tend to be autonomous, dominant, lacking in self-control, not particularly tolerant, not particularly interested in making a good impression, and not seeking to care for others or to be cared for by others

## Theories of Psychological Reactance

This theory (Brehm, 1966) was emerge out of the concept of cognitive discrepancy theories (Proulx, Inzlicht, & Harmon-Jones, 2012), and particularly, out of cognitive dissonance theory (Festinger, 1957). Both cognitive difference and PRT are emphasized on motivational stimulation and diminution; however, Brehm (1966) pays attention to a definite drive the drive to maintain the independence in selecting when and how to behave in a particular situation.

**Assumptions of Theory.** Psychological reactance theory depends on two assumptions. Initially, PRT expect individuals have a lot of free behavior practices they accept they can establish (Brehm, 1966). According to Brehm, free practices are acts individuals have occupied with already, are as of now occupied with, and could be occupied with what's to come. The second assumption of PRT is that when people's free behaviors are threatened or eliminated they become motivated to restore their freedom. To be sure, people do not desire freedom, but its loss is motivationally arousing (Brehm, 1966).

**Components of PRT.** For purpose of clearness, studies have broken PRT into segments and demonstrated it dependent on request of event (e.g., Dillard & Shen, 2005). The following components have been identified: (a) presence of independence (b) elimination or warning to independence (c) awakening of reactance (d) reinstatement of independence.

***Freedom or Independence.*** The first component of PRT originates from the supposition that people have sets of free behaviors in which they can associate in the present or future (Brehm, 1966). Individuals may not regard all actions as freedoms; they are available just when two conditions are met, individuals are caution of freedom (i.e., feel it exists) and they feel equipped for instituting it. Furthermore, freedoms are individual based or personal (Brehm & Brehm, 1981), if individuals believe they have the autonomy to do something and experienced that they can perform it (e.g., Wicklund & Brehm, 1968).

***Elimination and Warning to independence.*** The second central part of PRT originates from the suspicion that independence limitation is aversive (Brehm, 1966) and makes an inspiration and provides a motivation to reestablish the lost

independence or freedom. Anything that completely blocks people from performing a behavior or holding a certain position constitutes elimination of freedom (Mazis, Settle, & Leslie, 1973). Furthermore, something that hinders, however doesn't wipe out, freedom is a danger.

*Awakening of Reactance.* Two significant components choose how much reactance individual will feel from a specific threat: qualities of the freedom and of the danger itself (Brehm, 1966).

*Restoration of Independence.* After individuals experience expulsion and risk to freedom reactance shows in two primary manners (Brehm & Brehm, 1981). The mainly simple type of reactance includes involving in the limited behavior (i.e. boomerang effect; Brehm, 1966). When people are unable to engage in the restricted behavior, they can reestablish freedom by social implication like seeing someone else engage in a similar behavior (Brehm & Brehm, 1981).

The theory that was given by Brehm (1966) proposes that individuals by and large will in general secure their significant freedom of decisions when one's free decision is compromised; the unexpectedly occupied choices grow to be more alluring, though the forced choices becomes less appealing. Consequently, people look for ways to get the eliminated alternatives back rather than doing what they should do. What is significant, reactance not takes place in the absence of any initial freedom of choice, or then again when the individual options vary broadly in their persuasive quality. Thus, reactance is basically evokes in presumption phase, particularly as the upcoming decision is seemed as important (Linder & Crane, 1970).

Psychological reactance is the arousal state that occur when an independent behavior is removed or in danger with removal. The theory shows that when an individual freedom is remove or in danger with exclusion, the person will be provoked to re-establish that freedom. At the point when an individual sees a particular freedom, any power on the person that makes it increasingly hard for the person in question to practice that opportunity comprises a danger (Brehm, 1966; Brehm & Brehm, 1981). Psychological reactance is linked with defensiveness, authority and assertiveness (Dowd & Wallbrown, 1993). Reactant individuals tend to act without thinking about potential outcomes (Buboltz et al., 2003). For reactance to

happen, the individual must see the opportunity being referred to as being significant (Clee & Wicklund, 1980; Lessne & Venkatesan, 1989).

### **Locus of Control**

Control is the eventual end result of the human's century's effort. It describe as understanding how to alter or influence any given situation so the result is that which is preferred. People might be controlled by a few methods. On the littler individual to-individual or individual to-bunch level, powerful talking, social weight, and danger of viciousness may enable one individual to control another. One of the least evident techniques for Psychology or control is powerful talking and nonverbal signals (Cavendish, 2008).

Control is a concept that plays an important role in many of Psychological theories, It is central to Seligman's (1975) theories of Learned Helplessness, Rotter's (1954) Social Learning Theory, Weiner's (1986) attribution analysis of motivation and emotion, and it is the key concept in Bandura's (1977) self-efficacy theory (Cavendish, 1990). According to these theories, People who are in control are usually happy, efficient, do work on time and more disciplined. While those people who are not in control are usually do not perform task at time, less efficient and are usually unhappy (Cavendish, 1990).

The idea was developed by Rotter in 1954, and has since become a part of character examines. Is an idea that indicates to how powerfully individuals think they have to be in command of situations and experiences that affect their lives. Is how a lot of people acknowledge that they have authority over the aftereffect of events in their lives instead of outside powers. Locus of control is a person's certainty structure concerning the reason behind their experiences and the parts to which that individual properties success or frustration (Judge, 1997).

Furham and Steele (as cited in Huizing, 2015) have defined academic locus of control as an idea that an outcome will or will not influence the accomplishment of a task. Huizing (2015) says that locus of control describes a range of standards as to whether one's consequences are product of inner control like effort or external control like powerful others. Dimitrovsky and Schapira-Beck (as cited in Cheng, Cheung, Chio, & Chan, 2013) define locus of control as a wide spread hope that one's outcome

are decided mainly through one's very own conduct and character (internal locus of control) or greater via out of doors forces, which includes good fortune, destiny, or effective others (external locus of control). In his research describes that locus of control is connected to whether or not person perceives that he\she has a power over what is happening to them (Nowicki, 1974).

Trice (1985) defined the academic locus of control as a person belief that his or her action is influenced by the academic success. This success can be described by the mindset which an individual hold with themselves. The possibility of locus of control isn't typological. It does not thorough that individuals are both internally or externally controlled (Shehu & Bushi, 2015). It is also defined as an alternative, in the form of a spectrum along which people can be requested.

Locus of control is not a constant characteristic and may possibly depend upon the circumstances. It isn't always a stagnant character attribute but instead a person's own way of know about his or her world (Zuber, 2000). In a few conditions, which can be very obvious and unambiguous in their meanings, the internals frequently act in an outside style, or, the outside behave in internal fashion. Inner beliefs commonly grow as and acquire growing private mastery over the environment (Ajzen, 1985).

In spite of the fact that locus of control has often been seen as a cognitive model a personality trait, its underlying foundations can really be found in Behaviorism as the direct context to this theory linked to reinforcement beliefs. Lefcourt (1976) defined obvious locus of control as evident control is characterized as a summed up anticipation for inner rather than outside control of reinforcement (Lefcourt, 1976, p. 27).

### **Types of Locus of Control**

There are two kinds of locus of control:

**Internal Locus of Control.** If a person has internal locus of control, the individual attributes his achievement to his or her own hard work and abilities. A person who believe to succeed will become more driven and learn more. For instance, individuals with an internal control locus could blame their failures in their studies for poor grades (Wang & Tomlinson, 2010).



**External Locus of Control.** Students with this locus of control normally suppose that their successes or defeats result of outside variables outside their capacity to control, for example, fate, fortune, situation, foul play, inclination, or instructors who are unreasonable, partial, or incompetent. The individuals with this control might consider teacher as unfair for their poor grades (Fox & Spector, 1999).

Rotter (as cited in Albert & Dhye, 2016) differentiates between internal and external locus of control as a service is perceived through the situation as not being totally dependent upon his deed, it's far typically perceived because the result of good fortune, risk, destiny, uncontrollable situation or an unpredictable events. When an individual respond to an event in this way, it shows that the individual has external locus of control. If it is perceived that any event that happen depend upon the personal characteristics, it is characterized as internal locus of control.

Locus of control is an age linked concept as it changes with age. Children feel more helpless or have external orientation with regard to their wishes. But with growing age, they begin to develop internal beliefs (Penk, 1969).

Changing life occasions may likewise acquire change locus of control. Severe problems in life change ones locus of control from inside to external as through feeling of dependency on others. As the problem get solved the control again changed from external to internal direction (Smith, 1970). Encountering the detachment of the family can lead a child to make external locus of control (Gardner, 1971; Masters, 1970; Hertherington, 1979; Duke & Lancaster 1976).

Outcome of therapy is predictable in a person's locus of control. Psychotherapy has a positive effect on locus of control. Researches indicate that even if a person receives psychotherapy for short time feels change in locus of control in internal direction. (A person can maintain different sets of locus of control beliefs, for her and for others. These two separate systems do not contradict or contrast with one another. Such an individual may have an internal locus of control for describing his/her actions, an external locus of control for describing the reasons of other's actions. Thus beliefs in the locus of control may relate differently to one self as opposed to others. More importantly, an individual may hold person-specific as well as situation specific locus of control belief, forming several sets of viewpoint that may overlap in varying degrees (Furnham & Steele, 1993).

## **Theories of Locus of control**

**Social Learning Theory.** Theory is explained in terms of person's goals, expectations, and social fortifications. According to theory, individual behavior is in determined by person goals. Conduct or action is constantly directional. An individual responds with those behaviors that he has learned will lead to the greatest satisfaction in a given situation (Rotter, 1971).

According to Strain (1993) Rotter social learning theory suggests that the likelihood of a conduct happening is identified with the person's hope that the conduct will pick up support and that fortification has an incentive to the person (Jansen & Carton, 1999). Social learning theory of locus of control was given by Rotter. Rotter chose the label *Social Learning* because the theory stressed the fact that the major of basic modes of behavior are learned in social situation and are inextricably fused with need requiring for their satisfaction the mediation of another person (Naila, 2001).

Bandura (1997) social learning theory sets that people gain from one another, by methods of observation, imitation, and modeling. People learn through imitating others conduct, frames of mind, and results of those practices. Most individuals actions is found through modeling from viewing others, one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action. Social learning theory clarifies human conduct as far as nonstop equal connection between intellectual, social, and ecological impacts. The theory sometimes considered as a link between behaviorist and cognitive learning theories for the reason that it hold attention, recall, and motivation (Strickland, 1989).

According to Morris (1993) the principle thought of social learning theory continues as before that there is constantly a link among three factors that being the individual, the circumstance, and the assessment of hopes got by that individual from that individual's encounters.

**Theory of Learned Helplessness.** Learned helplessness theory is the view that clinical depression and associated dysfunctional behaviors result from a perceived absence of control over the outcome of a situation (Seligman, 1976). Learned helplessness is formally defined as a disruption in motivation, affect and learning following exposure to no contingent (uncontrollable) outcomes. There are three

fundamentals to its definition; contingency, cognition and actions (Christopher et al. 1993).

1. Contingency applies to intention association between events and its results and for helplessness to occur there should be no association between an individual and its result he or she encounter.
2. Cognition is associated with how the individual sees the possibility, clarifies it and extrapolates from this comprehension. The impression of uncontrollability (no possibility) might be precise or erroneous yet once it happens the individual endeavors to clarify it. From this explanation they make extrapolations about the future and, when learned weakness occurs, they expect that their direct won't affect future results.
3. Behavior refers to the observable effects of being exposed to uncontrollable outcomes. Most often it involves giving up weaker attempts to control the situation or even failure to try to do so at all behavior incompatible with new learning. The response is also accompanied by negative emotions such as anxiety and sadness (Christopher et al, 1993).

