Understanding Hoarding Behavior and its Correlates Among Clinical and Non-clinical Groups

BY

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NATIONAL INSTITUTE OF PSYCHOLOGY

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QUAID-I-AZAM UNIVERSITY

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BY

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A dissertation submitted to

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QUAID-I-AZAM UNIVERSITY

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In

Psychology

2023

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Understanding Hoarding Behavior and its Correlates Among Clinical and Non-Clinical Groups

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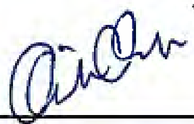

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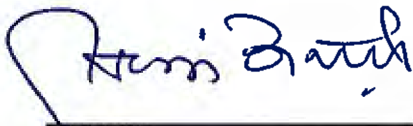

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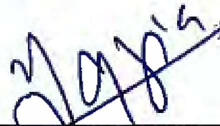

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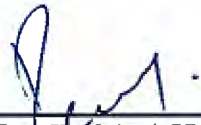

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To many

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Abstract

Hoarding is a mental health condition that has been added in DSM-V under the category of Obsessive Compulsive and Related Disorders and is characterized by difficulty discarding a number of objects irrespective of their actual value resulting in clutter causing significant distress and impairment in daily living (APA, 2013). Though it is considered to be a universal phenomenon, most of research has been done in Western societies and has rarely been examined in Asian cultures including Pakistan. The present study, therefore, aimed to examine the manifestation and correlates of hoarding behavior in cultural context of Pakistan which has been achieved across a sequence of three interrelated studies.

Objective of study I was to explore the phenomenon of hoarding behavior in Pakistan qualitatively. Grounded theory method was utilized as it infers that reality of any event or action is socially constructed (Charmaz, 2005) and takes context as an important factor. Six focus groups were conducted to collect data from adult sample from general public. Initially focus group guide was designed based on existing literature comprising of open ended questions which was revised after each FGD, following the grounded theory method. Analysis revealed four main aspects of hoarding behavior that were: cognitive component, affective component, personality dynamics and the socio-cultural aspect, each comprising of further categories and sub-categories. In addition, five semi structured interviews were done with clinical experts (3 psychiatrists, 2 psychologists) to assess their understanding regarding nature and perceived prevalence of the hoarding behavior in reference to clinical settings of Pakistan. Five main themes emerged through interviews were: nature of phenomenon, perceived prevalence, under-reported, experiential factors, and biological factors. Findings of qualitative study support the existing literature in many respects. However, it also revealed certain unique aspects like status transformation with

resulting sense of competition, gender role, impact of material deprivation, and religious construction for explanation of hoarding behavior as more of culture specific influences. Results also support the prevalence of hoarding behavior as an associated symptom in number of psychopathologies, however, as a separate disorder it is not well recognized in clinical settings of Pakistan.

Study II comprised of two phases. Phase-I aimed to develop an indigenous instrument to measure factors associated with hoarding based on the narrative from qualitative exploration. Both inductive and deductive approaches were used and a systematic procedure for scale development was followed. Data was collected from a sample of 400 individuals on which factor structure of scale was determined. A three factor solution with 22 items was found to be most coherent empirically and theoretically. Scale was named as "Determinants of Hoarding Scale" with three subscales labeled as Materialism (N = 8), Perceived Utility Value (N = 7), and Emotional Associations (N = 7). Psychometric properties of scale were found to be satisfactory with alpha value of .82 for Materialism, .81 for Perceived Utility Value, .83 for Emotional Associations, and .90 for complete scale. Confirmatory factor analysis was done on an independent data set of 250 individuals to establish construct validity. Phase-II intended to adapt the study measures into Urdu language that were not already available in target language. Therefore, Saving Inventory-Revised (SI-R; Frost, Steketee, & Grisham, 2004), Hoarding Rating Scale (HRS-I; Tolin, Frost, & Steketee, 2010), and Family Adaptability and Cohesion Evaluation Sclaes (FACES IV; Olson, 2011) were translated into Urdu using translation/back translation approach (Brislin, 1973). Data was collected from 221 individuals on translated Urdu versions of scales along with already translated measures that included Adult Attachment Scale (AAS; Collins & Read, 1990), Young Schema Questionnaire-S3 (YSQ-S3; Young, 2005), Depression Anxiety Stress Scale (DASS; Lovibond &

Lovibond, 1995), and Obsessive Compulsive Inventory-Revised (OCI-R; Foa et al., 2002). Confirmatory factor analysis was conducted for each adapted scale. Results revealed the replication of factor structure for HRS-I without any modification while few modifications have been done for FACES-IV. However in case of SI-R, a uni-dimentional model was found to be most appropriate instead of original three factor solution for present data. Correlation among study variables was also computed and the results revealed that the trend of relationship between different variables was in postulated direction. Findings of the study provided ground for use of study measures for hypothesis testing in main study.

Study III intended to assess the impact of family functioning and attachment styles on development and maintenance of hoarding behavior along with examining the mediating role of psychological distress (depression, anxiety, and OCD) and maladaptive schemas among clinical and non-clinical groups. It also identified the moderating role of demographic variables in association with hoarding behavior. Data was collected on all study measures from both clinical (N = 100) and non-clinical (N = 100) participants. Results revealed significant impact of family functioning and attachment styles on hoarding behavior both directly and through psychological distress and maladaptive cognitive schemas. Moreover, along with emotional associations and perceived utility value, materialism proved to be a strong correlate of hoarding behavior. Also, non-significant results with respect to relationship between attachment styles and hoarding behavior through anxiety and OCI-NH are notable. Whereas depression proved to be the strongest mediator. The present study therefore is suggestive of certain cultural influences on expression and understanding of hoarding behavior. However, results need to be interpreted in certain limitations while further research is needed to confirm the unique cultural influences.

INTRODUCTION

Chapter I

Introduction

Hoarding has become increasingly an area of interest for clinical psychology and public health researchers; yet, very little is discovered regarding how hoarding disorder develops and what factors affects its expression (Mataix-Cols & Cruz, 2018; Mills, 2013). Hoarding Disorder (HD) is known by a difficulty in discarding or disposing the belongings and causes the growth in clutter, psychological distress and disability (American Psychological Association, 2013). Hoarding disorder affects around 1-6% of the world population (Postlethwaite, Kellett, & Mataix-Cols, 2019). Average age of hoarding disorder symptoms are 13.4 years, with 60% of the patients presenting the onset of symptoms started by the age of 12 years, growing to 80% by the age of 18 years (Grisham, Frost, Steketee, Kim, & Hood, 2006; Postlethwaite, Kellett, & Mataix-Cols, 2019). Hoarding disorder not only disturbs one's own self wellbeing and career (Mills, 2013), but also the health and safety of others like family members and neighbors (Drury, Ajmi, de la Cruz, Nordsletten, & Mataix-Cols, 2014). However, what is now known as a distinct psychopathology has meant many different things in different times and cultures. To develop a thorough understanding of the course of progression of hoarding from a common behavior to a clinical disorder, it is essential to have a historical overview of the behavior.

History of Hoarding Disorder

Hoarding behaviours have been studied for ages, with a range of justifications and perspectives based on instinctual behavior, contextual factors, and psychoanalytic perspectives. In order to fully comprehend the hoarding behavior, one needs to understand the evolution of this disorder which started from preservation of

possessions as a common behavior and ended up as a clinical disorder in fifth edition of Diagnostic and Statistical Manual of Mental Disorders (American Psychological Association, 2013).

Possession acquisition was originally supposed to be an innate habit that is learned and fostered by one's environment, and it was thought to be a universal human experience (Lahera, Saiz González, Martín-Ballesteros, Pérez-Rodríguez, & Baca-García, 2006). Hoarding tendencies become more problematic, according to James (1913), when an individual becomes preoccupied on missing prospective opportunities related to one’s possessions, their future worth while ignoring the present utility, and gathering and over-sensitivity for items with low values including pins and buttons. Thorndike (1913) emphasized the intrinsic desire to accumulate attention-getting goods, but noted that the contentment and connection received from these items may contribute to more 'crystallised' behavior. Others claim that hoarding is a natural way for people to generate a sense of protection and security in face of unpredictability of the world around them (Bindra, 1948). Bindra (1948) investigated the hoarding behavior in rats and found perception of security a significant predictor of hoarding that is; the rats with secure perception of environment were less likely to exhibit hoarding behavior than rats in insecure environments. Surprisingly, Fromm (1947) claimed that people acquire belongings in order to connect and respond to their surroundings, as well as to get stability from them (Grisham & Barlow, 2005). While there may be an initial desire to obtain a property, these early subjective interpretations of hoarding appear to suggest that the level of comfort, security, and certainty derived from the possession may affect the likelihood of hoarding.

Hoarding was once thought to be a behaviour caused by anal fixation, orderliness, inadequacy, and prudence, which resulted in a considerable collection of possessions, (Grisham & Barlow, 2005). Hoarding, according to psychoanalytic theorists like Frost and Steketee (1998) and Salzman (1973), is a product of perfectionistic aspirations, in which an effort to have full control over one's circumstances causes difficulties in abandoning possessions that could be useful in the future. Furthermore, psychoanalytic theory suggests that hoarding may be caused by eating behaviors even during infancy age. For example, the impact of food schedules on the risk of hoarding of rats has been explored by Hunt (1941). He discovered that rats who were fed seldom hoarded the food pellets two and a half times more than rats who were provided the access to unlimited food which also led to a conclusion that demonstrating that availability of non-availability of food/ nutrition during childhood has significant impact on adult behavior.

Hoarding was originally assumed to be a subclass of OCD due to a number of commonalities, along with the aversion of rejecting belongings (related to obsessions), the possibility of losing valuable possessions (related to addictions), and considerable anxieties about people touching or re-arranging personal items (consistent obsession and compulsive behaviors to arrange things; Frost, Steketee & Tolin, 2012). Mataix-Cols et al. (2010) reported a medium to high relationship between hoarding and symptoms of OCD in non-clinical population (Mataix-Cols et al., 2010). In addition, research of OCD-based therapy revealed that people with hoarding tendencies had poor success. Exposure and Response Prevention (ERP) has been shown to have little effects on patients with hoarding disorders who have poor treatment adherence, reduced initial treatment rates, and limited clinical

outcomes (Tolin, 2011). Due to the reduced response to CBT for HD, further research was conducted, which revealed a number of discrepancies between these two clinical manifestations. People with hoarding disorder certainly doesn't appear to encounter undesired or obtrusive emotions about valuables, there was little urge to regulate thoughts about possessions, hoarding behavior was fairly consistent (in comparison to OCD), and hoarders showed little understanding and presented for therapy later than OCD patients (Frost et al., 2012).

Ample research on hoarding behavior has paved the way for a separate cognitive behavioral model of hoarding, highlighting the hoarder's thoughts and emotions for his possessions as significant predictors hoarding behavior (Frost & Hartl, 1996). This CBT model, further, indicates behavioral avoidance and cognitive deficits as determinants of onset and resulting maintenance of hoarding behavior.

Cognitive Behavioral Model of Compulsive Hoarding

The conceptual framework provided by Frost and Hartl (1996) aims to describe the key aspects and mechanisms of hoarding activity, is the best way to understand hoarding (Grisham & Barlow, 2005). According to the concept, knowledge acquisition deficiencies, evasive behaviour, emotional attachment troubles, and inaccurate ideas about the type of things are all crucial contributors in prompting hoarding behaviour (Frost & Hartl, 1996; Gordon, Salkovskis, & Oldfield., 2013). The different facets of the problem are:

Information processing deficits. The significance of challenges in judgment, classification/organization, and impaired memory assurance in sustaining hoarding behavior has been indicated as a primary element of the hoarding model, stressing the

relevance of information processing deficiencies in perpetuating hoarding behavior (Frost & Hartl, 1996; Hartl et al., 2004).