**Attribution Theory.** Attribution theory is a social psychology theory developed by Heider (1958). The theory is linked with the manners by which individuals clarify (or quality) the conduct of others or themselves. Numerous years prior, the social analyst Heider (1958) acquainted the term attribution with alludes to clarifications individuals give for their own or someone else's activity accepts. At the point when attribution depends on an inner factor, it is called dispositional attribution and when it depends on outer factor, it is called situational attribution (Kelly, 1967).

Heider (1958) explain difference between two general factors external and internal. Inside attributions involve qualities of the individual, (for example, capacity, frames of mind, character, temperament and exertion) for having caused a specific behavior, whereas outside attributions implicate outer components, (for example, the errand, others or karma) for making an occasion or result happen. He recognized that successes and failures are deciphered by a person inside this causal system, Weiner added an additional measurement to fundamental explanation when he suggest that the cause's stability should also be included in the outcome explanations given by the individual.

To begin with, the reason for the achievement or disappointment might be interior or out. That is, we may do well or flop because of influences that we believe have their origin within us or because of factors that create in our environment. Second, the reason of the achievement or disappointment might be either stable or unstable. If we believe cause is stable, and then the outcome is likely to be the same if we perform the same behavior on another occasion. If it is unstable, the outcome is likely to be different on another occasion. Third, the cause of the success or failure may be either controllable or uncontrollable. A controllable factor is one which we believe we ourselves can alter if we wish to do so. An uncontrollable factor is one that we do not believe we can easily alter. People with inward locus of control ascribe accomplishment to their own endeavors and capacities. Since improvement is possible due to practice and personal determination, students with an internal locus of control will be motivated to master new skills and reflect current weaknesses (Ashkanasy, 1987).

On the other side, persons with an external locus of control, is extra likely to face anxiety when encounter with failure or unique academic tasks in light of the fact that she accepts that she can't straightforwardly impact her dominance of the information. She may infer that she essentially wasn't intended to do the new assignment. Also a student that attributes her success to luck or fate will be less likely to make the effort needed to learn because she believes extra effort will not impact the final result (Weiner, 1986).

### **Relationship between Academic Procrastination and Psychological Reactance**

A study was conducted by Guilfoyle, on academic procrastination and psychological reactance. Subjects ( $N = 42$ ) consisted of undergraduate students who identified themselves to have a serious problem with procrastination and failed at attempts to control procrastination in the past. This was basically an experimental study in which there have to check the difference between two treatment group for curing of reactance. But there is no significance between two treatment groups. Results showed no clear effects in reported procrastination due to reactance. No significant changes, with respect to the frequency and severity of reported procrastination behaviors, were found. There is little support for the prediction that means procrastination scores would vary as a function of the level of reactance. No

significant main effect differences were found between freedom limited and freedom restored conditions. The only significant interactions were found between reactance and time. Moreover, the only significant differences were found at the pre-test which suggest that the reactance manipulation had no effect on the motivational state of the subjects (Guilfoyle, 1986).

There was another study conducted by Malantinvoca (2015). The mystery of should Procrastination, delay, and reactance in academic settings. The sample of the study was of undergraduate student population. The hypothesis of the study was that the psychological reactance positively predicted procrastination. The data of study was analyzed by path analysis and SEM. Reactance was considerably linked to delay only when good act on the task was of comparatively high significance. The study provides the relationship between procrastination and reactance and it also provide the difference between experiential and objective component of reactance. The construct of trait reactance is based on the thought that feeling to freedom threats may become universal to a variety of dimensions of reality (Chadee, 2011). Thus the people high in trait reactance are also high in state reactance. If the task is not so much demanding and difficult then if student procrastinate then the procrastination is due to lack of motivation. On the other side if the task is demanding and difficult then pressure is in advance to start working and when the student perceive threat to freedom then the procrastination is due to reactance. In the study there were two components of procrastination and researchers have to find difference between two. One is delay component means how much a procrastinator and non-procrastinator takes time to start work and other is subjective component the degree to which subject feels that they procrastinate (Malantinvoca, 2015).

There was a study conducted by Mulry (1994). This study explored the effects of psychological reactance on two methods of treatment for academic procrastination. The sample of study was undergraduate procrastinators. Undergraduate procrastinators ( $N = 84$ ), pretested for dispositional reactance, underwent two sessions of either paradoxical or self-control treatment. Reactance level was manipulated before each session. Change in procrastination, operationalized as change in effective study time. Results indicated that procrastination diminished with both treatments, but only for participants with low situational reactance. And this result shows that reactance was considerably linked to procrastination (Mulry, 1994).

## **Relationship between Academic Procrastination and Locus of Control**

A study was conducted by Deniz (2009). The population of study was university students. The age range of students was 17-21 years old. The finding of Beck et al. (2000) that individuals who have internal locus of control procrastinate less, supports the research finding of Janesson and Carton (1999) that student who have external locus of control procrastinate more than the students who have internal locus of control and students with inside locus of control complete their schoolwork sooner than students with external locus of control (Baltaş, 2000).

There was another study conducted by Akça on academic procrastination and locus of control. The study investigates the relationship between variables. The aim of study also was that whether these variables predict self-handicapping behavior. The population was undergraduate students of university. Data was analyzed through Pearson correlation and regression analysis. The study shows considerable positive relationship between external locus of control and academic procrastination. A weak positive and important link was found between academic procrastination and locus of control. As per locus of control scores, students for the most part have internal locus of control (Akça, 2012).

Procrastination is very common in daily life, which means to irrationally delay the start and completion of tasks, study shows the delay behavior is prevalent in a cross-culture. Academic procrastination is defined which occur in learning scenario (Lay & Schouweburg, 1993). Silly time utilizing is the fundamental external exhibition. Because course arrangements, learning methods, teaching time have much change in university and the freshman have more free time relatively, academic procrastination is exposed day by day. Academic procrastination is the reason the freshman doesn't fit in with university life. So we study the characteristic and cause of the freshman's academic procrastination to help them adapt smoothly through the learning period. Locus of control is a stable individual personality factors and it can forecast a person behavior, so select this variables of this study to explore the impact on academic procrastination. Some studies have been conducted about time management disposition as a factor of personality, which partly results in academic procrastination, because few have done with consideration of locus of control and time the executive's manner at the same time. It was found that the causes of

Procrastination were fear of failure, revolt, aversiveness of task, time management, lack of affirmation, and risk-taking by factor analysis, and there were difference on gender among fear of failure, rebellion, and of aversiveness task. Academic procrastination and other task's procrastination have negative correlation with time management and its three dimensions, but which have significant correlation with the locus of control. The locus of control and time management disposition has combinatory effects upon academic procrastination and could predict it. Among them, locus of control influences academic procrastination directly, while time control does both directly and indirectly. The locus of control acts as mediator on the sense of time efficacy and academic (ShiYi.,2009).

Undergraduates from Wuhan were invested to explore to the relationship between academic procrastination and parenting-style, self-worth, locus of control by self-reported. It was found that all undergraduates didn't procrastinate frequently in academic tasks. However, there were some students wanted to change their procrastination behavior. Undergraduates procrastinate more often in academic tasks than non- academic tasks. Undergraduates' procrastination didn't have significant difference on gender. Grade two and grade four undergraduates procrastinate more than grade one and Grade three. In all, undergraduates agree highly to the 26 items. The most influential reasons related to low self-esteem, evaluation anxiety and aversiveness of tasks; the least influential reasons related to fear of success. It was found that the reasons of procrastination were aversiveness of tasks and evaluation anxiety. There were no differences in grade. Boys agree more in evaluation anxiety than girls. High and low procrastinators have different locus of control, self-worth and parenting-style. High procrastinators tend to external locus of control, have lower self-worth and are more refused and denied by their parents' self-worth, positive parenting-style have negative relationship with procrastination and positive relationship with the will to change procrastination; locus of control, negative parenting style have positive relationship with procrastination and negative relationship with the will to change procrastination parenting style had direct affects, mediated by self-worth and locus of control self-worth had direct affects, mediated by locus of control (Jing, 2009).

Janssen investigated the effects of locus of control expectancies and task difficulty on procrastination. The sample of study was college students. The results of

study with locus of control were considerable. In particular, examinations uncovered that students with internal locus of control hopes would in general start taking a shot at the task sooner than students with external locus of control hopes. The research revealed that the 46 to 95 % students procrastinate regularly. Research result suggests that, the individual's students for longer duration are in college, the more they procrastinate. People with inside control anticipations see an unexpected connection between their conduct and outcomes; one may anticipate that they should delay not as much as people with outside control hopes. Trice and Milton (1987) also found that procrastinators had greater external locus of control than non-procrastinators (Janssen, 2010).

### **Relationship between Psychological Reactance and Locus of control**

This study examined the influence of locus of control orientation, trait anger, and coronary prone behavior patterns on responses to mild and strong threats to attitudinal freedoms. Brehm has theorized that individuals will attempt to restore threatened and/or eliminated freedoms under a number of circumstances, but has not included the influence of certain personality factors in his theory (Brehm & Brehm, 1981). This was basically an experimental study. The hypotheses were that the individuals with internal locus of control show more reactance. The sample of study was of university students. Results suggest that locus of control may be a significant element to consider in gaining an understanding of reactance phenomena (Smith, 1985).

There was another study conducted by Jacobs (2015) on business enterprises software in educational organizations: reactance, efficacy, empathy, and locus of control. The results of study show that the only locus of control had significant impact on reactance. Locus of control alone accounted for 12% of predicted variance of reactance.

### **Rationale of Study**

Procrastination is a serious problem among students which initially gives short time pleasure, but long time difficulties such as academic failure and poor performance (Beydokhti, 2017) Procrastination is a complex phenomenon and act and it is affected by many habits and reasons. This phenomenon is spread all over the



world in general public and in academic settings. Procrastination is considered a problem when it disturbs the functioning of an individual. The academic procrastination is a deadly serious issue and it is one of the major reasons of failure among students. There has been an estimation that 80-90% students procrastinate in academic activities. When the students procrastinate feeling of anxiety also occurs in them that prevent them from focusing on their studies. A few studies have been conducted in Pakistan (Aziz & Tariq, 2013; Choudhry, 2008; Fatima, 2001), but none has focused to find out different reasons leading to academic procrastination among university students.

This study is going to explore the role of psychological reactance and locus of control on academic procrastination among university students. The psychological reactance occurs in an individual when the free behavior of an individual is eliminated and it causes motivation in individual to restore that freedom behavior. It has led to the empirical demonstrations that, a lost choice alternative tends to become more attractive, a forced attitudinal position tends to become less attractive for students. So the students look at the ways to restore their lost freedom.

In Pakistani research studies there is not much literature on finding relationship between academic procrastination and psychological reactance so this study aims to find that whether these two variables are related to each other or not. Academic procrastination is studied with other variable like emotional intelligence, self efficacy etc. this research is up to finding its relationship with psychological reactance because psychological reactance may promote an individual to procrastinate. This is a natural phenomenon that when free behavior of someone is eliminated then the individual reacts to restore that freedom and in case of students they procrastinate as a result of this and this is one of the major reasons behind the current research.

We also observe the problem of procrastination among university students closely and we also procrastinate on most of occasions in study. The research is conducted on university because university students have more chance to indulge in pleasurable activities so they did not focus on completing important tasks and assignments. Psychological reactance increased as levels of family independence increased and in university students have more independence so we chose sample of university students to explore this further (Buboltz, 2003). The lives of university

students are characterized by frequent deadlines given by university teachers and administrators to carry out various responsibilities such as registration for courses, completion of course forms and submission of class assignments or term papers (Popoola, 2005). The studies provide inconsistent results in describing that whether the male students procrastinate more or females so this study also explores this. The previous studies also show that there is no significant difference found between gender and psychological reactance (Mook, 1994). So this study aims to found that whether there is a link between psychological reactance and gender.

Locus of control show that a student attribute the event happening around him i.e., either externally or internally. This behavior might have a major impact on the student academic life therefore this variable was elected to check the impact of locus of control on the academic procrastination and psychological reactance.

## Method

### Objectives

The aim of present research is to:

1. To explore the relationship of psychological reactance, locus of control and academic procrastination among university students.
2. To explore the role of various demographics like gender socioeconomic status parents working status in relation to study variables.

### Hypothesis

1. There will be a positive relationship between academic procrastination and psychological reactance in university students.
2. There will be a positive relationship between students with external locus of control and academic procrastination in university students.
3. There will be a negative relation between students with internal locus of control and psychological reactance in university students.
4. Males will procrastinate more than the females in university students.
5. The individuals with low percentage procrastinate more than the individuals securing high percentage in university students.

### Operational Definition

**Academic Procrastination.** Procrastination is defined as the act of laying off or postponing an action to a later time. Academic procrastination is characterized as neglecting to complete an academic task inside warranted time allotment or deferring the task until the very late. In the present study academic procrastination is measured with the help of Lay Procrastination scale for student population (Lay, 1986). According to these measure higher scores on scale represent higher procrastination and low scores represent less procrastination.

**Psychological Reactance.** Psychological reactance (PRT; Brehm, 1966) posits that when something threatens or eliminates people's freedom of behavior, they experience psychological reactance, a motivational state that drives freedom restoration. When one's free choice is threatened, the suddenly unavailable alternatives become more attractive, while the imposed alternative becomes less attractive. The psychological reactance is measured by Sulzberger State Reactance Scale (SSR Scale). The higher scores indicate higher psychological reactance and low scores indicate low reactance. There are four components of psychological reactance, emotional response, resistance to influence, resistance to compliance, and reactance to advice.

**Locus of Control.** Locus of control refers to how strongly people believe they have control over the circumstances and events of life. The locus of control is internal and external. The different individuals have different beliefs about their locus of control some believe that they have internal locus and some believe that they have external locus of control. The locus of control is measured by Rotter locus of control scale. The scale measure the internal and external locus of control. The high score of an individual on internal locus of control statements indicate high internal locus of control and high score on external locus of control statement indicates high external locus of control (Rotter, 1966).

### **Instruments**

In this scale, following instrument will be used to collect data

**Academic Procrastination Scale.** The academic procrastination scale was developed by Lay (1986). It is 20-items scale with 5-point Likert scale with 1 is extremely uncharacteristic and 5 extremely characteristics. The reverse key items for the scale were 3,4,6,8,11,13,14,15,18,20. The scale has a Cronbach alpha of .82 (Lay, 1986) and a retest reliability of .80 (Ferrari, 1989).

**Sulzberger State Reactance Scale.** The scale that is used in study is Sulzberger State Reactance Scale. It is 19 item scale with 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). It measures the state reactance of an individual. The reliabilities for the scales are considered good ( $\alpha = .93 - .97$ ). There are four subscales of this scale, Emotional response toward restricted choice, with

items 4, 6, 7, 8, Reactance to compliance with items 1, 2, 3, 14, Resisting influence with items 10, 11, 12, 13, and reactance to advice with items 5 and 9 (Sittenthaler, 2015).

**Rotter Locus of Control Scale.** The scale was developed by Julian Rotter. The scale has 29 items. The scale has the average reliability of .70. The scale measures an individual internal and external locus of control. This is a force choice test with two statements from which have to choose one statement. The two statements were termed as A and b. High scores on A indicate external locus of control and low scores on A indicate internal locus of control. Among the 29 item 6 item were filler (1, 8, 16, 14, 24, & 27) to disguise the actual purpose of scale. Score 0 as given for external locus of control and 1 for internal locus of control, so possibly range of scores is from 0-23. Higher score on internal locus of control indicates higher internal locus of control and higher score on external locus of control indicates high external locus of control (Rotter, 1966).

### Participants

The sample ( $n = 300$ ) of study was taken from different universities of Rawalpindi and Islamabad mainly from Quaid-i-Azam University, FAST University and COMSATS University Islamabad. The sampling technique that was used is purposive and convenient sampling. The mean age of sample is ( $M = 20$ ) and their standard deviation is ( $SD = 2.31$ ). Their also ask about different demographics from participants like no of hours you study and parental working status

**Table 1**

*Frequency and Percentage of Demographic Variables (N=300)*

Demographics	<i>f</i>	%
<b>Gender</b>		
Male	203	67.7
Female	97	32.3
<b>Socioeconomic status</b>		
Low	18	6.0
Middle	273	91.0
High	7	2.3

<b>Income (in Rs)</b>		
20000 or below	4	1.3
21000-40000	15	5.0
40000-60000	53	17.7
60000-80000	39	13.0
80000-100000	61	20.3
100000 above	90	30.0
<b>Mother working status</b>		
Working	73	24.3
Nonworking	227	75
<b>Father Working Status</b>		
Working	261	87.0
Nonworking	36	12.0
<b>Percentage in last semester</b>		
Less than 40	7	2.3
Between 40-60	22	7.3
Between 60-80	180	60.0
Above 80 percent	65	21.7
<b>Area of Study</b>		
Natural science	126	42.0
Social sciences	55	18.3
Computer science	119	39.7
<b>Family System</b>		
Joint	101	33.7
Nuclear	199	66.3

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## Procedure

The sample of study was collected from different universities of Rawalpindi and Islamabad. Official permission was taken from universities for collection of data. After explaining the nature and purpose of study the questionnaire was given to participants. The participants were approached during the study hours. They were guaranteed that the information collected will be used for research purpose only. After giving informed consent participants are provided with consent form. Participants

were given questionnaire with questions in form of a booklet. Only those participants were given booklet that was willing to participate. The participants was informed that they have right to quit at any time from study. After all data collection data was entered into SPSS and further analysis of data was done and results were computed in the form of tables.

## Results

The study aims to explore the relationship between academic procrastination psychological reactance and locus of control. There are different demographic variables consider in the study. The results were analyzed using SPSS statistics. The reliabilities were finding through cronbach alpha reliabilities. The Pearson product moment correlation was used to study relationship between variables. The *t*-test and ANOVA was used to compare differences between different demographic variables. On the basis of locus of control we divide our sample into internal and external locus of control.

**Table 2**

*Chronbach alpha Reliabilities and Descriptive Statistics of Main Study Variables*  
(*N*=300)

Variable	<i>k</i>	<i>α</i>	<i>M</i>	<i>SD</i>	Range		Distribution	
					Actual	Potential	Skewness	Kurtosis
Acadproc	20	.61	59.57	8.69	29-89	20-100	-.065	.380
Psych Reac	14	.73	44.24	7.69	22_64	14-70	.071	.098
Emo Res	4	.51	14.30	2.92	5-20	4-20	-.30	-.28
Reac com	4	.42	12.12	2.82	4-20	4-20	-.04	.07
Resisinfl	4	.57	12.55	3.13	4-20	4-20	.12	-.24
ReacAdv	2	.32	5.26	6.17	5-10	2-10	.35	-.16
Loc	29	.50	11.65	3.03	23 -23	2-46	-.261	.520

*Note.* Acadproc =Academic Procrastination;PsychReac =Psychological Reactance; Loc=Locus of Control;Emo Res = Emotional Response;Reac Com = Reactance to Compliance; ResisInfl =Resisting Influence; and ReacAdv= Reactance to Advice.

Table 2 shows the alpha reliability, mean, standard deviation, actual range, potential range, skewness and kurtosis of study measures. The alpha reliability of study measure was satisfactory on current study sample. But the alpha reliability of locus of control scale is low because of the reason that the locus of control do not culturally adopted that is used in our study. It was observed that all the scales have their distribution lies within normal range.



**Table 3**

*Correlation between Academic Procrastination, Psychological Reactance and Locus of Control (N=300).*

	1	2	3	4	5	6	7
1 Academic Procrastination	-	.32**	.25**	.21**	.29**	.12**	.09
2 Psychological Reactance		-	.76**	.72**	.81**	.53**	.15**
3 Emotional Response			-	.34*	.48**	.25**	.12*
4 Reactance to Compliance				-	.40**	.25**	.10
5 Resisting Influence					-	.31**	.10
6 Reactance to Advice						-	.10
7 Locus of Control							-
<i>Internal Locus of Control</i>							
1 Academic procrastination	-	.33**	.28**	.21**	.26**	.15	.09
2 Psychological Reactance		-	.76**	.70**	.82**	.50**	-.06
3 Emotional Response			-	.32**	.49**	.24**	-.03
4 Reactance to compliance				-	.41**	.20*	-.16
5 Resisting influence					-	.32**	-.05
6 Reactance to Advice						-	.15
7 Internal Locus of Control							-
<i>External Locus of Control</i>							
1 Academic procrastination	-	.31**	.21**	.19**	.31**	.10	.03
2 Psychological Reactance		-	.74**	.72**	.78**	.56**	.07
3 Emotional Response			-	.34**	.44**	.25**	.11
4 Reactance to compliance				-	.37**	.28**	.06
5 Resisting influence					-	.30**	-.00
6 Reactance to Advice						-	.00
7 External Locus of Control							-

\*\*  $p < .005$ ; \*  $p < .01$ .

Table 3 shows the relationship between academic procrastination psychological reactance and locus of control. Table also shows the relationship of internal locus of control and external locus of control with academic procrastination and psychological reactance. Correlation matrix was generated to see how study variables relate to each other.

Academic procrastination shows a significant positive correlation with psychological reactance but non-significant relationship with locus of control. The subscales of psychological reactance shows significant positive relationship with academic procrastination. There found significant positive relationship between psychological reactance and its subscales. The subscale of resistance to compliance shows significant positive relationship with resisting influence, reactance to compliance and reactance to advice. Emotional response shows significant positive relationship with locus of control. Resistance to compliance, resisting influence, reactance to advice shows positive significant relationship with each other. Emotional response shows significant positive relationship with locus of control but non-significant relationship found with other subscales for locus of control.

In internal locus of control shows significant positive relationship of academic procrastination with psychological reactance and its subscales was found except for reactance to advice and also subscales shows significant positive relationship with each other but no significant relationship with locus of control was found.

In external locus of control significant positive relationship between academic procrastination and psychological reactance and its subscales was found except for reactance to advice. But there is no relationship between academic procrastination and psychological reactance with external locus of control was found.

**Table 4**

*Linear Regression Analysis Indicate the Prediction of Academic Procrastination by Psychological Reactance and its Subscales (N=300).*

Predictor	<i>B</i>	<i>B</i>	<i>p</i>	95% CI	
				<i>LL</i>	<i>UL</i>
Constant	43.81		.00	36.40	48.93
Emotional Response	.39	.13	.04	.00	.75
Reactance to compliance	.26	.09	.17	-.11	.63
Resisting influence	.53	.19	.00	.16	.89
Reactance to Advice	.06	.01	.84	-.55	.65
<i>R</i>	.11				
$\Delta R^2$	.11				
<i>F</i>	7.38				
<i>p</i>	.00				

Table shows that the psychological reactance do not significantly predicted procrastination. But the two subscales of psychological reactance Emotional Response and Resisting Influence significantly predicted procrastination with 11% of variance. There is significant difference found on subscale reactance to compliance and resisting influence. There is no significant relationship found with overall locus of control.