Decision making. According to findings, individuals with hoarding disorder face difficulties in selection on a regular basis (Tolin et al., 2012). Fear of committing mistakes, according to some experts, is what motivates the collection of waste, which has been related to obsessional impulses exhibited in OCD and OCPD (Frost & Steketee, 1997; 2007). By accumulating, the person can defer the choice and, as a result, probable anxiety, loss, or psychological distress (Frost & Hartl., 1996). The choice criterion is stated to be comprised of assumptions about forthcoming necessity, predicted repercussions if one makes any wrong choice, and consciousness in dealing with bad judgments (Woody, Kellman-McFarlane, & Welsted, 2014). When deciding whether or not to trash a thing, people appear to be more concerned with the cost of losing the thing than with the cost of maintaining the item (Frost & Hartl, 1996).

Woody et al. (2014) provided a detailed analysis on intellectual capacity in hoarding patients, finding that, based on self-report measures such as the Frost Indecisiveness Scale, hoarding clients appeared to be more impatient than normal participants (Grisham, Norberg, Williams, Certoma, & Kadib, 2010). Surprisingly, research has found that people with hoarding issues have different abilities on decision-making tasks like the Iowa Gambling Task (IGT). When it comes to merging behavioral and other cognitive processes to create judgments, the IGT is used to measure an individual's capacity for making effective decisions (Becerra & Robies, 2010). Several studies have found that hoarders with OCD perform worse on the IGT than non-hoarders with OCD (Lawrence et al., 2006). In contrast, some investigations

reported no changes in IGT performance between HD and normal people (Fitch & Cougle., 2013).

Research utilizing imagery has revealed that it takes people with hoarding problem considerably longer to decide whether to discard their paper products than non-hoarders while checking for depression and OCD without hoarding (Tolin et al., 2012; Woody et al., 2014). Furthermore, Tolin et al. (2012) discovered that there was a significant difference in the sum required to implement judgments when discarding their own things versus the experimenter's things, people with hoarding characteristics making decisions about the experimenter's things more quickly. Grisham et al. (2010) reported that even though hoarders experienced difficulty in making decisions, this was not obvious on mental and emotional assessments. These results indicate that there may be a mismatch between actual and potential choice-making ability, and they are also dependable with studies in recollection (Grisham et al., 2010; Hartl et al., 2004).

***Memory related issues*.** Another aspect of Frost and Hartl's proposed cognitive behavioural therapy for hoarding is memory issues (1996). Furthermore, it appears that studies on whether hoarding causes substantial memory issues are contradictory. Some investigations have identified differences in memory retrieval, with compulsive hoarders doing significantly worse than OCD patients and healthy people (Blom et al., 2011). Furthermore, Hartl et al. (2004) evaluated changes in actual and potential memory capacity among people with compulsive hoarding, finding that compulsive hoarders remembered less details and employed less effective strategic plans on one of the memory detectors (Rey-Osterrieth Complex Figure Test). In contrast, studies

on memory loss found no difference between compulsive hoarders and clinical or control groups (Fitch & Cougle, 2013; Mackin, Areán, Delucchi, & Mathews, 2011). It's likely that the stated memory problems stem from a lack of trust in one's memory, an exaggeration of the consequences of poor memory, and preconceived notions about memory's importance (Grisham & Baldwin, 2015; Woody et al., 2014).

Categorization issues. People with hoarding tendencies have a harder time categorising their stuff since they have a larger number of classifications than people who do not have hoarding tendencies (Frost & Hartl, 1996). Winzce, Steketee, and Frost (2007) conducted studies to support this assertion. They counted the number of groups and the amount of time persons with hoarding issues spent classifying common household items and sorting their personal belongings (Winzce et al., 2007). When dealing with ordinary everyday objects, they discovered no substantial changes in the number of bundles and time required to categorize. When it came to categorizing personal belongings, meanwhile, the hoarding group created much more collections than the comparison group and took considerably longer to organize than the OCD group and the control group (Winzce et al., 2007).

Grisham et al. (2010) investigated the classification abilities of hoarding patients and discovered that hoarders formed more collections for personal objects and adhesive labels than clinical subjects. When compared to both control groups, hoarding respondents took slightly longer to sort items, especially when compared to medical and non-clinical control mechanisms, and had significantly higher levels of depression, as measured by the Subjective Units of Distress Scale (SUDS), earlier but after almost all activities. When compared to control groups, these findings suggest

that people with hoarding tendencies have a tougher time categorizing their belongings and experience significantly more distress (Grisham et al., 2010). The difficulty in categorizing, as well as the overwhelming sense of anxiety, may be linked to sentimental attachment and notions about things that form throughout the sorting process. However, more research is required to completely appreciate the categorization process.

Avoidance Behavior Approach

When excessive levels of pleasant feelings are linked with lower value items, the behavior is thought to occur (Grisham & Barlow, 2005). Furthermore, when confronted with losing belongings, avoiding activity is thought to be the outcome of programmed emotional reactions of anxiety or dread, resulting to preserving and problems in discarding. Hoarding, according to Frost and Gross (1993), can be characterized as an avoidance habit linked to concerns of impatience and obsessive compulsive impulses.

Behavioral avoidance has been defined as the reluctance of making decisions out of fear of the consequences, the rejection of potentially detrimental repercussions of making a bad decision, and the anticipation of the probable damage of crucial relationships. (Frost & Hartl, 1996). There has been a spike in research on avoidance behaviour, particularly experiential avoidance (EA), which is defined as the deliberate avoidance of unpleasant experiences and emotions due to a lack of ability to tolerate unpleasant internal states (Ayers, Castriotta, Dozier, Espejo, & Porter, 2014). Both cognitive and experiential avoidance appear to support the maintenance of hoarding behaviour. Wheaton, Abramowitz, Franklin, Berman, & Fabricant (2011) established

a relationship between EA and hoarding behaviours using a university sample. Even after controlling for anxiety and depressed evaluations, they discovered that EA predicted SI-R results.

Furthermore, Ayers, Castriotta, Dozier, Espejo, & Porter (2014) investigated cognitive and contextual prevention in people who have hoarding behaviour and discovered that avoidance accounted for different aspects of hoarding intensity, with cognitive avoidance contributing to respondents' clutter index on the SI-R subscale and contextual anticipation uniquely forecasting variations on both the difficulty discard and the difficulty discard-related measurements. These results pointed to a possible link between anticipation and several features of hoarding activity.

Emotional Attachment to Objects

Following a study by Frost and Gross (1993), who discovered that people with hoarding disorder expressed higher levels of expressive connection to personal items when compared to a control group of people, sentimental attachment to items has been discovered to play a significant role in hoarding disorder. Frost, Hartl, Christian, and Williams (1995) investigated emotional attachment to personal possessions in university students and volunteer groups, finding that greater hoarding intensity was linked to advanced emotive attachment to personal items, a greater reliance on personal items for consolation, and a higher level of responsibility for having compassion for their personal possessions. According to research on emotional attachment, things can be perceived as extensions of one's self and can have human-like features (Frost & Hartl, 1996).

Frost and Hartl (1996) suggested two types of emotional attachment: 1) people who accumulate ascribe significantly level of emotional attachment or ‘hyper-

sentimentality' to things, and 2) sentimental relationship with objects which provide a feeling of protection or convenience, which has been observed in many animals research and financial literature (Frost et al., 1995). Phung, Moulding, Taylor and Nedeljkovic (2015) looked into the link between emotive processing and hoarding activities patterns, finding that Deep emotional attachment to items can serve as a "possible alternative" for overall emotional control, according to research. Emotional connection moderated the association between emotional control and hoarding tendencies, according to their findings (Phung et al., 2015). These findings demonstrate the possibility of employing a strong emotional bond with an object as a form of emotional control, increasing the bond and reliance (Phung et al., 2015). Furthermore, Steketee, Frost and Kyrios (2003) used factor analysis to investigate the impact of beliefs in hoarding behavior, focusing on views about recollection, connection, control, and obligation. Memory, obligation, and control were determined to be endorsed, as well as a factor variable of ideas about sensitive connection to items, which stood for the most variance.

Beliefs about the nature of possessions. It has been proposed that thoughts about possessions perform a noteworthy part in the context of hoarding behavior (Frost & Hartl, 1996; Steketee & Frost, 2003). Three basic notions are included in hoarding behavior, according to Frost and Hartl (1996): ideas about the prominence of maintaining possession command, ideas about responsibility for acquisition, and ideas about the importance of superiority (Frost & Hartl., 1996). Further exploration focuses on the general ideas that influence people's ability to trash things, such as views about the efficiency of an item, ideas about its prospective value, and attitudes about the relevance of things (Gordon, Salkovskis, & Oldfield, 2013). According to

Gordon et al. (2013), these ideas subsequently govern other mental functions like decision-making, experience aversion, and attachment to items.

Since Frost and Hartl proposed cognitive behavioral model for addictive behaviors has gotten a lot of attention (1996). With more research in this field, the Diagnostic and Statistical Manual of Mental Disorders – Fifth Edition classified hoarding disorder as a distinct disorder (DSM-5; APA, 2013). The shifting perimeters of OCD and hoarding disorder, as well as the progression of hoarding-specific therapy, have prompted increased research into the clinical features, epidemiological studies, underlying causes, and efficacy of a variety of psychological and pharmacological therapies, ranging in configuration and period that aim to reduce or mitigate hoarding behavior.

Clinical Features and Diagnosis

The Diagnostic and Statistical Manual (5th Edition) defines hoarding behavior as a consistent problem disposing or dealing with belongings, as well as a collection of belongings that interferes with the planned use of living areas. This conduct causes clinically considerable suffering or disability, and the categorization implies that it cannot be interpreted in a good way by a medical illness/condition or another psychological disorder. If there is delusional thinking linked with hoarding behaviours, the description can additionally include whether the activity includes further purchase of objects, whether there is fair, good, inadequate, or lacking insight, and if there is fair, good, inadequate, or lacking insight. Hoarding disorder is characterised by perfectionism, impatience, evasion, anxiety, difficulty planning and organising tasks, and impulsiveness (American Psychological Association, 2013).

DSM-5 Diagnostic Criteria for Hoarding Disorder

A. Persistent difficulty discarding or parting with possessions, regardless of their actual value.
B. This difficulty is due to a perceived need to save the items and to the distress associated with discarding them.
C. The difficulty discarding possessions results in the accumulation of possessions that congest and clutter active living areas and substantially compromises their intended use. If living areas are uncluttered, it is only because of the interventions of third parties (e.g., family members, cleaners, or the authorities).
D. The hoarding causes clinically significant distress or impairment in social, occupational, or other important areas of functioning (including maintaining a safe environment safe for oneself or others).
E. The hoarding is not attributable to another medical condition (e.g., brain injury, cerebrovascular disease, Prader-Willi syndrome).
F. The hoarding is not better explained by the symptoms of another mental disorder (e.g., obsessions in obsessive-compulsive disorder, decreased energy in major depressive disorder, delusions in schizophrenia or another psychotic disorder, cognitive defects in major neurocognitive disorder, restricted interests in autism spectrum disorder).

Specify if:

- With excessive acquisition: If difficulty discarding possessions is accompanied by excessive acquisition of items that are not needed or for which there is no available space. (Approximately 80 to 90 percent of individuals with hoarding disorder display this trait.)

Specify if:

- With good or fair insight: The individual recognizes that hoarding-related beliefs and behaviors (pertaining to difficulty discarding items, clutter, or excessive acquisition) are problematic.
- With poor insight: The individual is mostly convinced that hoarding-related beliefs and behaviors (pertaining to difficulty discarding items, clutter, or excessive acquisition) are not problematic despite evidence to the contrary.
- With absent insight/delusional beliefs: The individual is completely convinced that hoarding-related beliefs and behaviors (pertaining to difficulty discarding items, clutter, or excessive acquisition) are not problematic despite evidence to the contrary.

Measurement. To acquire a better understanding of the intensity and complexity of hoarding behavior, a variety of clinical assessment methods have been created. Many prior researches assessed hoarding using criteria from the Y-BOCS questionnaire; even so, this method of measuring did not appear to resolve characteristics of hoarding, such as clutter, accumulation, or trouble in disposing (Steketee & Frost, 2003). The Saving Inventory Revised (SI-R), which is meant to assess an individual's level of clutter, trouble in disposing, and inappropriate accumulation, is now the most commonly used scale of hoarding behavior (Frost et al., 2004). The Hoarding Rating Scale Interview (Tolin et al., 2010) and the Clutter Image Rating Scale (CIRS), which employs visual representation to estimate the intensity and complexity of an individual's hoarding (Frost, Steketee, Tolin & Renaud, 2008), the UCLA Hoarding Severity Scale (UHSS; Saxena, Brody, Maidment & Baxter, 2007), the Savings Cognition Inventory Revised (Steketee et al., 2003), the Structured Interview for Hoarding Disorder (Nordsletten et al., 2013), the Activities of daily living scale (Frost et al., 2013) and the Hoarding Assessment Scale (Schneider, Storch, Gefken, Lack & Shytle., 2008; Frost & Hristova, 2011) are some alternative measurement tools.

However, these measures are primarily developed in Western cultures and need rigorous cross-cultural validation in order to have meaningful comparisons among different regional populations. The most widely used and validated measure in this regard has been Saving Inventory Revised. Adaptation studies of SI-R have been suggestive of considerable similarity in presentation of hoarding features across different regions. Though, deviation in factor structure and reliability have been noticed as well which point towards the potential cultural influences. Hoarding Rating

Scale is another such instrument that has been successfully adapted and validated across different cultures. Additional replication studies are needed to address the validity requirements of all of these different hoarding measures (Nordsletten et al., 2018).

Epidemiology of Hoarding Disorder

Prevalence. A recent meta-analysis showed that the prevalence of hoarding disorder is around 1-6% of the population (Postlethwaite, Kellett, & Mataix-Cols, 2019). Iervolino et al. (2009) evaluated the prevalence of hoarding behaviors in a dual collection of 5,022 people and discovered that 2.3 percent meet the requirements for hoarding, with men having significantly higher levels than women. In contrast, a recent study looked at the prevalence of anxiety-associated symptoms as well as obsessive-compulsive and related disorders. After evaluating 2,495 people, they discovered that 2.6 percent of the people had 20 scores on hoarding above the clinical cut-off (LopezSola et al., 2014).

The frequency of hoarding in non-western civilizations has also been studied. Mueller, Mitchell, Crosby, Glaesmer, and Zwann (2009), for instance, looked at the prevalence of hoarding disorder in a German population and found an incidence rate of around 4.6 percent. It was also discovered that two-thirds of the individuals with addictive behaviors also had buying behavior, which is consistent with previous research and important procurement criteria in hoarding disorder (Mueller et al., 2009). Furthermore, Bulli et al. (2014) used an Italian format of the Savings Inventory Revised to assess the prevalence of hoarding in Italy over two researches. With a number of 1092 individuals, they discovered that the incidence varied from 3.7

to 6.0 percent, with number of factors such as age, ethnicity, or educational level. Associations between obsessive-compulsive disorders and compulsive behavior of buying were found which was consistent with prior research, especially when anxiety and depression signs were taken into account (Bulli et al., 2014). However, prevalence rates have been found to be higher in Pakistan with 20.3% of the participants falling in clinical range from a community based non-clinical sample (Inam, Akhtar, Kashif, & Nadeem, 2020).

Not only has the prevalence of hoarding disorder been studied, but also has one of its main characteristics, trouble in disposing. Rodriguez, Simpson, Liu, Levinson, & Blanco, (2013) evaluated the prevalence of trouble in disposing in the general population of the United States. They discovered that roughly 20.6 percent of participants had serious problems in discarding items, and that this trait was linked to a significant level of psychological disorders, such as substance dependence, anxiety disorders, and, most importantly, obsessive-compulsive personality disorder (OCPD). Furthermore, they discovered that problem in discarding was more probable to appear as people became older, despite no sex differences (Rodriguez et al., 2013). As a result, it seems that the frequency of hoarding disorder is between 2.3 and 6% in both the United States and Europe, with evidence indicating that maturity may increase the chance of hoarding behavior. This high level of occurrence is surprising, especially given that hoarding is often maintained within the private household, making awareness of its magnitude difficult to determine (Samuels et al., 2008).

Age of onset. Minimal hoarding behaviors are considered to arise in the early adolescence, develop to moderate level in the early twenties, and become acute in the early thirties (Tolin et al., 2012). Surprisingly, awareness and acknowledgment of signs are thought to occur in the early 30s, when the complexity is already significant (Cromer, Schmidt, & Murphy, 2007). Procurement symptoms and signs appears to follow a different structure starting in late adolescence, which could indicate financial or independent life events (Grisham et al., 2006). Grisham et al. (2006) hypothesized that those who reported a traumatic life event prior to hoarding behavior had a later onset age than those who did not disclose a strong trigger. These results imply that distinct patterns of hoarding behavior initiation and advancement may influence treatment responsiveness and consequently the duration of the disease (Grisham et al., 2006).

Hoarding activities provide a number of additional concerns for older persons, including an elevated risk of danger from possessions, loneliness, and physical difficulties in organizing or disposing waste (Tolin., 2011). Eckfield (2012) investigated the relationship between ageing and the acquisition of possessions in a qualitative approach. Respondents described a “dynamic interplay” between aggregation and ageing, implying that factors including such as health condition, social situation, and living environment exacerbated hoarding habits and results (Eckfield, 2012). These results demonstrate the need for deeper research on the perspective of older adults with hoarding behavior, as well as the opportunity for more appropriate interventions (Eckfield, 2012).

Prognostic and Risk Factors

Early life experiences. In terms of age, research reveals that hoarding can be caused by natural conditions, with trauma being one of the most crucial determinants of hoarding (Hartl et al., 2005). In a study of 180 people with OCD, Cromer et al. (2007) looked at the link between traumatic life experiences (TLE) and hoarding. Surprisingly, participants who were classed as hoarders (24%) were much more probable to have had a TLE at some point in their lives. Furthermore, those who meet the requirements for hoarding and TLEs showed much more severe hoarding symptoms than hoarders who had not undergone a TLE (Cromer et al., 2007). Moreover, age, OCD symptoms, mood, or depression and anxiety comorbidities did not explain this strong link between hoarding and trauma (Cromer et al., 2007). Hartl et al. (2005) proposed a relationship between traumatic events and obsessive hoarding, with results indicating that PTSD symptoms, as well as a higher quantity and frequency of trauma in persons with hoarding disease, suggest a causative link. Likewise, Przeworski, Cain, and Dunbeck (2014) investigated the link between traumatic experiences in life and hoarding and discovered that hoarding intensity was linked to the frequency of traumatic events encountered prior to the development of hoarding symptoms. These results support the theory that traumatic events may play a role in the development of hoarding disorder. Tolin (2011) discovered that 76 percent of the respondents had experienced intimate partner violence, which is significant when compared to the 32 percent of women in the overall population. A large percentage of respondents agreed that the traumatic experience occurred prior to the beginning of hoarding behavior, implying a linear link for some people. These outcomes, notably, do not match those of an OCD population, and are considered to

be better linked with those who have received treatment for serious psychological disorders or drug related disorders (Tolin, 2012).

Genetics and neurological functioning . The expanded research into the genomic structure and neurological processes of people with hoarding problem has resulted from attempts to elaborate hoarding behavior.

Genetics**.** According to factor analytic research, there is a distinct hoarding component that is substantially genetic, with hoarders indicating that first-degree relations have struggled with hoarding. (Samuels et al., 2007). Nordsletten et al. (2013) investigated whether obsessive hoarding is inherently inscribed or moderated by circumstances in a group of siblings. They discovered a significant hereditary concordance between problem rejecting and overwhelming accumulation, implying that hoarding behaviour may have a genetic behavioral factor. Moreover, they discovered that the atmosphere accounts for 40% of diversity, demonstrating the relevance of natural conditions (Nordsletten et al., 2013). These conclusions could indicate that hoarding can occur as a function of inherited susceptibility as well as environmental elements.

Neurological**.** Neurological activity, in contrast to heredity, has been hypothesised to affect the prevalence and intensity of hoarding behaviour. For example, An et al. (2009) used brain-imaging to investigate the neurological differences between patients with hoarding form OCD and people with OCD who did not have accumulating behaviors. They observed noteworthy variations in brain areas, with hoarding individuals having higher activation in the medial frontal ventromedial prefrontal cortex than OCD patients who do not hoard (An et al., 2009). Tolin, Witt,

and Stevens (2014) also investigated whether patients with hoarding behavior showed a different set of hyperactivation patterns and relationships than those with OCD. They reported that patients suffering from hoarding problem had greater potency in the right cerebral cortex, but those suffering from OCD had more activity in the bigger right OFC (Tolin, Witt & Stevens, 2014). Saxena et al. (2004) also evaluated that the brain metabolic processes of 26 people who had hoarding activity, obsessive-compulsive disorder, and healthy people. In comparison to the control group, people with hoarding disorder had significantly slower metabolic processes in the inferior temporal gyrus and cuneus. Persons with hoarding disorder exhibited substantially decreased glucose metabolism in the dorsal anterior cingulate gyrus when experienced by people with OCD (non-hoarding); hoarding symptoms were inversely linked with glucose metabolism in this domain. In addition to notable differences between OCD and HD, this report intends to emphasize the importance that brain structures may play in the beginning and continuation of hoarding behaviors. Moreover, Anderson, Damasio, and Damasio (2005) examined into the function of traumatic brain injuries in the start of hoarding disorder and discovered that those with "unusual collecting behaviour" had impairment to the brain's mesial prefrontal cortex. More precisely, the right mesial prefrontal cortex, near the anterior frontal and temporal pole, appears to be the most significantly linked (Anderson et al., 2005). Eventually, Mataix-Cols, Pertusa and Snowdon (2011) conducted preliminary study to investigate the relationship between neurological structures and hoarding behaviour and discovered that the ventromedial prefrontal/anterior cingulate cortices, frontal lobe regions, and prefrontal limbic structures are all involved in hoarding behaviour. Nevertheless, they discovered that several of the studies had small number of participants or low

dependability, implying that these are simply preliminary results that need be investigated further (MataixCols et al., 2011). Considered collectively, these statistic point to considerable abnormalities in neurological abilities, with abnormalities in the anterior cingulate, precentral, and superior frontal gyri being highlighted (Grisham & Baldwin, 2015). Furthermore, it appears that there are other variables to consider. Relatively current findings have underlined the importance of psychological elements, including hoarding-related ideas, cognitive deficiencies, and sentimental connections, in the progression of hoarding behavior.

Comorbidity

According to research, hoarding disorder is linked to a variety of other comorbid diagnoses such as Major Depressive Disorder (MDD), Anxiety disorders, OCD, Attention Deficit Hyperactivity Disorder (ADHD), lack of attention, and trauma-related abnormalities (Hall, Tolin, Frost, & Steketee, 2013; Tolin, 2011). Indeed, comorbidity has been documented in roughly 92 percent of those who fulfill the clinical diagnostic criteria for hoarding disease (Frost, Steketee, & Tolin, 2011; Hall et al., 2013; Samuels et al., 2002).

As stated earlier, hoarding behavior was regarded as a subgroup of OCD and was thus expected to treat in the framework of OCD (Ayers, Saxena, Golshan, & Wetherell, 2010). Surprisingly, it indicates that people with hoarding disorder are more likely to have symptoms of depression (50.7 percent comorbidity) and anxiety disorders (24.4 percent comorbidity) than signs of obsessive compulsive disorder (18.6 percent; Frost et al., 2011; Hall et al., 2013). Furthermore, studies have discovered significant levels of comorbidity between social anxiety and the reporting

of a traumatic occurrence (Cromer et al., 2007; Hartl et al., 2005; Landau et al., 2011; Przeworski, Cain, & Dunbeck, 2014). Attention Deficit Hyperactivity Condition (ADHD), particularly lack of attention, has been linked to hoarding behavior (Hartl et al., 2005), with evidence implying that people with childhood ADHD have a higher risk of developing hoarding disorder (10.9 percent) than those without (3 percent; Fullana et al., 2013). The features of ADHD are likely to have a variety of treatment consequences, which requires more research.