**Table 5***Linear Regression Analysis on the Basis of Locus of Control (N=300).*

Predictor	Internal Locus of Control				95% CI	
	<i>B</i>	$\beta$	SE	<i>p</i>	<i>LL</i>	<i>UL</i>
	Constant	43.17		.95	.00	35.45
Emotional Response	.52	.18	.26	.05	0	1.04
Reactance to compliance	.30	.10	.27	.26	-.23	.83
Resisting influence	.30	.11	.26	.25	-.22	.81
Reactance to Advice	.27	.05	.55	.55	-.63	1.17
<i>R</i>	.11					
$\Delta R^2$	.11					
<i>F</i>	.80					
<i>p</i>	.00					
External Locus of Control						
Constant	43.90		4.30	.00	35.91	52.41
Emotional Response	.24	.08	.28	.37	-.30	.79
Reactance to compliance	.25	.08	.28	.37	-.30	.79
Resisting influence	.77	.26	.27	.00	.24	1.30
Reactance to Advice	-.10	-.02	.41	.79	-.94	.71
<i>R</i>	.11					
$\Delta^2$	.11					
<i>F</i>	7.86					
<i>p</i>	.00					

The same analysis was done by dividing sample into internal and external locus of control. The individuals with internal locus of control shows that only subscale of psychological reactance emotional response significantly predicted

procrastination with 11% of variance. And in external locus of control the only significant difference was found with resistance to influence with 11% of variance.

**Table 6**

*Gender Differences across Study Variable Academic Procrastination and Psychological Reactance (N=300).*

Variable	Male		Female		<i>t</i>	<i>p</i>	95% CI	
	<i>(n = 203)</i>		<i>(n = 97)</i>				<i>LL</i>	<i>UL</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Acad proc	59.75	8.28	59.20	9.61	.51	.61	-1.56	2.67
Psych Reac	44.08	7.68	44.57	7.53	-.51	.61	-2.35	1.38
Emo Res	14.22	2.87	14.46	3.04	-.67	.50	-.95	.46
Reac com	12.04	2.94	12.27	2.54	-.67	.50	-.92	.45
Resis infl	12.62	3.08	12.42	3.24	.51	.60	-.56	.95
Reac Adv	5.19	1.65	5.40	1.70	-1.01	.31	-.61	.10

*Note.* Acadproc =Academic Procrastination; PsychReac =Psychological Reactance; Loc=Locus of Control; Emo Res = Emotional Response; Reac Com = Reactance to Compliance; ResisInfl =Resisting Influence; and ReacAdv= Reactance to Advice.

There are no significant found on the basis of gender on academic procrastination, psychological reactance and its sub scales. There is no significant relationship found between males and females on the basis of these study variables.

Table 7 below shows there are no significant differences found on the basis of gender in study variable. There are no significant differences found between males and females in individuals with internal locus of control and there is also non-significant difference found in males and females for individuals with external locus of control.

**Table 7**

*Gender Differences across Study Variables on the Basis of Locus of Control (N=146+154).*

Variable	Males (n = 106)		Females (n = 40)		t	p	95%CI	
	M	SD	M	SD			LL	UL
Internal Locus of Control								
Acad proc	59.66	8.37	57.33	9.47	1.37	.17	-1.05	5.72
Psych Reac	42.30	7.58	43.85	8.44	1.01	.31	-4.59	1.49
Emo Res	13.74	2.84	14.37	3.51	1.09	.27	-1.73	.49
Reac com	11.50	3.04	11.90	2.36	-.73	.46	-1.44	.66
Resis infl	12.03	3.14	12.07	3.56	-.06	.95	-1.23	1.15
Reac Adv	5.00	1.52	5.50	1.79	-1.68	.09	-1.08	.08
External Locus of Control								
Variable	Males (n = 97)		Females (n = 57)		t	p	95%CI	
	M	SD	M	SD			LL	UL
Acad proc	59.85	8.12	60.51	9.62	.45	.65	-3.53	2.20
Psych Reac	46.02	7.35	45.07	7.32	.779	.44	-1.46	3.36
Emo Res	14.73	2.83	14.52	2.68	.44	.66	-.71	1.12
Reac com	12.62	2.74	12.54	2.65	.18	.85	-.80	.97
Resis infl	13.25	2.91	12.66	2.99	1.20	.23	-.37	1.56
Reac Adv	5.40	1.77	5.33	1.65	.23	.81	-.50	.63

*Note.* Acad proc =Academic Procrastination; PsychReac =Psychological Reactance; Loc=Locus of Control; Emo Res = Emotional Response; Reac Com = Reactance to Compliance; ResisInfl =Resisting Influence; and ReacAdv= Reactance to Advice.

**Table 8**

*Differences on Basis of Family System on Study Variables (N=300).*

Variable	Joint (n = 101)		Nuclear (n =199)		t	p	95% CI	
	M	SD	M	SD			LL	UL
Acadproc	60.67	9.10	59.01	8.45	1.56	.12	-.42	3.74
PsychReac	44.59	7.64	44.06	7.72	.57	.57	-1.31	2.39
Emo Res	14.05	2.76	14.42	3.00	-1.01	.31	-1.07	.34
Reac com	12.29	2.78	12.03	2.84	.77	.44	-.41	.94
Resisinfl	12.68	3.04	12.49	3.18	.41	.61	-.56	.94
ReacAdv	5.55	1.77	5.11	1.60	2.18	.03	.04	.84

*Note.* Acadproc =Academic Procrastination; PsychReac =Psychological Reactance; Loc=Locus of Control; Emo Res = Emotional Response; Reac Com = Reactance to Compliance; ResisInfl =Resisting Influence; and ReacAdv= Reactance to Advice.

Table 8 shows that there are no significant difference found on the basis of family system on academic procrastination, psychological reactance and its subscales.

**Table 9**

*Differences on Family System among Study Variables on the Basis of Locus of Control (N=146+154).*

Variable	Joint (n = 49)		Nuclear (n = 97)		t	p	95%CI		Cohen's d
	M	SD	M	SD			LL	UL	
	Internal locus of control								
Acadproc	59.18	8.46	59.94	8.86	.160	.87	-2.78	3.27	-
PsychReac	42.51	7.15	42.84	8.18	-.236	.81	-3.04	2.39	-
Emo Res	13.65	2.51	14.06	3.28	-.83	.40	-.91	1.08	-
Reac com	11.67	2.30	11.58	3.12	.18	.85	-.81	.99	-
Resisinfl	11.81	3.08	12.16	3.34	-.61	.54	-1.47	.77	-
ReacAdv	5.36	1.69	5.02	1.56	1.22	.22	-.21	.90	-
External locus of control									
Variable	Joint (n = 52)		Nuclear (n = 102)		t	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
	Acadproc	62.08	9.52	59.08			8.08	2.04	
PsychReac	46.56	7.64	45.22	7.11	1.07	.28	-1.11	3.79	-
Emo Res	14.44	2.95	14.74	2.68	-.68	.49	-1.25	.61	-
Reac com	12.88	3.07	12.45	2.49	.94	.34	-.47	1.34	-
Resisinfl	13.50	2.80	12.80	3.00	1.39	.16	-.29	1.68	-
ReacAdv	5.73	1.84	5.19	1.63	1.83	.06	-.04	1.11	-

*Note.* Acadproc =Academic Procrastination; PsychReac =Psychological Reactance; Loc=Locus of Control; Emo Res = Emotional Response; Reac Com = Reactance to Compliance; ResisInfl =Resisting Influence; and ReacAdv= Reactance to Advice.

There are no significant differences found in individuals with internal locus of control with academic procrastination and psychological reactance on the basis of family system. But there is significant difference found on external locus of with academic procrastination. Individual's lives in joint family system procrastinate more

than the individual who live in nuclear family system. There are no significant differences found on psychological reactance on the basis of family system.

**Table 10**

*Differences of Variables on Working status of Mother (N=300).*

Variable	Mother working (n= 73)		Not working (n=227)		t	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
Acadproc	59.75	9.20	59.51	8.54	.20	.83	-2.06	2.54	-
PsychReac	43.53	7.64	44.46	7.71	-.89	.37	-2.96	1.10	-
Emo Res	14.05	2.83	14.37	2.95	-.82	.41	1.09	.45	-
Reac com	12.20	2.63	12.09	2.88	-.29	.77	-.63	.86	-
Resisinfl	12.00	3.12	12.73	3.12	-1.75	.08	-1.56	.09	-
ReacAdv	5.27	1.73	5.25	1.66	.08	.93	-.42	.46	-

*Note.* Acadproc =Academic Procrastination; PsychReac =Psychological Reactance; Loc=Locus of Control; Emo Res = Emotional Response; Reac Com = Reactance to Compliance; ResisInfl =Resisting Influence; and ReacAdv= Reactance to Advice.

Table 10 indicates that there are no significant differences found on the basis for individuals with mother working or non-working on academic procrastination and psychological reactance and its subscales.



**Table 11**

*Differences of Variable on Working Status of Mother on the Basis of Locus of Control (N=146+154).*

Variable	Mother working (n = 35)		Not-working (n = 111)		t	p	95%CI	
	M	SD	M	SD			LL	UL
Internal locus of control								
Acadproc	58.91	9.01	59.05	8.64	-.08	.93	-3.48	3.20
Psych Reac	41.20	6.14	43.21	8.25	-1.32	.19	-5.00	.985
Emo Res	13.40	2.60	14.09	3.16	-1.17	.24	-1.85	.47
Reac com	11.48	2.34	11.65	3.02	-.30	.75	-1.27	.93
Resisinfl	11.54	3.00	12.20	3.31	-1.05	.29	-1.90	.58
ReacAdv	4.77	1.35	5.25	1.67	-1.54	.12	-1.09	.13
External locus of control								
Variable	Mother working (n=38)		Not-working (n=116)		t	p	95%CI	
	M	SD	M	SD			LL	UL
Acadproc	60.53	9.43	59.95	8.46	.35	.72	-2.63	3.79
Psych Reac	45.68	8.32	45.66	6.97	.01	.98	-2.68	2.72
Emo Res	14.65	2.94	14.65	2.72	.00	.99	-1.02	1.03
Reac com	12.86	2.74	12.50	2.69	.71	.47	-.64	1.36
Resisinfl	12.42	3.21	13.24	2.84	-1.49	.13	-1.90	.26
ReacAdv	5.73	1.91	5.25	1.64	1.38	.17	-.21	1.17

*Note.* Acadproc =Academic Procrastination; PsychReac =Psychological Reactance; Loc=Locus of Control; Emo Res = Emotional Response; Reac Com = Reactance to Compliance; ResisInfl =Resisting Influence; and ReacAdv= Reactance to Advice.LL= upper limit; UL= lower limit

Table 11 indicated that there are no significant differences found on the basis for individuals with mother working or non-working in internal locus of control with academic procrastination and psychological reactance and. There are also no significant differences found for individuals on the basis of external locus of control with mother working or non-working in academic procrastination and psychological reactance.

**Table 12**

*Differences of variables on Working Status of Father (N=300).*

Variable	Father working (n = 261 )		Not-working (n = 36)		t	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
Acadproc	59.45	8.93	59.78	6.86	-.21	.83	-2.87	2. 21	0.03
PsychReac	44.07	7.54	45.42	8.85	-.89	.37	-4.04	1.35	-
Emo Res	14. 27	2.81	14.36	3.65	-.82	.41	-1.11	.93	-
Reac com	12.04	2.81	12.66	2.92	-.29	.77	-1.61	.36	-
Resisinfl	12.57	3.09	12.50	3.50	-1.75	.08	-1.03	1.17	-
ReacAdv	5.18	1.64	5.89	1.76	.08	.93	-1. 28	-.12	-

*Note.* Acadproc =Academic Procrastination; PsychReac =Psychological Reactance; Loc=Locus of Control; Emo Res = Emotional Response; Reac Com = Reactance to Compliance; ResisInfl =Resisting Influence; and ReacAdv= Reactance to Advice.

There are significant difference found for individuals with father working and non-working on the basis of academic procrastination. The individuals whose father non-working procrastinates more than the individual with father working. There is no significant difference found with psychological reactance and its subscales.