According to research, gender may also play a factor in the chance of being treated with a comorbid disorder. A research examined by Wheaton, Timpano, LaSalle-Ricci, and Murphy (2008) explored comorbidity in 115 people who had been diagnosed with OCD with hoarding symptoms. Females with hoarding behavior had an increased risk of schizoaffective disorder (17.19%), panic disorders (40.63%), binge-eating disorder (10.94%), alcohol dependence (32.81%), and substance dependence (26.56%) than males, so even though men had an increased risk of social anxiety disorder (43.14%; Wheaton et al., 2008) than females.

Research suggest multiple types of hoarding behaviors exist depending on the presence of comorbid disorders, such as "pure hoarding," "hoarding with depressive symptoms," and "hoarding with depressive symptoms and ADHD" (Hall et al., 2010). Through latent class analysis, Hall et al. (2013) studied diverse patterns of comorbidity and clinical associations, finding that these three groups had different manifestations. The pure hoarding group was thought to have a higher rate of therapeutic response, with reduced levels of stress, depressions, and anxiety, but the other two groups were more likely to experience mild depression, indecision, and

problematic memory (Hall et al., 2013). The identification of comorbid disorders in hoarding is critical, since it can influence therapeutic delivery, cooperation, and results of treatment.

Implications of Hoarding Disorder

Continuing to live in such a cluttered environment has been shown to have serious psychosocial repercussions, such as the unwillingness to work, following personal hygiene, and interact in daily activities (Tolin, 2011). In comparison to normal or healthy sample sizes, functional impairment has been observed to be significant (Drury et al., 2014; Pertusa et al., 2008). Tolin et al. (2008) investigated the societal and financial repercussions of hoarding behaviours and discovered that people with hoarding disease missed an average of 7 days of work, which is comparable to those with psychological illnesses. Furthermore, the extent of work incapacity was associated to the intensity of hoarding.

Moreover, the economic implications of hoarding can be significant, with people with hoarding behavior frequently unable to pay their bills or meet their basic needs (Tolin et al., 2008). A person's ability to pursue and get affordable medication for hoarding behavior can be hindered financially. It's also been observed that hoarders are three times more likely than their family members to be obese and suffer from serious or chronic medical issues (Tolin et al., 2008). Falling and fire hazards affect the possibility of this chronic illness affecting the person and others around them (Frost, Steketee, & Williams, 2000; Grisham & Barlow, 2005). Furthermore, according to Tolin et al. (2008), 63.6 % of those with hoarding abnormality have no less than one severe health complication, with elevated blood

pressure, joint problems, chronic fatigue syndrome, hormone imbalance, immune deficiency, extreme tiredness, and hyperglycemia being the most frequently reported disorders (Tolin et al., 2008).

Hoarding is a serious problem not just for the individual, but it can also have a negative impact on interpersonal relationships, generating tensions between relatives and friends. (Grisham, Steketee & Frost, 2008). Buscher, Dyson, and Cowdell (2013) organized a literature review to assess the impact of hoarding disorder on blood relations. The study discovered recurring characteristics of decreased quality of life, damaged family relationships, and ‘actively campaigning around,' which was described as family members' collaboration or acquiescence to the situation (Buscher et al., 2013). As a result, hoarding behavior can have a considerable influence on family members' psychological, physical, and societal well-being; nevertheless, shame and humiliation might prevent family members from seeking help. In certain circumstances, the social and emotional cost of caring for a family member suffering from hoarding disorder might be equivalent to that of the individual suffering from hoarding disorder (Drury et al., 2014). These disrupted approaches can lead to even more social isolation, which can encourage hoarding and acquisitive behavior (Buscher, Dyson, & Cowdell, 2013; Grisham et al., 2008; Meddard & Kellet, 2014).

Existing frame of research indicates that hoarding behavior has been considered enormously in reference to conditions like mental health co-morbidity (i.e., Mataix-Cols, et al., 2000; Samuels et al., 2008) or information-processing deficits (e.g., Frost & Hartl, 1996), whereas centering less significantly on hoarding as a possible reaction to other forms of circumstantial impacts, like family dynamics or

previous social experiences. Though few researches have observed how experiences like traumatic life events (Cromer et al., 2007) or early family relationships (Frost, Kyrios, McCarthy, & Matthews, 2007) could affect hoarding behavior, further studies are yet seriously required. Thus, the present study anticipates to move the focus of research on hoarding from an individualistic outlook to a more of unified understanding of the phenomenon by examining certain experiential influences like attachment and family environment along with personal attribute of maladaptive cognitive schemas, expanding the scope of attention and practice while considering the behavior.

Family Environment and Hoarding Behavior

While biological and genetic links with hoarding are becoming more and more established in the scientific literature, research is just beginning to examine how hoarding behavior affects the family, with only a few studies to date on this subject. Tolin, Frost, Steketee, and Fitch (2007) first examined the burden of hoarding on family members of persons who hoard in a retrospective, self-report internet survey of 665 individuals reporting to have family members with hoarding problems. The study found that living in a severely cluttered environment as a child was associated with increased levels of childhood distress, which included less happiness, more difficulty making friends, reduced social contact in the home, increased intra-familial strain, and embarrassment about the condition of the home. It was also found that family members' feelings of rejection toward the person who hoards are associated with the severity of the hoarding and lack of insight about the behavior displayed by the persons who hoard.

Likewise, another study qualitatively examined the perspectives of caretakers of persons who hoard (Wilbram, Kellett, & Beail, 2008). Ten people who served as a caretaker for a hoarding family member were qualitatively interviewed, and the major themes that emerged included 'loss of normal family life,' 'the need for understanding,' 'coping with the situation,' 'impact on relationships,' and 'marginalization.' This investigation offered a deeper level of understanding of caregiver experiences, but because of the scope of participants was limited only to caretakers, further research was needed.

Similarly, Sampson (2012) qualitatively explored the lived experiences of 12 non caretaking family members of persons who hoard in order to better understand their interactions with their loved ones who hoard. It was found that participants reported a lack of understanding of hoarding behavior, which resulted in a significant amount of personal psychological distress when dealing with or thinking about their loved one's hoarding. Negative feelings toward their hoarding family members were present, as were associated feelings of trauma and loss around their deteriorating relationships with their loved ones. Further, they also reported a hesitancy to seek out social support from others around their problem, due to perceived feelings of judgment associated with the hoarding behavior. The participants also reported struggling with internal conflicts, including feeling ashamed and concerned that they also displayed some hoarding tendencies of their own.

Charuvastra and Cloitre (2008) argue that human social experience plays an important role in how an individual responds to trauma, starting with the attachment relationship between child and caregiver and extending into adult relationships. They suggest that a functional social network can provide a sense of safety to an individual

through the presence of stable, reliable interpersonal connections. Certain kinds of social interactions in this network may help trauma survivors regulate their emotions, particularly emotions of fear, anxiety, and mistrust (p. 309). Adequacy of social support from family relationships has been found to be directly related to the reported severity of psychological and physical symptoms and/or acts as a buffer between stressful life events and associated symptoms (Wills, 1990). Overinvolved or demanding supports, particularly families, have been linked with increased health issues (Berlin & Sluski, 1987). Given the systemic links that have been found between family dynamics and mental health outcomes, the proposed study postulates family environment as a contributing factor towards advancement of hoarding behavior.

Interpersonal Attachment and Hoarding Disorder

Attachment, according to Bowlby (1969), is an inherent genetically adaptable incentive system that motivates the infant to explore and retain near to their parents also named as attachment figure, or described to as the primary caregiver, in circumstances of crisis. An attachment bond is a continuous, emotional connection that a child creates with a primary caregiver who is viewed as permanent and strong (Cassidy, 2008). The nature of the child's encounters with their emotional bond improves the level of the attachment relationship. The quality of the attachment relationship is determined by the attachment figure's responsiveness and receptivity to the child's requirements and emotions, as well as how much the youngster has learnt to depend on the primary caregiver as a source of protection (Bowlby, 1969).

Communications with incoherent, unpredictable, or unsympathetic intimate relationships, as per attachment theory, coincide with the advancement of a reliable, good psychological framework; lessen adaptability in dealing with traumatic events; and eventually lead an individual to psychotic breakdown in crisis situations (Bowlby, 1980). Attachment insecurity can thus be regarded an overall susceptibility to psychological disorders, with the specific symptoms which are associated being determined by biological, cognitive development, and environmental influences.

According to attachment theory, many psychological disorders have their origins in disruptions of attachment bonds in early childhood, and can be triggered or exacerbated by the disruption of attachment bonds later in life. Mikulincer and Shaver (2007) looked at dozens and dozens of divisional, linear, and probable studies involving both clinical and non-clinical test results and discovered that attachment insecurity was prevalent by many people from a variety of psychological illnesses, from slight frustration to extreme psychological disorders and perhaps even schizophrenia. Recent research has also revealed substantially consistent findings. Attachment insecurities (both anxious - ambivalent) are linked with depressive symptoms (Cantazaro & Wei, 2010), stress (Bosmans et al., 2010), obsessional disorder (Doron et al., 2009), post-traumatic depression (Ein-Dor et al., 2010), and suicidal ideation (Gormley & McNeil, 2010), and eating disorders (Illing et al., 2010).

Several personality issues include attachment insecurity as an important trait. Furthermore, the type of attachment insecurity experienced by people with various diseases varies. Anxious attachment is linked to schizophrenic and emotionally distant disorders, whereas avoidant attachment is linked to reliant, melodramatic, and bipolar

mental illnesses. Attachment concern is linked to the “emotive somatic symptoms” an aspect of personality disorders, which comprises of individuality uncertainty, stress, behavior problems, maladaptive behaviors, passivity, varied functionality, consciousness, narcissistic behavior, and distrust, according to Crawford et al. (2007). Crawford et al. (2007) discovered that avoidant attachment is linked to what Livesley (1991) calls the 'inhibitability' as an element of personality issues, including limited emotional expression, intimacy issues, and social evasion.

Similarly, emotional attachment characteristics may also play a prominent part in susceptible people, in development of hoarding behavior. Contemporary neuroscience has identified a certain degree of overlap between the brain regions involved in attachment behavior and those implicated in hoarding disorder, such as the anterior cingulate cortex. Severe and stressful childhood experiences have been identified as a possible contributing factor (Alonso et al., 2004). Hoarders indicate weak interpersonal connection and a high incidence of various types of childhood trauma (Hartl et al., 2005), with the existence of such experience being linked to more severe hoarding characteristics (Cromer et al., 2007). Breakdown of attachment connections and the formation of unstable or dysfunctional attachment can be a result of child maltreatment (Bifulco, Moran, Ball, & Lillie 2002). Appropriate childhood connection facilitates the effective use of intimate relationships, emotional connection, and dependency, and it influences behaviour all throughout lifespan (Waters & Cummings, 2000).

Grisham, Steketee, and Frost (2008) examined hoarders with non-hoarding patients with anxiety disorders and non-clinical population groups in terms of information of social dysfunction. Hoarders exhibited much more interpersonal

problems than non-hoarding patients with anxiety disorders and indicated equal degrees of relational suffering. Nedelisky and Steele (2009) examined affiliation to people and impersonal items in a group of OCD patients (*n*=14 hoarders and *n*=16 non-hoarders), comparing their reactions to a bilateral connection scale and a five-minute speech section. Hoarders had much higher degrees of emotional excessive-involvement with physical objects and lesser degree of affective interaction with humans, according to the study.