**Table 13**

*Differences of Variable on Work Status of Father on the Basis of Locus of Control (N=146+154).*

Variable	Father working (n=131)		Not -working (n=15)		<i>t</i>	<i>p</i>	95% CI		<i>Cohen's</i> <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			LL	UL	
Internal Locus of Control									
Acadproc	59.98	8.73	59.33	8.74	-.14	.88	-5.05	4.35	-
PsychReac	42.92	7.49	41.07	10.49	.663	.51	-4.07	7.77	-
Emo Res	14.03	2.84	12.93	4.44	.94	.36	-1.39	3.60	-
Reac com	11.57	2.84	12.00	3.16	-.54	.58	-1.97	1.12	-
Resisinfl	12.18	3.12	10.86	4.12	1.49	.13	-.42	3.05	-
ReacAdv	5.12	1.61	5.26	1.62	-.33	.75	-1.01	.73	-
External Locus of Control									
Variable	Father working (n = 130)		Not –working (n = 24)		<i>t</i>	<i>p</i>	95% CI		<i>Cohen's</i> <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			LL	UL	
Acadproc	59.92	9.13	60.10	5.35	-.12	.90	-3.04	2.68	-
PsychReac	45.23	7.45	48.52	5.98	-1.92	.05	-6.67	.08	.49
Emo Res	14.50	2.77	15.38	2.61	-1.34	.18	-1.25	.40	-
Reac com	12.51	2.70	13.14	2.70	-.98	.32	-1.88	.63	-
Resisinfl	12.96	3.03	13.66	2.49	-1.01	.31	-2.08	.67	-
ReacAdv	5.24	1.68	6.33	1.77	-2.72	.00	-1.87	-.29	.63

*Note.* Acadproc =Academic Procrastination; PsychReac =Psychological Reactance; Loc=Locus of Control; Emo Res = Emotional Response; Reac Com = Reactance to Compliance; ResisInfl =Resisting Influence; and ReacAdv= Reactance to Advice.

There are no significant differences found for individuals with father working or non-working in internal locus of control and in external locus of control. There is only slight difference found on external locus of control for means of psychological reactance in those individuals with non-working father shows more psychological reactance than that of individuals with father working. And in psychological reactance one of its subscales reactance to advice shows significant relationship in that

individual with non-working father shows more reactance to advice than the individual with father working.

**Table 14**

*One Way ANOVA for Differences on Subject Area in Academic Procrastination, Psychological Reactance and Locus of Control(N=300).*

Variables	Natural Sciences (n=126)		Social Sciences (n=55)		Computer Sciences (n=119)		F	p	i-j	95%CI		
	M	SD	M	SD	M	SD				D(i-j)	LL	UL
Acad.procr	58.11	9.26	59.65	8.01	61.08	8.18	3.62	.03	3>1	2.96	.34	5.59
PsychReac	43.17	7.66	45.69	8.03	44.70	7.43	2.43	.08	-	-	-	-
Emo Res	13.90	2.89	14.45	2.94	14.64	2.92	2.07	.13	-	-	-	-
Reac com	11.78	2.83	12.47	2.67	12.31	2.86	1.59	.21	-	-	-	-
Resisinfl	12.38	2.99	12.94	3.31	12.56	3.19	.62	.54	-	-	-	-
ReacAdv	5.09	1.69	5.81	1.80	5.17	1.53	3.90	.02	2>3	.72	.40	1.40
Loc	11.59	2.95	11.62	3.43	11.73	2.95	.072	.931	-	-	-	-

*Note.* Acadproc =Academic Procrastination; PsychReac =Psychological Reactance; Loc=Locus of Control; Emo Res = Emotional Response; Reac Com = Reactance to Compliance; ResisInfl =Resisting Influence; and ReacAdv= Reactance to Advice.

Table 8 shows that there is significant difference found for academic procrastination on area of study. The individual belongs to computer sciences procrastinate more than the individual from natural sciences. There is no significant relationship found with psychological reactance and locus of control for area of study.

**Table 15**

*One Way ANOVA for Comparison of Percentage on Study Variables (N=300).*

Variable	40 % <(n=7)		40-60 % (n=22)		60-80 % (n=180)		80% > (n=66)		F	p	i-j	D(i- j)	95%CI	
	M	SD	M	SD	M	SD	M	SD					LL	UL
Acad.proc	57.43	12.13	66.36	6.68	59.83	8.28	58.21	8.21	5.32	.00	2>3	6.53	2.02	11.04
											2>4	8.15	3.18	13.12
PsychRea	45.00	9.95	45.50	8.08	44.23	7.54	44.35	8.10	.42	.79	-	-	-	-
Emo Res	14.71	3.25	14.95	2.78	14.22	2.80	14.39	3.13	.46	.76	-	-	-	-
Reac com	12.57	2.69	12.00	2.79	12.13	2.73	11.98	3.29	.12	.97	-	-	-	-
Resisinfl	11.86	3.71	13.63	3.31	12.48	3.06	12.72	3.19	1.25	.28	-	-	-	-
ReacAdv	5.85	1.46	4.90	1.68	5.38	1.79	5.19	1.34	1.49	.20	-	-	-	-

*Note.* Acadproc =Academic Procrastination; PsychReac =Psychological Reactance; Loc=Locus of Control; Emo Res = Emotional Response; Reac Com = Reactance to Compliance; ResisInfl =Resisting Influence; and ReacAdv= Reactance to Advice.

Table 15 shows that there are significant differences found on the basis of percentage for procrastination. Table shows that individuals with low percentage procrastinate more than the individuals with high percentage. There is no significant link of percentage with psychological reactance and its subscales were found.

**Table 16**

*One Way ANOVA for Comparison of Percentage on the Basis of Locus of Control(N=136+145).*

Variable	Internal Locus of Control								F	i-j	D(i-j)	95%CI	
	less than 40% (n=4)		40-60 % (n=10)		60-80 % (n=83)		Above 80 % (n=33)					LL	UL
	M	SD	M	SD	M	SD	M	SD					
Acad.pro	49.23	6.99	58.94	8.68	59.25	8.80	59.57	8.29	1.77	-	-	-	-
Psyreac	40.25	3.86	41.88	8.14	42.76	7.54	43.31	8.86	.259	-	-	-	-
Emo Res	13.75	2.75	14.90	2.42	13.74	2.97	14.33	3.39	.58	-	-	-	-
Reac com	11.25	1.50	11.70	3.02	11.74	2.59	11.30	3.76	.15	-	-	-	-
Resisinfl	10.00	1.41	12.40	2.71	11.92	3.27	12.75	3.45	.96	-	-	-	-
ReacAdv	5.25	1.25	4.40	1.50	5.48	1.76	4.90	1.20	3.00	-	-	-	-
Variable	External Locus of Control								F	i-j	D(i-j)	95%CI	
	less than 40 % (n=3)		40-60 % (n=12)		60-80 % (n=98)		Above 80 % (n=32)					LL	UL
	M	SD	M	SD	M	SD	M	SD					
Acad.pro	68.33	7.50	67.22	7.66	59.93	7.85	56.17	9.03	8.39**	2>3	7.29	1.85	12.74
Psyreac	51.33	13.01	46.22	7.59	45.33	7.25	45.86	6.90	.712	-	-	-	-
Emo Res	16.00	4.00	14.57	3.89	14.64	2.60	14.61	2.76	.23	-	-	-	-
Reac com	14.33	4.72	14.64	3.24	12.87	2.82	12.76	2.95	.44	-	-	-	-
Resisinfl	14.33	4.72	14.64	3.24	12.87	2.82	12.76	2.95	-	-	-	-	-
ReacAdv	6.66	1.52	5.21	1.67	5.29	1.82	5.58	1.42	-	-	-	-	-

\*\*  $p < .05$ .

Table 16 shows that there is no significant relationship found for internal locus with percentage on academic procrastination and psychological reactance. In external locus of control significant relationship of percentage with academic procrastination was found. The table shows that individuals with low percentage procrastinate more than that of individuals with high percentage. There is no relationship of percentage with psychological reactance was found.

**Table 17**

*One Way ANOVA for Comparison of Socio Economic Status on Study Variables (N=300).*

Variable	Low (n = 18)		Middle (n = 273)		High (n = 7)		F	p	(i-j)	D(i-j)	95% CI	
	M	SD	M	SD	M	SD					LL	UL
	Acad.pro	62.11	8.89	59.65	8.63	52.71						
Psyreac	45.78	6.86	44.19	7.76	41.71	7.45	.74	.47				
Emo Res	15.27	2.60	14.27	2.95	12.71	2.21	2.04	.13				
Reacom	12.05	3.15	12.13	2.18	12.00	2.44	.01	.98				
Resisinfl	12.78	3.33	12.54	3.15	12.00	2.23	.15	.85				
ReacAdv	5.66	1.53	5.23	1.67	5.00	2.16	.64	.52				

*Note.* Acadproc =Academic Procrastination; PsychReac =Psychological Reactance; Loc=Locus of Control; Emo Res = Emotional Response; Reac Com = Reactance to Compliance; ResisInfl =Resisting Influence; and ReacAdv= Reactance to Advice.

Table 17 shows that there is significant difference found for individual on basis of socio economic status for academic procrastination. The individuals with low socioeconomic status procrastinate more than the individuals with high socio economic status. There are no significant differences found with psychological reactance and its subscales.

There are no significant differences found on the basis of socio economic status for individuals with internal locus of control. In external locus of control significant difference was found for psychological reactance and one of its subscales Resistance to Influence. It indicates that the individuals with low socio economic status show more psychological reactance than the individuals with high socioeconomic status. In sub scales of psychological reactance individuals with middle socio economic shows more resistance to influence than the individuals with low socioeconomic status.



**Discussion**

The present study aims to investigate the relationship between academic procrastination psychological reactance and locus of control among sample of university students. Furthermore the study also explore the relationship of various demographics with study variables like gender, socioeconomic status, family system, mother and father working status in relation to measuring these variables of study. The reliable and standardized instruments were used to measure the variables of study, Lays Procrastination Scale was used to measure the procrastination among students (Lay, 1986), Sulzburg State Reactance Scale was used to measure psychological reactance and Rotter Locus of Control Scale (Rotter,1966) was used to measure internal and external locus of control among students. In the study sample is divided into basis of internal and external locus of control and run all of analysis separately with internal and external locus of control and report it separately in the result section. The sample of study was taken from different universities of Rawalpindi and Islamabad mainly from Quaid-i-Azam University, FAST University and COMSATS University Islamabad. Frequencies and percentage of demographic variables were calculated in order to gain an understanding of the sample characteristics (Table 1).

In order to fulfill the study objectives that was to determine the relationship between academic procrastination psychological reactance and locus of control among university students and for purpose of finding strength and direction of relationship, correlation coefficient were calculated. In the study our first hypothesis was their will be positive relationship between academic procrastination psychological reactance. The findings of study prove this that there is positive relationship between academic procrastination psychological reactance. As the literature indicates that the reactance correlates positively with procrastination. Reactance was considerably linked to delay only when good work on the task was of relatively high significance (Malantinova, 2014).

Second hypothesis was that there will be positive relationship between students with external locus of control and academic procrastination. But our study did not proves this hypothesis as there was no significant relationship found between

students with external locus of control and academic procrastination in study. The literature also proves this as one of study conducted as in study by (Procházka, 2014). The study was concerned with relationship between procrastination and psychological reactance. The study was concerned that the people with external locus of control procrastinate more than the individuals with internal locus of control. Correlation analysis did not reveal a statistically significant relationship between the variables investigated in study. The theory that the internality/externality of locus of control correlates with academic procrastination was not confirmed. Students who feel responsible for the results of their work put off academic tasks to the same extent as students who regard the results as more the effect of chance or external circumstances.

Third hypothesis was that there will be negative relationship between students with internal locus of control and academic procrastination. Our hypothesis was rejected as there is no significant difference between internal locus of control and academic procrastination in this study. The above literature proving the second hypothesis also proves this hypothesis. Correlation analysis did not reveal a statistically significant relationship between the variables investigated in study. The theory that the internality/externality of locus of control correlates with academic procrastination was not confirmed. Students who feel responsible for the results of their work put off academic tasks to the same extent as students who regard the results as more the effect of chance or external circumstances (Procházka, 2014).

Our fourth hypothesis was that males will procrastinate more than the females. This hypothesis was rejected as there is no major difference found between males and females in our study. Different investigations have reported academic procrastination in both genders while a few examinations indicated no distinction between both genders as far as academic procrastination is concerned. *t*-test for sample indicates that there are no significant differences found on the basis of gender in study. This fact was consistent with other studies examining academic procrastination (Ferrari, 1989; Solomon & Rothblum, 1984). The tendency to delay academic tasks is common in both man and women. There were no overall differences in sex on procrastination (Beutel et al., 2016).

There was another hypothesis that stated there will be a negative relationship between academic procrastination and percentage and our study proves this. This shows that the individuals with low percentage procrastinate more than the

individuals with high percentage. The literature on this hypothesis also supports this. There was a study conducted on academic procrastination and academic performance (Goroshit, 2018). Findings indicated that studying procrastination was negatively associated with final exam grade. Direct relationships between self-reported academic procrastination and academic achievement were negative but weak. There was another study conducted on academic procrastination and academic performance (Lakshminirayan, Reddy, & Siddana, 2013). Students who were considered high procrastinators performed below average in their academics, whereas low procrastinators scored average or above average in their academic performance. The results of the Spearman's correlation coefficient test showed negative correlation between procrastination score and academic performance indicating that students with high procrastination scores performed below average in their academics.

The demographic was family system. The individuals with internal locus of control show no significant difference on procrastination. The individuals in external locus of control show significant difference in procrastination. There are no significant found on the basis of working status of mother but there are significant differences found with father working status in that individual with father non-working procrastinate more than the individuals with father working and in locus of control with reference to external locus of control differences were found that the individuals with father non-working and external locus of control shows more reactance. The discrepancy of non-significant result in relation to parents working status shows that individuals procrastinate and show equal level of reactance but no significant difference found between parents working and non-working group as this is part of individual's daily life.

### **Conclusion**

The current study aims to investigate the relationship between academic procrastination psychological reactance and locus of control. Findings of the study shows that there is positive relationship between academic procrastination and psychological reactance but there is no significant relationship of academic procrastination with locus of control was found and there is significant positive relationship between psychological reactance and overall locus of control. The study also makes the comparison with various demographics like gender, age, socioeconomic status, family system in relation to measuring these variables. Additionally, the current study has theoretical and practical implications.

### **Limitations of study**

The current study has several limitations as there was shortage of time and resources. For present study sample was taken by convenient sampling technique that may not result the whole population. The sample was only taken from university students so the results of study are not applicable to all academic levels like school and colleges. In the study self-report measures determining only subjective report by participants that cannot ensure the truthfulness of information given by them. The instruments used in study were not culturally adopted which limited the validity of instrument. Locus of control scale used in study was not culturally adopted and our sample face difficulty in understanding some of its items that affect our results. So future researches should use scale that is culturally bound or adopt the scale according to cultural relevance.

In this study we didn't focus on analysis related to public verses private university so in future university wise analysis should be considered do comparison on the basis of public verses private university. Our sample for most of demographics like socioeconomic status was and father working status was not equally distributed and it can affect our results so future researches so future researches try to maintain equal sample distribution. Locus of control scale used in study was not culturally adopted and our sample face difficulty in understanding some of its items that affect our results. So future researches should use scale that is culturally bound or adopt the scale according to cultural relevance.

To ensure the considerable representation of group of individuals and representative distribution of population to whom results will be generalized and transferred normally required a large sample size, so the researcher should consider the large sample size. Some suggestions for future research are that in future the research should be conducted on a large sample which properly represents the population. The present study is only restricted to university students so in future it should be conducted on different academic levels like school and colleges. In future the other demographic variables should be considered that are not considered in this study.

### **Implications**

The findings of research of have important implications. As academic procrastination is an important phenomena and it is present in almost every students,

this study will be helpful in understanding this concept in Pakistan with relationship to psychological reactance. There are limited researches on relationship academic procrastination and psychological reactance so this study help find the relationship between these variables in classroom stings and helps very much in academics.

In the lights of findings different programs could be developed in reduce procrastination among students. This research would prove beneficial in academic settings. Procrastination can be overcome in students by giving them awareness programs. Provide students some healthy choices and freedom so that they can procrastinate less.

## References

- Abramowitz, C. V., Abramowitz, S. I., Roback, H. B., & Jackson, C. (1974). Differential effectiveness of directive and nondirective group therapies as a function of client internal-external control. *Journal of Consulting and Clinical Psychology, 42*(6), 849.
- Aitken, M. E. (1983). A personality profile of the college student procrastinator. *Scientific Electronic Library, 7*(495), 544-550.
- Ajzen, I. (1985). *From intentions to actions: A theory of planned behavior*. Action control (pp. 11-39). Berlin: Springer.
- Akca, F. (2012). An investigation into the self-handicapping behaviors of undergraduates in terms of academic procrastination, the locus of control and academic success. *Journal of Education and Learning, 1*(2), 288-297.
- Akın, A. (2011). Academic locus of control and self-handicapping. *Procedia- Social Behavioral Sciences, 30*(2), 812-816.
- Andreoli, V. A., Worchel, S., & Folger, R. (1974). Implied threat to behavioral freedom. *Journal of Personality and Social Psychology, 30*(6), 765.
- Argiropoulou, M. I., & Ferrari, J. R. (2015). Chronic procrastination among emerging adults: Factor structure of the Greek version of the general procrastination scale. *Hellenic Journal of Psychology, 12*, 85-104.
- Arif, H., Noor, S. S., & Muneer, S. (2014). Academic procrastination among male and female university and college students. *FWU Journal of Social Sciences, 8*(2), 65.
- Ashkanasy, N. M., & Gallois, C. (1987). Locus of control and attributions for academic performance of self and others. *Australian Journal of Psychology, 39*(3), 293-305.
- Aziz, S., & Tariq, N. (2013). A web-based survey of procrastination and its outcomes among Pakistani adolescents. *Journal of Behavioral Sciences, 23*(1), 118-131.

- Bachrach, A. (2012). Understanding the psychology of procrastination and overcoming it. *British Journal of Guidance & Counseling, 15*(6), 304-310.
- Balkis, M., & Duru, E. (2009). Prevalence of academic procrastination behavior among pre-service teachers and its relationship with demographics and individual preferences. *Journal of Theory & Practice in Education, 5*(1), 110-130
- Baltaş, A. (2000). Emotional intelligence and its relation to everyday behavior. *Personality and Individual Differences, 36* (6), 1387-140.
- Bandura, A. (1986). Social foundations of thought and action. *British Library Cataloguing in Publishing Data, 39*(3), 94-104.
- Bandura, A. (1997). Self-efficacy: The exercise of control. *Macmillan, 50*(3), 801-804.
- Bandura, A., & Walters, R. H. (1977). Social learning theory. *General Learning Press, 1, 1-46.*
- Barratt, N. A. (2010). *An empirical phenomenological investigation of procrastinating behavior* (Doctoral Dissertation). Rhodes University,
- 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*(5), 3.
- Becker, G. S. (2007). Health as human capital: Synthesis and extensions. *Oxford Economic Papers, 59*(3), 379-410.
- Bekleyen, N. (2017). Understanding the academic procrastination attitude of language learners in Turkish universities. *Educational Research and Reviews, 12*(3), 108-115.
- Berkowitz, L., & Harmon-Jones, E. (2004). Toward an understanding of the determinants of anger. *Emotion, 4*(2), 107.
- Beswick, G., & Mann, L. (1994). State orientation and procrastination. *Volition and Personality: Action Versus State Orientation, 23*, 391-396.

- Beswick, G., Rothblum, E. D., & Mann, L. (1988). Psychological antecedents of student procrastination. *Australian Psychologist*, 23(2), 207-217.
- Beutel, M. E., Klein, E. M., Aufenanger, S., Brähler, E., Dreier, M., Müller, K. W., & Wölfling, K. (2016). Procrastination, distress and life satisfaction across the age range a German representative community study. *PloS One*, 11(2), 1-10.
- Beydokhti, T. (2017). Academic procrastination and its characteristics: A narrative review. *Future of Medical Education Journal*, 7(2), 43-50.
- Binder, K. (2000). *The effects of an academic procrastination treatment on student procrastination and subjective well-being* (Doctoral dissertation). Canada Carleton University.
- Biondo, J., & MacDonald Jr., A. P. (1971). Internal-external locus of control and response to influence attempts. *Journal of Personality*, 39(3), 407-419.
- Boysan, M., & Kiral, E. (2017). Associations between procrastination, personality, perfectionism, self-esteem and locus of control. *British Journal of Guidance & Counseling*, 45(3), 284-296.
- Brehm J.W. (1966). *A theory of psychological reactance*. New York, USA: Academic Press.
- Brehm, J. W. (1972). Responses to loss of freedom: A theory of psychological reactance. *General Learning Press*, 5, 420-426.
- Brehm, S. S. (1977). The effect of adult influence on children's preferences: Compliance versus opposition. *Journal of Abnormal Child Psychology*, 5, 31-41.
- Brehm, S. S. (1981). Oppositional behavior in children: A reactance theory approach. *Developmental Social Psychology: Theory and research*, 96-121.
- Briody, R. (1980). *An exploratory study of procrastination* (Doctoral dissertation), Washington, DC: American psychological Association.



- Brown, A. R., Finney, S. J., & France, M. K. (2011). Using the bifactor model to assess the dimensionality of the Hong Psychological Reactance Scale. *Educational and Psychological Measurement, 71*(1), 170-185.
- Buboltz Jr, W. C., Johnson, P., & Woller, K. M. (2004). Psychological reactance in college students: Family- of- origin predictors. *Journal of Counseling & Development, 81*(3), 311-317.
- Buboltz Jr., W. C., Williams, D. J., Thomas, A., Seemann, E. A., Soper, B., & Woller, K. (2003). Personality and psychological reactance: extending the nomological net. *Personality and Individual Differences, 34*(7), 1167-1177.
- Burgoon, M., Alvaro, E., Grandpre, J., & Voulodakis, M. (2002). Revisiting the theory of psychological reactance. *The Persuasion Handbook, 7*, 213-232.
- Burka, J. B., & Yuen, L. M. (1983). Procrastination: Why you do it what to do about it. *Cambridge, MA Da Capo Press, 7*(8), 3-7.
- Cavendish, W. M. (2008). A longitudinal study of depressive symptomology and self-concept in adolescents. *The Journal of Special Education, 42*(2), 67-78.
- Chadee, D. (2011). Toward freedom: Reactance theory revisited. *Theories in Social Psychology, 3*, 13-43.
- Cheng, C., Cheung, S. F., Chio, J. H. M., & Chan, M. P. S. (2013). Cultural meaning of perceived control: A meta-analysis of locus of control and psychological symptoms across 18 cultural regions. *Psychological Bulletin, 139*(1), 152.
- Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling, 9*(2), 233-255.
- Choi, N. (1998). The effects of test format and locus of control on test anxiety. *Journal of College Student Development, 39*(6), 616-20.
- Choudhry, S. (2008). Relationship between personality traits and *procrastination among students*, (Unpublished MSc Research Report). National Institute of Psychology, Quaid -i- Azam University, Islamabad, Pakistan.
- Comber, B. (2006). Critical literacy educators at work. *The Practical Critical Educator, 5*(7), 51-65.