Medard and Kellett (2014) discovered that hoarders had higher attachment anxiety disorder and aversion than student and public controls, but only perceived stress anticipated increased hoarding intensity. Anxious affiliation was considered to be a significant determinant of hoarding practices and mental processes in a nonclinical sample by Neave, Tyson, McInnes, & Hamilton (2016). For those with an apprehensive attachment type, material attachment may thus be a replacement for emotional interactions (Norris, Lambert, DeWall, & Fincham 2012). People with hoarding issues may choose to receive supportive care from their things instead of from interactions with others, possibly because connections with things appear less frightening.

There's also assumption that humans with hoarding disorder don't have a high level of emotional resilience or the capacity to answer adaptively to adversity in intimate communication. When accounting for anxiety and gender, Phung et al. (2015) discovered that susceptibility to anxiousness and participating in hasty acts to ease a negative emotion were powerful determinants of hoarding characteristics in a nonclinical sample. Furthermore, Timpano et al. (2011) discovered a connection between relational stress responses and greater hoarding characteristics that was

largely regulated by emotional resistance. Lastly, Cruz et al. (2013) found that people with hoarding disorder have trouble in controlling their emotions when compared to healthy people, but not when compared to people with OCD. Many mental health conditions are linked with disruptions in attachment bonds both in early childhood and in later life (Salcuni, 2015). Further, there is evidence that parental abuse, neglect or separation in early childhood, which are all associated with significant disruption of attachment bonds, are associated with an undue emotional attachment to possessions, which in turn is linked to the severity of subsequent hoarding behavior Chou, Mackin, Delucchi, & Mathews, 2018). Also, later experiences of social exclusion, trauma in interpersonal relationships, or poor social support have been associated with the development and maintenance of hoarding behavior in adult life. This may be mediated through insecure adult attachment, leading to negative affective states which in turn trigger an increased attachment to, and desire to accumulate, certain possession. At the individual, higher-order level, hoarding also serve secondary psychological functions such as the regulation of negative emotions, low self-esteem, or distress related to uncertainty. Person's vulnerability to such reactions is prompted by both hereditary influences and childhood strain including the disturbance of attachment bonds and development of maladaptive cognitive schemas (Rajkumar, 2021). The present research therefore aims to study attachment perspective and role of maladaptive cognitive patterns in relation to hoarding behavior.

Psychological Distress and Hoarding Disorder

Hoarding has been demonstrated to be highly correlated with the experience of negative emotions, and emotional reactions also play a significant role in its beginning and persistence. Anxiety, despair, and stress are just a few examples of the detrimental effects that increased hoarding levels have been linked to in the past (Novara, Bottesi, Dorz, & Pastore, 2013). The cognitive-behavioral model of hoarding emphasises how strong negative emotions, such as sadness, anxiety, and depression, might encourage hoarding behaviours (Frost & Hartl, 1996). Frost and colleagues, have looked at the behavioural, emotional, and cognitive factors that influence discarding behaviours in both HD and non-HD groups. When faced with the choice of whether to keep a possession or buy a new one, those with HD displayed higher levels and longer durations of distress, negative affect, and maladaptive attitudes than people without HD (Frost, Ong, Steketee, & Tolin, 2016).

A sizable fraction of hoarding patients have been found to exhibit avoidance behavior patterns. For instance, acquisition might be a way to avoid the painful and unfavorable emotional states that could result from failing to obtain an item or from choosing the wrong value for it (Frost et al., 1998). When it comes to discarding, one may choose to keep the item rather than getting rid of it and dealing with the stress and aggravation that may result. The idea that saving, acquiring, and to some extent clutter (i.e., not organising) are all aspects of avoiding pain is thus a key element of the cognitive behavioural theory of hoarding. More precisely, it makes sense that hoarders with high anxiety sensitivity could practise maladaptive hoarding behaviours to avoid experiencing anxiety-related feelings and any potential detrimental effects.

Frost, Steketee, and colleagues observed hoarders in clinical settings and found that when forced to part with a prized possession, the subjects frequently displayed significant anxiety and sometimes even physically grieving the loss (Frost, Steketee, Williams, & Warren, 2000).

In HD treatment groups, it has also been observed that participants frequently refuse to throw away things they can clearly see are unnecessary for their own lives and are not likely to be kept by others, claiming that they do so out of pure emotional fear of the possible emotional experience of doubt/anxiety, guilt, and/or sadness. Having trouble controlling or tolerating the emotional anguish brought on by discarding and making decisions may be the cause of this. Additionally, numerous authors have noted that excessive acquisition behaviours frequently seem to be driven by a need to control affect (Tolin et al., 2018).

Determining whether illnesses are directly or indirectly related to hoarding is crucial because of the significant psychiatric burden of hoarding. There is compelling evidence that MDD, not OCD, is the most prevalent mental comorbidity in HD while anxiety disorders are also very common in people with HD. In populations with HD, previously reported rates of MDD range from 26.3% to 51%, GAD rates range from 5% to 24.4% (Archer et al., 2019; Mathews, 2021). In general, persons with HD have considerably greater incidence of psychiatric disorders than participants without HD.

The proposed study additionally included a construct of psychological distress in the analysis because mental health symptoms and hoarding behavior have been so strongly connected in previous studies. It is predicted that there will be a strong correlation between psychological distress and the seriousness of hoarding.

Specifically, it is assumed that psychological distress is the underlying mechanism that explains relationship between family functioning, adult attachment patterns, and hoarding behavior.

Maladaptive Cognitive Schemas and Hoarding Disorder

Beck's cognitive theory, first established in 1967, has spawned a multitude of exploratory work on psychopathology (Clark, Beck, Alford, Bieling, & Segal, 2000; Williams, Watts, MacLeod, & Mathews 1997). Adverse basic elements about oneself, other individuals, and their surroundings, also known as dysfunctional schema, are at the root of the growth and function of psychological abnormalities, according to cognitive theory (Beck, 1995). Poorly functioning schema are thought to emerge early in childhood as a result of bad connections with primary caregivers, and they make the people susceptible to psychological disorders when they are stressed. As a result, the framework is also known as a susceptibility distress concept (Clark et al., 2000). According to cognitive theory, every kind of emotional problem is associated with a distinct cognitive pattern based on the unique cognitive content (Beck, 1976). The major cognitive pattern in depression is thought to be negative thoughts, deprivation, and insufficiency (Clark et al., 2000). The core beliefs of anxiousness are thought to be something about physically or emotionally vulnerability (Beck, Emery, & Greenberg 1985). The understanding of such a violation of one's private domain, as well as the individual's assessment of one's (in)ability to survive, nullify, or repel the violent attack, are thought to be crucial in frustration (Beck, 1976). Limitation or dissatisfaction of wants are perceived as emotional attacks and are regarded as wrongful acts.

The cognitive approach of Jefrrey Young has recently given new impetus to research on the theoretical approach in adulthood. Young developed taxonomy of 15 dysfunctional schemas based on clinical practice with individuals with psychological disorders, which can be classified into five model subject areas: Disconnection/ Rejection, Impaired Autonomy/Performance, Impaired Limits, Other-Directedness and Overvigilance/Inhibition. Young and colleagues are widely regarded as providing an excellent conceptual elaboration of Beck's model; however there are some distinctions between the two conceptual models. For instance, as Schmidt, Joiner, Young, & Telch, (1995) pointed out, although Beck's basic beliefs are subjective; Young's concepts are absolute, implying that they are triggered relatively regularly. Both concepts are classified as sustainable, overall systems of thought that influence information evaluation and perception, have various activation levels and encompass encrypted effects and cognitive ability (Riso & McBride, 2007).

Numerous psychologists have used Young's classification system to describe the quality of cognitive susceptibility in young people with a variety of psychopathologies, such as psychological disorders (e.g. Jovev & Jackson, 2004; Petrocelli, Glaser, Calhoun, & Campbell 2001), anorexia (e.g. Leung, Waller, & Thomas 1999; Unoka, Tölgyes, & Czobor, 2007), drug and alcohol abuse (e.g. Brotchie, Meyer, Copello, Kidney, & Waller, 2004), depression (e.g. Shah & Waller, 2000). In this particular study, psychopathologists show considerably higher declarative results compared with "healthy" restraints and declarative performances can be accurately discriminated among groups with various forms of psychopathology, or that schema results are related to psychological issues. This has been consistently shown. Furthermore, even after adjusting the physical ailments,

greater levels of dysfunctional schemas suggest prior history of serious psychotic disorder (Abela, Sarin, Ngo, Lakdawalla, & Murad, 2009) and anorexia (Sarin & Abela, 2003) in recently non-disordered persons. These results corroborate cognitive theory concepts about the complexity of the schemas conceptualization, the positive relationship between dysfunctional schemas and psychopathology, and the role of dysfunctional schemas as a susceptibility tool for the growth of psychological disorders.

Little research has been done on role of maladaptive schemas in advancement of hoarding behavior particularly. However, the available research indicate that hoarding behaviour and its components have a positively significant relationship with EMS domains, and are able to predict hoarding behaviour among the domains of EMS impaired autonomy/performance and impaired limits. Also, a review of cognitive behavioral models of hoarding behavior reveals that hoarding is identified by troubles in forming interpersonal relationships, emotional attachment, and distorted beliefs, regarding objects (Frost & Gross, 1993; Ayers et al., 2011). It is therefore considered essential to elucidate the findings in present research by studying schemas as a contributing factor towards hoarding of stuff.

To sum up, during the past 20 years, research has successfully increased our knowledge and comprehension of the complex phenomenon known as hoarding behavior. Models for explaining hoarding disease have been developed as a result of this research, focusing on personal and familial vulnerability factors (e.g., family history, comorbidity), information processing difficulties (e.g., inattention, categorization, memory), cognitions (e.g., significance of things), positive and negative emotions, biological characteristics, and other aspects (Bratiotis, Muroff, &

Lin, 2021). However, the majority of this research focuses on a single person, necessitating extra research to comprehend the various etiological and causative components that are ingrained in more extensive societal contexts of human life. A deeper understanding of the sociocultural roots of hoarding illness may improve target selection, target identification, therapy development, and treatment personalization. More thorough research is also required to define the role of family dynamics and environmental factors as potential contributors to the development and maintenance of hoarding behaviors, particularly the interplay between various social and personal variables. Future research on hoarding will also require the expansion of evaluations that are culturally and linguistically appropriate, as well as more inclusive sampling of participants from different racial and ethnic backgrounds. Additionally, a variety of perspectives from inside and across various demographics and experiences must be taken in order to have a comprehensive grasp of the problem. The goal of the current study is to clarify the results with regard to Pakistani culture.

Hoarding Behavior and the Cultural Context of Pakistan

Context is the environment in which a person acts. This can be social structures, cultural scripts and behavior, and the physical environment. These contextual factors influence the person, for example, by shaping attitudes or other psychosocial determinants of behavior, values, norms, and personality (Ambuehi & Inauen, 2022). Generally, context is very important to consider in research and to be integrated into health psychology research for various reasons. Firstly, context can facilitate the execution of unhealthy behavior. Secondly, context not only influences

behavior directly, but context can also shape individual factors that determine behavior, such as personality traits, personal preferences, and response patterns. Thirdly, context is measurement specific and also influences measurement (Pomerance & Converse, 2014).

Clinical psychology and psychiatry have not historically placed a strong emphasis on culture when attempting to understand psychopathology. In fact, for the majority of its existence, psychopathology has not addressed cultural diversity since health sciences have readily classified behaviors, cognitions, emotional responses, and social functioning as psychopathological for deviating from social norms—typically defined from a Western, Eurocentric perspective (Maddux, Gosselin, & Winstead, 2005). However, in today's worldwide society, it is now largely accepted that cultural context defines what constitutes (mal)adjusted human behavior, which includes how people typically act, think, feel, and relate to one another in social interactions. Psychological suffering necessitates knowledge of a complicated, multi-dimensional process of biopsychosocial factors, which is culturally placed (Moleiro, 2018).