- Deniz, M., Tras, Z., & Aydogan, D. (2009). An Investigation of Academic Procrastination, Locus of Control, and Emotional Intelligence. *Educational Sciences: Theory and Practice*, 9(2), 623-632.
- Dillard, J. P., & Shen, L. (2005). On the nature of reactance and its role in persuasive health communication. *Communication Monographs*, 72(2), 144-168.
- Donnell, A. J., Thomas, A., & Buboltz Jr, W. C. (2001). Psychological reactance: Factor structure and internal consistency of the questionnaire for the measurement of psychological reactance. *The Journal of Social Psychology*, 141(5), 679-687.
- Dowd, E. T., & Wallbrown, F. (1993). Motivational components of client reactance. *Journal of Counseling & Development*, 71, 533-538.
- Dowd, E. T., & Wallbrown, F. (1993). Motivational components of client reactance. *Journal of Counseling & Development*, 71(5), 533-538.
- Dowd, E. T., Milne, C. R., & Wise, S. L. (1991). The Therapeutic Reactance Scale: A measure of psychological reactance. *Journal of Counseling & Development*, 69(6), 541-545.
- Doyle J. A. & Paludi M. A. (1998). Sex and gender: The human experience (4th ed.). San Francisco: McGraw- Hill.
- Ellis, A., & Knaus, W. J. (1984). Overcoming procrastination. *Creative Education*, 4(7), 3-10
- Esmaili, N., & Monadi, M. (2016). Identifying the causes of academic procrastination from the perspective of male middle school male students. *International Journal of Humanities and Cultural Studies*, 6(3), 50-80
- Ferrari, J. R. (1991). Self-handicapping by procrastinators: Protecting self-esteem, social-esteem, or both. *Journal of Research in Personality*, 25(3), 245-261.
- 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.

- Ferrari, J. R. (2011). Still procrastinating: The no-regrets guide to getting it done. *John Wiley & Sons*, 3(7), 78-80.
- Ferrari, J. R., & Ware, C. B. (1992). Academic procrastination: Personality. *Journal of Social Behavior and personality*, 7(3), 495-502.
- Ferrari, M. A. (1989). Role of melanin in appressorium function. *Experimental Mycology*, 13(4), 403-418.
- Festinger, L. (1957). A theory of cognitive dissonance. *Stanford University Press*, 3(5) 1-10
- Flett, G. L., Stainton, M., Hewitt, P. L., Sherry, S. B., & Lay, C. (2012). Procrastination automatic thoughts as a personality construct: An analysis of the procrastinatory cognitions inventory. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 30(4), 223-236.
- Fox, S., & Spector, P. E. (1999). A model of work frustration aggression. *Journal of organizational behavior*, 20(6), 915-931.
- Furnham, A., & Steele, H. (1993). Measuring locus of control: A critique of general, children's, health and work-related locus of control questionnaires. *British Journal of Psychology*, 84(4), 443-479.
- Gafni, R., & Geri, N. (2010). Time management: Procrastination tendency in individual and collaborative tasks. *Interdisciplinary Journal of Information, Knowledge, and Management*, 5(1), 15-125.
- Gardner, D. C. (1981). Career maturity and Locus of Control: Important factors in career training. *College Student Journal*, 15(3), 239-46.
- Gardner, L., & Leshner, G. (2010). The role of narrative and other-referencing in attenuating psychological reactance to diabetes self-care messages. *Health Communication*, 31(6), 738-751.
- Goggin, W. C. (1981). Prediction as persuasion and threat: interaction of locus of control and locus of prediction on compliance and reactance. *Academic Leadership Journal in Student Research*, 6(3), 1-8.

- Goroshit, M. (2018). Academic procrastination and academic performance: An initial basis for intervention. *Journal of Prevention & Intervention in the Community, 46*(2), 131-142.
- Graham, T. R., Kowals, K. C., & Crocker, P. R. (2002). The contributions of goal characteristics and causal attributions to emotional experience in youth sport participants. *Psychology of Sport and Exercise, 3*(4), 273-291.
- Guilfoyle, E. C. (1986). The effects of psychological reactance and paradoxical and self-directive forms of brief psychotherapy on procrastination. *Educational Sciences: Theory & Practice, 7*(1), 376-385
- Hardey, P. (1993). Gurragorambla Creek horse track monitoring in Kosciusko National Park. *Unpublished report. Cited, 3-17.*
- Hasanagic, A., & Ozsagir, C. B. (2018). The validity exploration of general procrastination Scale. *Epiphany, 11*(1), 13-19.
- Haycock, L., McCarthy, P., and Skay, C. (1998). Procrastination in college students: The role of self efficacy and anxiety. *Journal of Counseling & Development, 76*, 317-324.
- Heider, F. (1958). *The psychology of interpersonal relations* (pp.13-15). New York, N.A: John Wiley.
- Heider, F. (2013). The psychology of interpersonal relations. *Psychology Press, 3*(7), 130-135.
- Hess, B., Sherman, M. F., & Goodman, M. (2000). Eveningness predicts academic procrastination: the mediating role of Neuroticism. *Journal of Social Behavior and Personality, 15*, 61–74.
- Hong, S. M., & Page, S. (1989). A psychological reactance scale: Development, factor structure and reliability. *Psychological Reports, 64*(3), 1323-1326.
- Huizing, R. L. (2015). Who's controlling locus of control? Cross-cultural LOC usage. *Identifying Primary Characteristics of Servant Leadership: 1 Delphi Study, 9*(1), 33.

- Hull, C. L. (1952). A behavior system: An introduction to behavior theory concerning the individual organism. *Yale University Press*, 16(7), 75-84
- Islak, R. B. (2011). *Academic procrastination in relation to gender among gifted and talented college students* (Doctoral dissertation). Beaumont: Lamar University.
- Jacobs, A. D. (2015). *Implementation of business enterprise software in educational organizations: Reactance, efficacy, empathy, and locus of control* (Doctoral dissertation). San Antonio: The University of Texas.
- Janssen, (2010). Systematic review of the health benefits of physical activity and fitness in school-aged children and youth. *International Journal of Behavioral Nutrition and Physical Activity*, 7(1), 40.
- Janssen, T., & Carton, J. S. (1999). The effects of locus of control and task difficulty on procrastination. *The Journal of Genetic Psychology*, 160(4), 436-442.
- Jaradat, A. K. M., & Rost, D. H. (2004). *Test anxiety in Jordanian students: Measurement, correlates and treatment* (Doctoral dissertation). Marburg, Hesse: University of Marburg.
- Jing, Y. (2009). *The study of the relationship between academic procrastination and parenting-style, self-worth and locus of control* (ProQuest Dissertations Publishing). Wuhan, China: Central China Normal University.
- Jowkar, B., & Delavarpur, M. (2006). Relationship between procrastination and goal orientation. *Journal of New Education Ideas*, 5(3), 61-80.
- Judge, T. A. (1997). The dispositional causes of job satisfaction: A core evaluations approach. *Research in Organizational Behavior*, 19, 151-188.
- Kelley, H. H. (1967). Attribution theory in social psychology. In Nebraska symposium on motivation. *University of Nebraska Press*, 6(1), 192-238.
- Kelly, G. (2003). *The psychology of personal constructs: USA New York Clinical diagnosis and psychotherapy*. New York: Routledge.

- Klingsieck, K. B. (2013). Procrastination European psychologist. *Hogrefe publishing*, 18(1), 24-34.
- Kluever, R. C., & Green, K. E. (1998). The responsibility scale: A research note on dissertation completion. *Educational and Psychological Measurement*, 58(3), 520-531.
- Lakshminarayan, N., Potdar, S., & Reddy, S. G. (2013). Relationship between procrastination and academic performance among a group of undergraduate dental students in India. *Journal of Dental Education*, 77(4), 524-528.
- Lay, C. H. (1986). At last, my research article on procrastination. *Journal of Research in Personality*, 20(4), 474-495.
- Lay, C. H., & Schouwenburg, H. C. (1993). Trait procrastination, time management, and academic behavior. *Journal of Social Behavior & Personality*, 8, 647-662.
- Lefcourt, H. M. (1991). Locus of control. Measures of social psychological attitudes, *Academic Press.1*, 413-499.
- Linder, D. E., & Crane, K. A. (1970). Reactance theory analysis of predecisional cognitive processes. *Journal of Personality and Social Psychology*, 15(3), 258- 262.
- Lowinger, R. J., Kuo, B. C., Song, H. A., Mahadevan, L., Kim, E., Liao, K. Y. H., ... & Han, S. (2016). Predictors of academic procrastination in Asian international college students. *Journal of Student Affairs Research and Practice*, 53(1), 90-104.
- Maier, S. F., & Seligman, M. E. (1976). Learned helplessness theory and evidence. *Journal of Experimental Psychology*, 105(1), 3.
- Maier, S. F., Peterson, C., & Schwartz, B. (2000). From helplessness to hope: The seminal career of Martin Seligman. The science of optimism and hope: *Research Essays in Honor of Martin EP Seligman*, 3(7), 11-37.

- Malatincová, T. (2015). The mystery of “should”: Procrastination, delay, and reactance in academic settings. *Personality and Individual Differences*, 72, 52-58.
- Marshall, G. N., Wortman, C. B., Kusulas, J. W., Hervig, L. K., & Vickers Jr., R. R. (1992). Distinguishing optimism from pessimism: Relations to fundamental dimensions of mood and personality. *Journal of Personality and Social Psychology*, 62(6), 1067-1089.
- Martinko, M. J. (1995). The nature and function of attribution theory within the organizational sciences. *Journal of Social Behavior & Personality*, 4(5), 7-16.
- Mazis, M. B., Settle, R. B., & Leslie, D. C. (1973). Elimination of phosphate detergents and psychological reactance. *Journal of Marketing Research*, 10(4), 390-395.
- Miller, W. R., & Seligman, M. E. (1975). Depression and learned helplessness in man. *Journal of Abnormal Psychology*, 84(3), 228–238.
- Mook, s. (1994). Psychological Reactance: Effects of Age and Gender. *The Journal of Social Psychology*, 2(134).
- Moonaghi, H. K., Mirhaghi, A., Oladi, S., & Zeydi, A. E. (2015). A journey across an unwelcoming field: A qualitative study exploring the factors influencing nursing students' clinical education. *Health Science Journal*, 9(4), 1.
- Morris, R. G., & Higgins, G. E. (2010). Criminological theory in the digital age: The case of social learning theory and digital piracy. *Journal of Criminal Justice*, 38(4), 470-480.
- Mulry, G. (1994). Psychological Reactance and Brief Treatment of Academic Procrastination. *Journal of College Student Psychotherapy*. (9) 1.
- Nowicki, S., & Segal, W. (1974). Perceived parental characteristics, locus of control orientation, and behavioral correlates of locus of control. *Developmental Psychology*, 10(1), 33–37.
- Olson, K., & Hargenhan, H. (1976). *An introduction to learning theory; translated by Seif*, Tehran. Iran: A. A. Doran Publications;

- Orpen, C. (1998). The causes and consequences of academic procrastination. *Westminster Studies in Education, 21*(1), 73-75.
- Ozer, B. U., & Ferrari, J. R. (2011). Gender orientation and academic procrastination: Exploring Turkish high school students. *Individual Differences Research, 9*(1), 33-40.
- Özer, 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.
- Peace, S. D., & Sprinthall, N. A. (1998). Training school counselors to supervise beginning counselors: *Theory, Research, and Practice. Professional School Counseling, 1*(5), 2-8.
- Penk, W. E. (1969). Age changes and correlates of internal-external locus of control scale. *Psychological Reports, 25*(3), 856.
- Popoola, M. M. (2005). Living with diabetes: The holistic experiences of Nigerians and African Americans. *Holistic Nursing Practice, 19*(1), 10-16.
- Prochazka, J. (2014). The relationship between procrastination and locus of control in academic environment. *Research Oriented Study, 33*(7), 383-392.
- Prohaska, V., Morrill, P., Atilas, I., & Perez, A. (2000). Academic procrastination by nontraditional students. *Journal of Social Behavior and Personality, 15*(5), 125.
- Proulx, t., Inzlicht, M & Harmon, E, 2012. (2012). Understanding all inconsistency compensation as a palliative response to violated expectations. *Trends in Cognitive Sciences, 16*(5), 285-291.
- Rosário, P., Costa, M., Núñez, J. C., González-Pienda, J., Solano, P., & Valle, A. (2009). Academic procrastination: Associations with personal, school, and family variables. *The Spanish Journal of Psychology, 12*(1), 118-127.
- Rothblum, E. D., Solomon, L. J., & Murakami, J. (1986). Affective, cognitive, and behavioral differences between high and low procrastinators. *Journal of Counseling Psychology, 33*(4), 387.



- Rotter, J. B. (1954). Social learning and clinical psychology. *Journal of Educational Psychology, 71*(1), 3.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied, 80*(1), 1.
- Rotter, J. B. (1971). Generalized expectancies for interpersonal trust. *American Psychologist, 26*(5), 443.
- Seligman, M. E. (1976). Learned helplessness: theory and evidence. *Journal of Experimental Psychology General, 105*(1), 3.
- Shaver, K. G. (2016). *An introduction to attribution processes*(pp.2-10). New York, NY:Routledge.
- Shehu, A., & Bushi, N. (2015). Is there any connection between academic performance, locus of control and learning styles. *Academic Journal of Interdisciplinary Studies, 4*(22), 188.
- Sittenthaler, S., Traut-Mattausch, E., Steindl, C., & Jonas, E. (2015). Salzburger State Reactance Scale (SSR Scale). *Zeitschrift für Psychologie, 223* (4), 257–266.
- Smith, R. E. (1985). Changes in locus of control as a function of life crisis resolution. *Journal of Abnormal Psychology, 75*(3), 329.
- Solomon, L. J., & Rothblum, E. D. (1984). Academic procrastination: frequency and cognitive-behavioral correlates. *Journal of Counseling Psychology, 31*(4), 503.
- Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin, 133*(1), 65
- Steel, P., & Ferrari, J. (2013). Sex, education and procrastination: An epidemiological study of procrastinators' characteristics from a global sample. *European Journal of Personality, 27*, 51–58.
- Strickland, B. R. (1989). Internal and external control expectancies: From contingency to creativity. *American psychologist, 44*(1), 1.

- Svartdal, F., Pfuhl, G., Nordby, K., Foschi, G., Klingsieck, K. B., Rozental, A., & Rębkowska, K. (2016). On the measurement of procrastination: comparing two scales in six European countries. *Frontiers in Psychology, 7*, 1307.
- Trice, A. D. (1985). An academic locus of control scale for college students. *Perceptual and Motor Skills, 61*(3), 1043-1046.
- Trice, A. D., & Milton, C. T. (1987). Locus of control as a predictor of procrastination among adults in correspondence courses. *Perceptual and Motor Skills, 65*, 1002.
- Uzun, B., Ferrari, J. R., & LeBlanc, S. (2018). Put aside procrastination positive emotional outcomes from self-forgiveness for delays. *North American Journal of Psychology, 20*(1), 1-10.
- Van Eerde, W. (2003). A meta-analytically derived nomological network of procrastination. *Personality and Individual Differences, 35*(6), 1401-1418.
- Wang, S., Tomlinson, E. C., & Noe, R. A. (2010). The role of mentor trust and protege internal locus of control in formal mentoring relationships. *Journal of Applied Psychology, 95*(2), 358.
- Weiner, B., Nierenberg, R., & Goldstein, M. (1976). Social learning (locus of control) versus attribution (causal stability) interpretations of expectancy of success. *Journal of Personality, 44*(1), 52-68.
- Weiner, B., Pintrich, P., & Shunk, D. (1986). An attribution theory of emotion and motivation. New York: Springer-Verlag. In *Motivation in Education Theory Research and Applications*. Prentice Hall.
- Wicklund, R. A., & Brehm, J. W. (1968). Attitude change as a function of felt competence and threat to attitudinal freedom. *Journal of Experimental Social Psychology, 4*(1), 64-75.
- Woller, K. M., Buboltz, W. C., & Loveland, J. M. (2007). Psychological reactance: Examination across age, ethnicity, and gender. *The American Journal of Psychology, 3*(7), 15-24.

- Wolters, C. A. (2003). Understanding procrastination from a self-regulated learning perspective. *Journal of Educational Psychology*, 95(1), 179.
- Woolfolk, A. (2007) *Educational psychology*.(10th Edition), Allyn and Bacon, Boston MA
- Zeidner, M. (1992). Sources of academic stress: The case of first year Jewish and Arabcollege students in Israel. *Higher Education*, 24(1), 25-40.
- Zuber, D. (2000). *A study of the relationship between locus of control, behavior and academic achievement in 5th grade students*(Doctoral Dissertations).Glassboro, NJ: Rowan University.

**Appendix A****Information sheet**

I am student of MSc (Psychology) at National Institute of Psychology, Quaid-i-Azam University, Islamabad. This research is part of my master's degree. The aim is to study student's experiences at university, the questions relate to how you handle everyday life at campus.

For this purpose, you are being provided with a booklet consisting of questionnaire in which your opinion is asked. Kindly take time to read the following instructions carefully and discuss if there is anything that is not clear or if you would like more information. It will take only 15-20 minutes to complete this booklet. Please don't leave any option unmarked. You should only participate if you want and you also have right to quit at any moment. Any information you provide will be kept anonymous. The researcher will not use your personal information provided on the demographic form for any purpose outside of this research project

Amna Bibi.

Participant signature \_\_\_\_\_

**Appendix B****Demographic**

Age: \_\_\_\_\_

Gender: \_\_\_\_\_

Socio economic status: High  Middle  Low 

Monthly family income: \_\_\_\_\_

No. of hours you study: \_\_\_\_\_

Mother working status: Working  Non-Working Father working status: Working  Non-Working 

Last passed semester percentage: \_\_\_\_\_

Subject area: Natural sciences  Social sciences  others \_\_\_\_\_Family system: Joint  Nuclear

### Appendix C

For each statement, decide whether the statement is uncharacteristic or characteristic of you using the following 5 point scale.

Extremely Uncharacteristic =1	Moderately Uncharacteristic =2	Neutral=3	Moderately characteristic=4	Extremely Characteristic=5
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		1	2	3	4	5
1.	I often find myself performing tasks that I had intended to do days before.					
2	I do not do assignments until just before they are to be handed in.					
3	When I am finished with a library book, I return it right away regardless of the date it is due.					
4	When it is time to get up in the morning, I most often get right out of bed.					
5	A letter may sit for days after I write it before mailing it.					
6	I generally return phone calls promptly.					
7	Even with jobs that require little else except sitting down and doing them, I find they seldom get done for days.					
8	I usually make decisions as soon as possible.					
9	I generally delay before starting on work I have to do.					
10	I usually have to rush to complete a task on time.					
11	When preparing to go out, I am seldom caught having to do something at the last minute.					
12	In preparing for some deadline, I often waste time by doing other things.					
13	I prefer to leave early for an appointment					
14	I usually start an assignment shortly after it is assigned.					
15	I often have a task finished sooner than necessary.					

16	I always seem to end up shopping for birthday or Christmas gifts at the last minute					
17	I usually buy even an essential item at the last minute.					
18	I usually accomplish all the things I plan to do in a day.					
19	I am continually saying I ill do it tomorrow.					
20	I usually take care of all the tasks I have to do before I settle down and relax for the evening.					

## Appendix D

Please read each statement carefully and chose the number that best describe your feelings about situation.

		stronglydisagree	Disagree	Neutral	Agree	Stronglyagree
		1	2	3	4	5
1.	Regulations trigger a sense of resistance in me.					
2	I find contradicting others stimulating.					
3	When something is prohibited, I usually think, "That's exactly what I am going to do."					
4	The thought of being dependent on others aggravates me.					
5	I consider advice from others to be an intrusion.					
6	I become frustrated when I am unable to make free and independent decisions.					
7	It irritates me when someone points out things which are obvious to me.					
8	I become angry when my freedom of choice is restricted.					
9	Advice and recommendations usually induce me to do just the opposite.					
10	I am contented only when I am acting of my own free will.					
11	I resist the attempts of others to influence me.					
12	It makes me angry when another person is					



	held up as a role model for me to follow.					
13	When someone forces me to do something, I feel like doing the opposite.					
14	.It disappoints me to see others submitting to Society's standards and rules.					

Please read each statement carefully and chose the number that best describe your feelings about situation.

## Appendix E

For each question there are two statements given. Please select the statement that you agree with the most

1	a. Children get into trouble because their parents punish them too much.	
	b. The trouble with most children now a days is that their parents are too easy with them.	
2	a. Many of the unhappy things in people's lives are partly due to bad luck.	
	b. People's misfortunes result from the mistakes they make.	
3	a. One of the major reasons why we have wars is because people don't take enough interest in politics.	
	b. There will always be wars, no matter how hard people try to prevent them.	
4	a. In the long run people get the respect they deserve in this world.	
	b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.	
5	a. The idea that teachers are unfair to students is nonsense.	
	b. Most students don't realize the extent to which their grades are influenced by accidental happenings.	
6	a. Without the right breaks one cannot be an effective leader.	
	b. Capable people who fail to become leaders have not taken advantage of their opportunities.	
7	a. No matter how hard you try some people just don't like you.	
	b. People who can't get others to like them don't understand how to get along with others.	
8	a. Heredity plays the major role in determining one's personality	
	b. It is one's experiences in life which determine what they're like	
9	a. I have often found that what is going to happen will happen.	
	b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.	
10	a. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.	
	b. Many times exam questions tend to be so unrelated to course work that studying in really useless	
11	a. Becoming a success is a matter of hard work; luck has little or nothing to do with it.	

	b. Getting a good job depends mainly on being in the right place at the right time.	
12	a. The average citizen can have an influence in government decisions.	
	b. This world is run by the few people in power, and there is not much the little guy can do about it.	
13	a. When I make plans, I am almost certain that I can make them work.	
	b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.	
14	a. There are certain people who are just no good.	
	b. There is some good in everybody.	
15	a. In my case getting what I want has little or nothing to do with luck.	
	b. Many times we might just as well decide what to do by flipping a coin.	
16	a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.	
	b. Getting people to do the right thing depends upon ability. Luck has little or nothing to do with it.	
17	a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.	
	b. By taking an active part in political and social affairs the people can control world events.	
18	a. Most people don't realize the extent to which their lives are controlled by accidental happenings.	
	b. There really is no such thing as "luck."	
19	a. One should always be willing to admit mistakes.	
	b. It is usually best to cover up one's mistakes.	
20	a. It is hard to know whether or not a person really likes you.	
	b. How many friends you have depends upon how nice a person you are.	
21	a. In the long run the bad things that happen to us are balanced by the good ones.	
	b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.	
22	a. With enough effort we can wipe out political corruption.	
	b. It is difficult for people to have much control over the things politicians do in office.	
23	a. Sometimes i can't understand how teachers arrive at the grades they give.	
	b. There is a direct connection between how hard i study and the grades i get	
24	a. A good leader expects people to decide for themselves what they should do.	

	b. A good leader makes it clear to everybody what their jobs are.	
25	a. Many times I feel that I have little influence over the things that happen to me.	
	b. It is impossible for me to believe that chance or luck plays an important role in my life.	
26	a. People are lonely because they don't try to be friendly.	
	b. There's not much use in trying too hard to please people, if they like you, they like you.	
27	a. There is too much emphasis on athletics in high school.	
	b. Team sports are an excellent way to build character.	
28	a. What happens to me is my own doing.	
	b. Sometimes I feel that I don't have enough control over the direction my life is taking.	
29	a. Most of the time I can't understand why politicians behave the way they do.	
	b. In the long run the people are responsible for bad government on a national as well as on a local level.	

Thank you for your participation