In addition to conceptualizing psychopathology, culture also has a recognized role in explaining and accounting for subjective distress, health, and sickness (Eisler, 2000). Certain groups may be exposed to a greater number of risk factors for psychological distress as a result of various circumstances which may enhance vulnerability. For instance, people in industrialized nations may grow up in a different setting from people in underdeveloped nations. Inadequate services, crowded conditions, and insufficient resources are frequently faced by the latter (Nicolini, Salin-Pascual, Cabrera, & Lanzagorta, 2017). Pakistan is also an underdeveloped

country with limited resources where people are constantly striving for a better living (Khilji, 2001). Most of the people living in urban areas live in small houses and have limited space as monthly rents are quite high which makes it unaffordable for a common man to have better accommodation. Moreover, Pakistan is a collectivist society (Tayeb, 2001) where people use to share their living space with extended family which impose further constraints on their living standards. In such circumstances, some people develop a pathological need to save things they might later need, even when it's hard to predict why or when, as a result of frequently requiring things they don't have. Poverty also brings with it more pervasive types of unpredictability and instability that could have a comparable, albeit more subtle, psychological impact (Lund et al., 2010).

Simultaneously, with increase in industrialization, larger quantities and varieties of goods for lower prices are being produced which means that the poorer and lower classes can likely be able to afford them (Blaszczyk, 2009). Also, mass media is promoting products to a large segment of the population, and advertisements are a way of showing consumers how products could offer them a better life and better social standing (Broner, 1989). Achieving the ideal "assemblage" of products to represent a specific social standing and a particular personal identity has become a realistic objective for many middle-class or even lower-class people as a result of greater manufacturing production, easier access to cheaper natural resources, and technical advancements (Shaeffer, 2012). However, the question of physical space remains the same. Naturally, those who are wealthy can also afford larger homes, as well as cleaning services, and organizing tools for their homes. In a large space, a

hoarding condition may appear as clutter or perhaps just as a hobbyist's collection. However, the same number of items could create confusion in a tiny place and possibly put the occupant in danger of harm. Consequently, it's not difficult to comprehend how poverty and hoarding, two conditions characterized by scarcity and excess respectively, can coexist.

Subsequently, there are many reasons that can have a profound influence on accumulation and presentation of material stuff. For instance, being a collectivist culture, significant others involvement in almost every aspect of one’s life is an acceptable norm in Pakistan (Jokhio et al., 2019. This can also impact the manifestation of hoarding. By way of organizational efforts on part of family members, the most obvious aspect of the phenomenon that is clutter could significantly be manipulated and can have a profound effect on presentation of this multifaceted condition. It can therefore, be speculated that there are many factors specific to present cultural context that can contribute differently towards the manifestation of hoarding behavior that warrant the investigation of their unique contribution towards existence of this universally accepted condition. Therefore, this study is designed to investigate the hoarding behavior in cultural context of Pakistan which will contribute to advance the transcultural validity aspect of this newly recognized mental health condition.

Rationale of the Present Study

Over the past decade the research has successfully expanded our knowledge regarding the conceptualization, vulnerability and associated factors of hoarding, but research on this newly recognized disorder is yet in infancy (Mataix-Cols & Cruz, 2018; Mataix-Cols et al., 2010). An important limitation of this body of research is that it has been conducted on European and/or Euro-American samples, mostly from developed countries like United States, England, Spain, Germany, and Italy (Frost, Steketee & Grisham, 2004; Mueller, Mitchell, Crosby, Glaesmer, & de Zwaan, 2009; Tortella-Feliu et al., 2006). Other cultures, especially Asian culture needs rigorous research. This culturally myopic perspective of hoarding disorder is biased for multiple reasons.

First, conceptualization of disorders may vary across cultures and their languages through which different cultures define particular disorder and their symptoms (Draguns, 1997; Draguns & Tanaka-Matsumi, 2003). In terms of hoarding disorder, there is controversy about hoarding disorder conceptualization and assessment that whether or not it should be considered as independent diagnosis, especially in non-western cultures where keeping the belongings, including belongings of little use, is considered as normal. In countries with these cultures like China, Pakistan, India, application of DSM-5 criteria could lead to over-diagnosis – medicalization of culturally tolerable behaviors (Wang, Wang, Zhao & Jiang, 2016).

Second, culture-specific properties can play role as a risk and/or protective factors. It means that a particular problematic behavior may not be considered as problematic behavior in another culture (Draguns & Tanaka-Matsumi, 2003).

Specifically with reference to hoarding behavior this can be an important aspect as the most obvious and problematic feature of the problem is Clutter which can be regulated by certain cultural norms. For example, in collectivist cultures like Pakistan, where house is considered a unit having active involvement of family members, clutter may not get as severe because of the presence and contribution of other family members. Therefore, having a strong family network sharing a common place can be a protective factor. On the other hand, it could be a reason for the disorder not being recognized in the society because of suppressing the obvious (clutter) signs of disease by significant others. Since most of the research on hoarding behavior has been done in Western and Euro-American origins having individualistic culture. A collectivist perspective that emphasize interdependence needs to be undertaken.

Third, culture-specific features may affect treatment's application and its effectiveness (Bernal, 2006). For instance, the socio-political and economic conditions of a country can affect the way people live and manipulate a culture. People living in underdeveloped countries with limited access to resources, having lack of awareness at large, can have different preferences towards life and treatment opportunities. In such deprived and harsh environment saving attitude can be a way of self-preservation. Therefore, they need to be evaluated in their particular cultural background.

Furthermore, the measurement of hoarding behavior is problematic in Asian culture. Because commonly used hoarding questionnaires are developed and validated in non-Asian cultures, only a few validation studies have been conducted in Asia (Mohammadzadeh, 2009). Research conducted on hoarding in Asian samples has

been unsuccessful to correctly capture the basic psychopathological characteristics, named as clutter, acquiring and difficulty in disposing.

These differential perspectives have significant inferences on the conceptualizations, as well as subsequent etiologically oriented research, treatment development, and assessment of particular disorder. Thus, the present study was conceptualized to empirically verify the situation with respect to hoarding behavior in Pakistan. Additionally, the present research aimed to explore the understanding of hoarding disorder in Pakistani cultural context and develop an indigenous measure of hoarding.

Also, no research to-date has studied the risk factor or correlates of hoarding disorders in Asian culture (Timpano et al., 2015). Therefore, this study objected to find out the personal and familial correlates of hoarding. Taking the influences of various contexts into consideration may provide important perspectives for understanding hoarding behavior, particularly since some conditions may be created and sustained by various social and relational factors (Milstein, 2002). The benefits of this could be far-reaching for researchers, treatment providers, people who hoard, their family members, and communities by providing the influence of context in which a person hoards that appears to be unique to every existing case.

Research Design

Chapter II

Research Design

General Framework of the Research

The purpose of the present research was to explore the existence and phenomenology of hoarding behavior in cultural context of Pakistan. It also aimed to study the influence of personal and familial correlates of hoarding. To achieve the goal this research is done conducting three distinct yet related studies. In Study-I the phenomenon was explored qualitatively to understand the underlying nature of the hoarding behavior as there is little evidence available so far in reference to hoarding in Pakistan. Grounded method analysis was utilized to delineate the vital aspects of hoarding and the related factors. In Study-II an indigenous instrument was developed on the basis of data gathered in qualitative exploration to determine the factors associated with hoarding in Pakistan. In addition, different related instruments namely Saving Inventory Revised, Hoarding Rating Scale-Interview, and Family Adaptability and Cohesion Evaluation Scales were translated and adapted to measure the study variables of hoarding and family functioning respectively. Further, psychometric properties of research instruments were also established. After doing this in main study that is Study-III hypothesis testing was done to see the relationship and interaction between various research variables.

Study-I Qualitative Exploration of the Phenomenon

The phenomenon of hoarding was initially explored qualitatively to understand its occurrence and nature in the Pakistani cultural context. Data was taken from the general public and mental health professionals like psychiatrists and psychologists to establish the indigenous understanding of hoarding behaviors. Focus

group discussions (FGD's) were arranged with the general public whereas an interview technique was used to gather data from health professionals. Grounded theory analysis of FGD's revealed four broad aspects of the phenomenon that further consisted of different categories. Whereas the analysis of interviews revealed five different aspects of clinical nature and the manifestation of behavior under concern. For a detailed description of the study see chapter III.

Study-II Development and Validation of Research Instruments

Study II comprised of two phases. Phase-I aimed at developing an indigenous measure "Determinants of Hoarding Scale (DHS)" on the basis of data collected in qualitative exploration. A systematic procedure for scale development was followed and both inductive and deductive approaches were utilized for the purpose. Factor structure and psychometric properties of the scale were established on a sample of 450 individuals comprising of students, working and non-working class. While confirmatory factor analysis for the scale was done on an independent sample (N = 250) to establish the construct validity of the scale.

Phase-II involved adaptation of research instruments that were not available in Urdu language. For identifying hoarding behavior Saving Inventory Revised (SI-R; Frost, Steketee, & Grisham, 2004) was translated and adapted which is a gold standard instrument to classify hoarding behavior. Besides this Hoarding Rating Scale Interview (HRS-I; Tolin, Frost & Steketee, 2010) was also adapted to support the diagnosis of clinical hoarding. To study the familial correlates of hoarding Family Adaptability and Cohesion Evaluation Scales (FACES; Olson, Gorall, & Tiesel, 1985) was adapted. Based on cohesion and flexibility dimensions it assesses different facets of family functioning including family communication and satisfaction. Confirmatory

factor analysis was conducted for each adapted scale. In addition to that correlation among study variables was also computed to see the direction of relationship between different variables.

Study III: Hypothesis Testing

The aim of this study was to investigate the familial and personal correlates of hoarding behavior. The role of childhood family environment and adult attachment styles in progression of hoarding behavior was examined. The mediating role of childhood maladaptive cognitive schemas and psychological distress was also seen in reference to relationship between family environment and attachment styles with hoarding behavior. Also the factors identified as relevant to hoarding in indigenous context of Pakistan in study-II were considered along with other study variables. Moreover, role of demographic variables was also observed. Data was collected from adults (N = 200) of age range between 18 and 60 years from both clinical (n = 100) and non- clinical (n = 100) groups. Clinical group comprised of patients suffering depression, anxiety, and obsessive compulsive disorders while non-clinical group consisted of individuals from different domains. Self-report measures validated in study-II, together with already translated versions of Depression Anxiety Stress Scale (Lovibond & Lovibond, 1995), Obsessive Compulsive Inventory Revised (Foa et al., 2002), Young Schema Questionnaire (YSQ-S3; Young, 2005), and Adult Attachment Scale (Collins & Read, 1990) were used to gather data on different variables to see the relationship between them using different statistical analysis techniques.

In the end a general discussion has been made on over all findings of the study in light of existing literature. The implications of study results have been discussed along with the limitations and suggestions for future research.

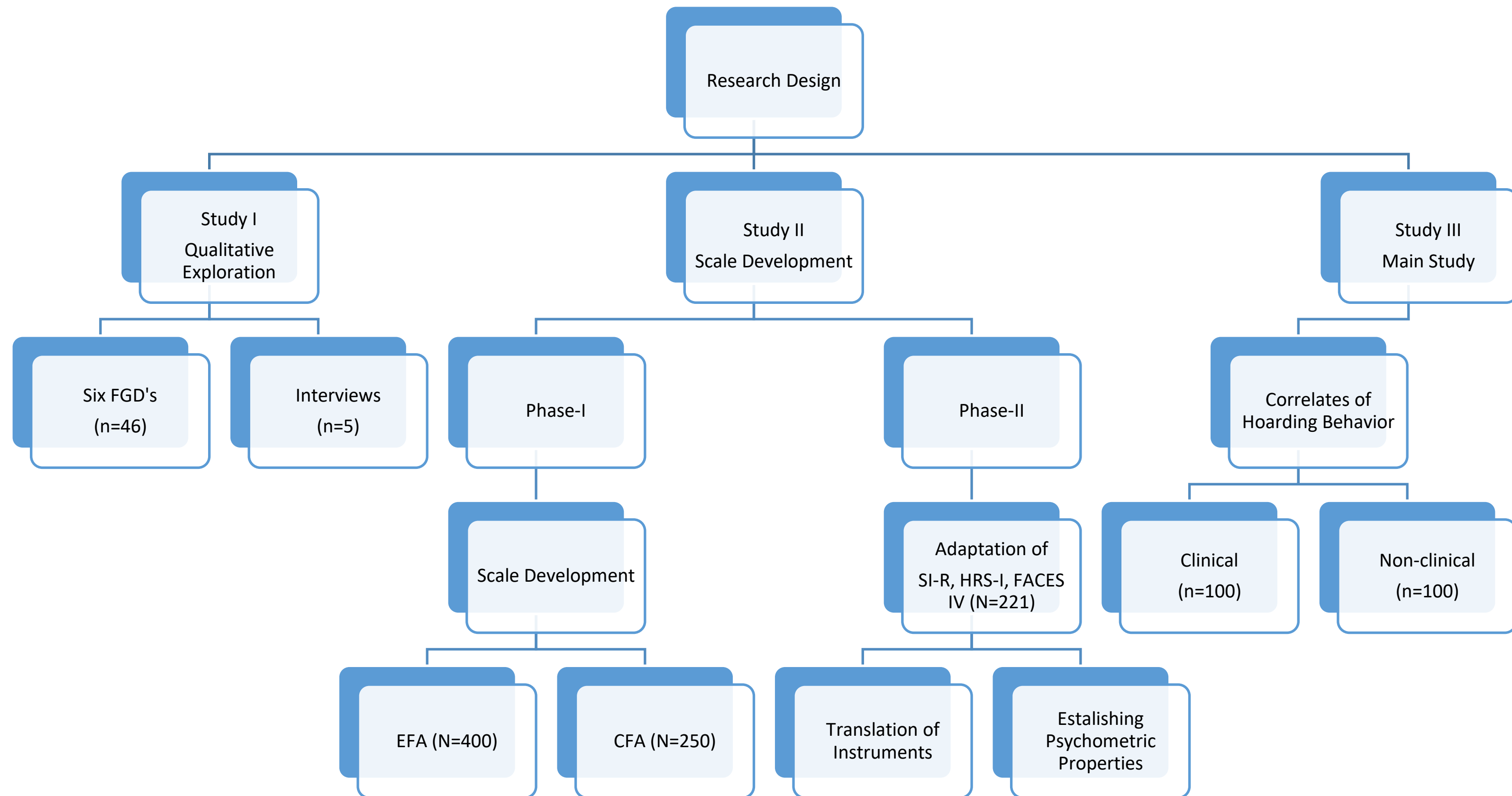


Figure 1. Research Design

Qualitative Exploration of Hoarding Behavior

Chapter III

Qualitative Exploration of Hoarding Behavior

Qualitative inquiry is a sophisticated tool while exploring any phenomenon as it helps in gaining insight by capturing the meanings that informants bring to it. Specifically, the grounded theory method is remarkable for it is based on symbolic interactionism (Charmaz, 2005). It infers that the reality of any event or action is socially constructed and takes the context as an important factor for understanding any phenomenon. The process helps not only to understand a phenomenon of interest but also helps to cover the gaps in the literature and to extend the existing knowledge (Creswell, 2007). Therefore, the present study was designed to explore the phenomenon of hoarding in indigenous settings, using the grounded theory method, as there are no earlier studies done in Pakistan to refer to. The study also undertakes the clinician's understanding regarding the nature and prevalence of hoarding behavior as a clinical concern. The focus is on gaining insight and familiarity of the phenomenon for later investigation.

Method

The grounded theory method was employed in this study to explore the phenomenon of hoarding in Pakistan through a systematic procedure of data collection and analysis. For this purpose, interpretive and constructivist point of view was used as it requires the understanding and interpretation of subjective meanings that are essential to in-depth consideration of participant's viewpoint and ultimately for the construct of interest (Charmaz, 2006).

Objectives

1. To explore the phenomenon of hoarding among the general public of Pakistan.
2. To investigate the clinician's understanding and perceived prevalence of the phenomenon as a clinical concern.
3. To compare the indigenous nature of phenomenon with existing conceptualization of hoarding behavior

Participants

The sample consisted of two groups, one comprising of adults (*n* = 46) of age range between 18-60 years with an average age of 40.9 years (*SD* = 7.8) and the other consisted of the clinician's from the field of mental health i.e. psychologists (*n* = 2) and psychiatrists (*n* = 3). Participants were approached through personal and social contacts and were from diverse social and economic backgrounds and included university students (*n* = 15), working (*n* = 23), and non-working (*n* = 8) classes. For a detailed breakdown of the sample characteristics see Table 1.

Table 1

Demographic Characteristics of the Sample (N=46)

FGD's	Gender		Age		Education			Marital Status		Socio-economic Status			Family System	
	Men	Women	*M*	*SD*	Matric & below	Masters	M.Phil/ Ph.D	Single	Married	Low	Middle	High	Nuclear	Joint
1	0	7	32.14	3.33	0	5	2	3	4	1	4	2	4	3
2	8	0	43	2.72	4	3	1	6	2	2	6	0	4	4
3	4	6	25	8.11	1	5	4	6	4	1	7	2	7	3
4	4	3	54.57	2.69	3	4	0	1	6	0	7	0	5	2
5	2	3	42.2	6.45	5	0	0	1	4	5	0	0	4	1
6	3	6	41	10.34	0	7	2	4	5	0	0	9	3	6

Instruments

Demographic Sheet. The information on demographics was collected using a self-tailored sheet consisting of age, gender, education and family system, etc. The socio-economic status of the participants was based on their area of residence and living circumstances.

Focus Group Guide . The focus group guide (Appendix-A) was prepared based on extant literature that covered the themes of identifying the reasons for acquiring and hoarding the stuff and the consequences it brings for one's self and others. It also included questions regarding contributing factors to the development and maintenance of the behavior. However, the guide was modified according to the need as the data emerged. Open-ended questions format was used to allow the participants to share their perspectives in detail and at the same time to keep the discussion focused and directed.

Interview Guide. An interview guide (Appendix-B) was prepared to assess the clinician's understanding of hoarding behavior as a clinical concern regarding Pakistan's clinical settings. The interview guide asked about the nature and prevalence of the behavior in the clinical population as perceived by the field experts based on their knowledge and experience. Questions were considered regarding phenomenology, prevalence estimates, and status of disorder in our clinical settings. Areas related to clinical examination and investigation of patients and the possible impact of the condition were also explored.

Data Collection

Focus groups were conducted to collect data from the adult sample from the general public. For this purpose focus group guide was designed based on existing literature comprising of open-ended questions as the departure point for qualitative inquiry. It took five focus groups to meet the saturation point. Yet another focus group was conducted to make sure that nothing new is emerging or missed. The number of participants in each focus group varied ranging from 5 to 10 and the time it took for each group discussion was approximately 40 to 80 minutes.

Focus group 1. It was conducted in the Women Hostel of Quaid-i- Azam University and included only female participants (*n* = 7). The age range of participants was between 26 and 37 with a mean age of 32.14 years (*SD* = 3.33). Four of them were married while three were single. All of them have an educational level of Masters and above.

Focus group 2. It was conducted at Quaid-i-Azam University campus with male participants (n = 8) only. The age range of the group participants was between 38 and 47 years (*M* = 43yrs, *SD* = 2.72). Six of them were married while two were unmarried and all of them were Masters and above.

Focus group 3. It was conducted with mix-gender at the National University of Modern Languages campus. The group comprised six female and four male participants with an age range of 25 to 48 years (*M* = 25, *SD* = 8.11). Five of them were single, four were married while one was divorced and all of them possessed educational qualifications of Masters and above except one.

Focus Group 4. It was headed with participants belonging to middle socioeconomic status at a friend's residence at Satellite town, Rawalpindi. It

comprised of three female and four male participants and the age range of participants was between 51 to 58 years while the mean age of the group was 54.57 years (*SD* = 2.69). Six of them were married while one was a widower. Four of the participants have the qualification of Masters level, one was having Matric degree, one was Middle passed while two were ill-literate.

Focus Group 5. It was conducted in a women hostel of Quaid-i-Azam University with participants from lower socio-economic statuses. It comprised of three male and two female participants with an age range of 33 to 48 years (*M* = 42.2, *SD* = 6.45). One of them was single while four were married. All of them have a low level of education with two having a Matric certificate, one was primary pass while two were ill-literate.

Focus group 6. It was done with participants (*n* = 9) belonging to high socio-economic status and was conducted at an acquaintance residence at E-11, Islamabad. It consisted of six female and three male participants. The age of the group participants ranged between 28 and 58 years with a mean age of 41 years (*SD* =10.34). Two of them were single, five were married, one was a widow, and one was a widower. All of them kept an educational level of Masters and above.

Semi-Structured Interviews

Besides that five semi-structured interviews were conducted with the clinical experts to assess their understanding and knowledge regarding the nature and perceived prevalence of the condition as a comorbid concern in different disorders regarding Pakistani settings. Three of five were psychiatrists while two were clinical psychologists. All of them kept considerable experience with at least ten years of clinical practice.

Interview 1. It was conducted with a senior psychiatrist working as head at a Government Hospital in Islamabad in his office. He kept a clinical experience of more than 30 years and has been actively involved in research activities also.

Interview 2. It was done with a psychiatrist at a Government Hospital in Rawalpindi. He has been in practice and research for more than forty years and also has been part of many national and international psychiatric associations.

Interview 3. It was conducted with a psychologist running her private clinic. She had considerable experience (24 years) in delivering therapeutic treatment and has been involved in teaching and research activities.

Interview 4. It was conducted with a psychologist at her Psychology Clinic in a University in Islamabad. She kept an experience of delivering therapy (14 years) at different private clinics in Islamabad and Karachi and has been actively involved in research and teaching.

Interview 5. It was done with a senior psychiatrist running his clinic in Rawalpindi. He has considerable experience (38 years) of delivering both pharmacological and psychological treatment and has been a member of different mental health associations.

Following informed consent, the substance of both the focus group discussions and the interviews was audiotaped, along with meticulous note-taking, in order to eliminate any missing material and therefore to make the transcription process easier. As part of the grounded theory methodology, the data collecting, and analysis phases occurred concurrently throughout the process.

Analysis

In the grounded theory method data is collected and analyzed systematically and simultaneously in a way that leads to the emergence of theoretical concepts that help to describe the phenomenon under investigation (Goulding, 2009). For the present research, a non-linear method to analyze the focus group data was used as proposed by Glaser (1978). Therefore data collection and analysis went side by side. For example, analysis of initial data suggested the need to collect data from different socio-economic groups. Thus analysis of data collected to a certain point leads to further data collection.

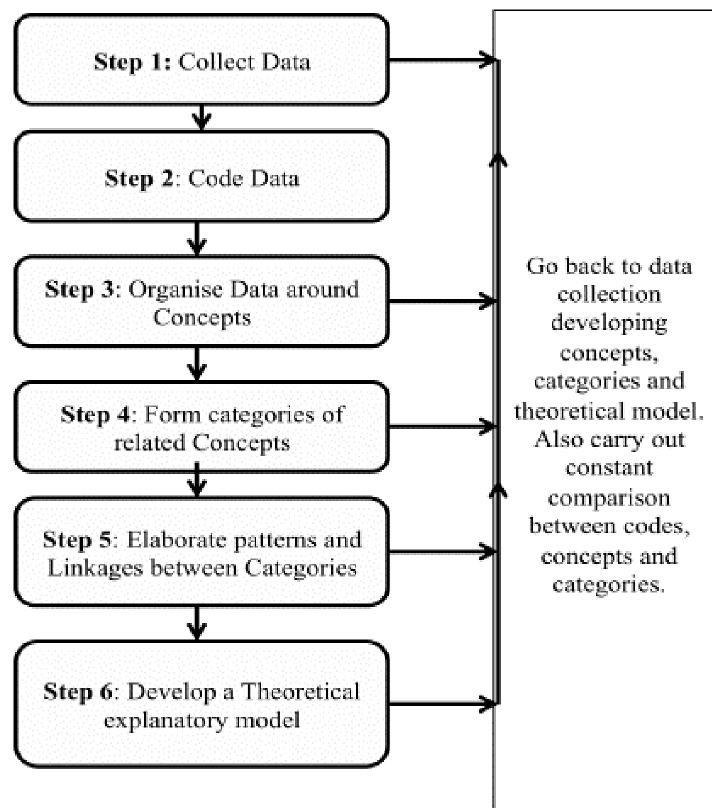


Figure 2. Steps involved in Data Analysis Process

As a first step initial coding was done that involved naming or labeling of the segment of data that helped making analytical interpretations. This not only helps to define the processes or actions involved but also makes sense of what they mean (Charmaz, 2006). During this phase data was coded adopting line by line scheme and ideas were generated generously in an inductive manner.

While doing initial coding, first focus group was coded firstly by the researcher and then was separately coded by another fellow Ph. D. scholar who has familiarity and experience in coding qualitative data. Differences were discussed and the coding was revised. For next two interviews only segments of data were coded by the other coder to enhance the reliability of coding scheme. Many researchers consider Inter Coder Reliability (ICR) not as an indicator of objectivity but as a way to stimulate discussion among themselves and thereby reflexively improve the analysis (Campbell, Quincy, Osserman, & Pedersen, 2013; Hruschka, Schwartz, St. John, Picone-Decaro, Jenkins, & Carey, 2004). Therefore, discussion among coders was thought vital to determine how and why interpretations clash since our goal in doing an ICR check was to identify areas that needed clarification and to review any discrepancies, update the coding framework, and then begin a second round of independent coding.

After initial coding, the next phase involved focused coding that refers to selecting the most significant or frequently occurring initial codes and that is done by re-examining the codes and memos and by looking for commonalities that stand out. Focused codes are considered more directed and conceptual than initial codes and help explain larger segments of data (Charmaz, 2006). While doing focused coding,

codes were compared against codes, and data was compared against data. This helped to distinguish different emergent categories in the data.

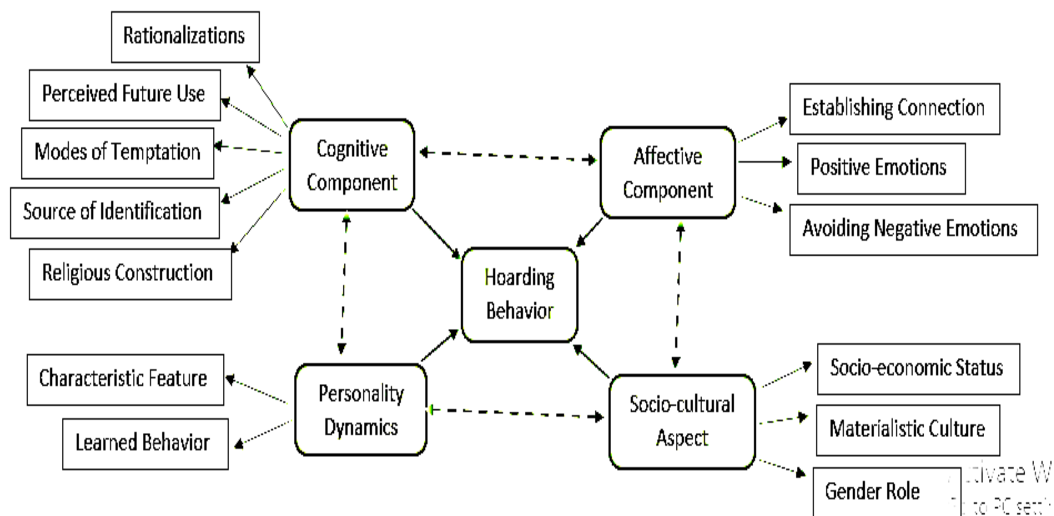


Figure 3. Emergent Themes and Categories during Analysis

The final step of analysis involved a more sophisticated level of coding that is theoretical codes which are meant to integrate categories developed in focused coding and brings coherence and makes the analysis more comprehensible. These codes help build the relationship between categories and explain the entire process of theorizing the emerging concepts (Charmaz, 2006). Therefore, as a final step, the emergent categories were analyzed and related categories were assembled to construct theoretical codes that can together help explain the underlying phenomenon of hoarding. At this point also, the broader classification and terminology for naming the categories were analyzed and discussed by the other coder as well.

Moreover, memos were written throughout the process of data gathering and analyzing to facilitate the comparison and directing further gathering of data by reflecting and reviewing on notes taken. This was done to record the meanings of codes generated and to have a tab on thoughts about different processes that emerged

and how they change over the data collection phase. This helped in making comparisons across data and modifying questions in subsequent FGD's.

Results

Focus group talks indicated four key features of the phenomenon: a cognitive component, an affective component, personality dynamics, and a socio-cultural factor, according to grounded theory analysis. Each notion had its own set of categories, each with its own set of significant and frequently recurring codes that clarified the analysis (see Table 2). However, because the developing concepts in grounded theory analysis are regarded interconnected and overlapping, a code's inclusion in one category does not exclude it from being included in another.

Table 2

Emergent Categories with Exemplary Initial Codes

Theoretical Codes	Focused Codes	Exemplary Initial Codes
Cognitive Component	Rationalization a) Object's Property	Utility value Charming/ Beautiful Liking/ Interest
	b) Seizing Opportunity	Availability/Unavailability Uncertainty of future availability Economical (low cost)
	Perceived Future Use	Recycling Alternative use Making inheritance
	Modes of Temptation	Advertisement Awareness/Knowledge Exposure to buyables
	Source of identification	Self-reflection Social competence Distinctiveness
	Religious Construction	Not following simplicity Undermining Islamic Values Diminishing brotherhood (Bhai-chara)
Affective Component	Establishing Connection	Memories Affiliation/ Emotional attachments Time spent
	Positive Emotions	Sense of satisfaction Sense of pleasure Sense of pride
	Avoiding Negative Emotions	Grief Avoiding wastage Fear of losing something important
Personality Dynamics	Characteristic feature	Miserliness Isolated/ Ill-sociable Jealousy
	Social Learning (Learned behavior)	Rearing Practices Experiences Environmental influences
Socio-Cultural Aspect	Socio-economic status	Pocket size Compensating deprivation Status symbol/status indicators
	Materialistic Culture	Modernization Competition Status transition/transformation
	Gender Role	*Female* Economic dependency Domestic control Nurturing *Male* Earners/self-sufficiency Dominant/Authority figures

To maintain the anonymity of participants, information is presented as aggregate. Exemplary data which is originally in Urdu has been translated in English as well for convenience in understanding and is presented without any identifying information of the participant.

Cognitive Component

The theme relates to the thoughts, beliefs, and values that provide significance to a person's hoarding act or object. The elements in this theme describe the constructs and interpretations of informants' mental representations of hoarded objects. While elaborating on the cognitive component five major categories were noticed as shown in Figure 4.

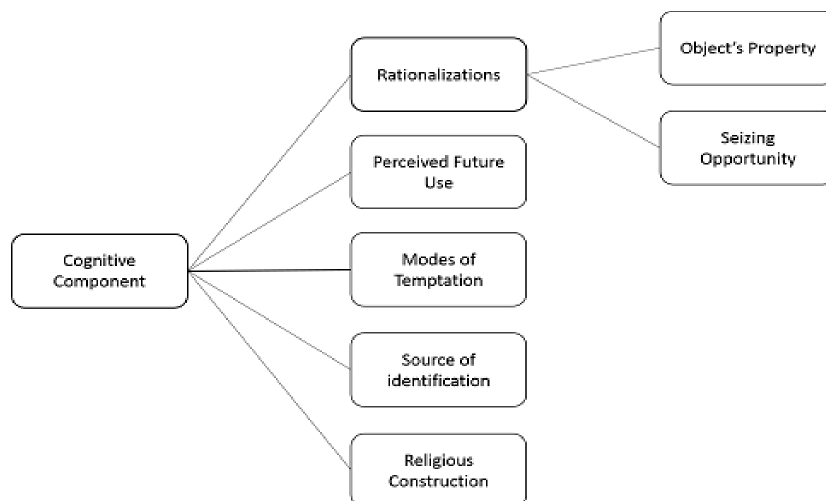


Figure 4. Categories under the cognitive component of hoarding behavior.

Rationalizations

Narratives reveal that people have various motivations for obtaining and storing various goods. These justifications are based on the object's properties such as its usefulness, durability, charm, and so on, or they see it as an opportunity in the form of its availability, low cost, or the risk of it not being available in the future as shown;

"ضروریات ہوتی ہیں؛ کچھ شوق ہوتے ہیں؛ اپنی طرف متوجہ کرتی ہیں؛ بعض اوقات گلیمر کے لیے بھی لے لیتے ہیں-"

[*These are necessities, sometimes we take things out of fondness, and they are appealing. At times we take things for glamour also]*

The responses of the informants show that they feel compelled to acquire things generally because of their interest or object's inherent properties and take the availability of objects as a privilege not to be missed. For example,

"مل رہی ہے تو لے لوں- پھر پتہ نہیں مجھے یہ نظر آئے یا نا آئے-"

[*It's available so it's better to buy it. Perhaps I find it again or not]*

explains how they feel so uncertain about the future that the fear of not getting it later makes them seize the opportunity by buying it.

Perceived Future Use

It appeared to be the most popular and well-supported category. Almost every participant in each group cited the artefacts' potential future use as the most crucial aspect instilling optimism and motivating them to maintain even the most used item.

"لوگ پرانی چیزیں اس لیے جوڑ کر رکھتے ہیں کہ شاہد جو نئی چیز میں بناؤں اس میں وہ کام آجائے- جیسے ایک صوفے کا کلپ ہے وہ پڑا رہے گا کہ کسی دوسرے صوفے میں لگایا جا سکتا ہے- ذہن میں اس کے ساتھ کوئی نہ کوئی استعمال منسلک ہوتا ہے "-

[*People save old things since they might be used in the new thing that they might create in the future. Like a clip of a sofa (couch) will be kept as it can be used in some other sofa. There is some use attach with it in mind]*

Narratives of the informants depicted that objects could be retained for they can have an alternative use. Mostly it was believed that no object is ever useless. It's

considered the responsibility of the person to find possible use for any object or to at least keep and care for that object until any purpose is found for the kept object. They asserted that though many of the objects are poorly used and even may not be used at all, it is difficult to throw them away just because they can be used. As mentioned,

"ہم اس لیے بھی چیز نہیں دیتے کہ کبھی نہ کبھی تو یہ چیز ہمارے استعمال میں
آئے گی"

[We don't give away things because they can come in our use at a certain time]

Such items have got their importance in the mind of the hoarder which refrains them to get rid of it. This results in items being accumulated in stores that stay there for even years, completing their life in vain but providing a source of satisfaction to the keeper by their mere presence.

Modes of Temptation

The reports of informants show that several items are acquired just because of exposure and awareness. Equally, an important factor was considered the temptation that is brought about by advertisement and glamour attached. For example,

"نئی چیز مارکیٹ میں آتی ہے تو کسی دوسرے سے پہلے میں لے لوں۔ پیکنگ
دیکھ کر لگتا ہے کہ یہ ضرورت کی ہیں۔"

[When something new comes in the market we want to buy it before anyone else. Sometimes we see the packing and it feels like it's necessary]

Going outside and coming in contact with objects increased the probability of acquiring to occur

"کہ باہر جائے تو کچھ اچھا لگے تو لے لیتے ہیں, جہاں جاتے ہیں ضرورت ہو نہ ہو
لیتے رہتے ہیں۔"

[When we go outside and find something good. We buy it. Wherever we go we take things whether needed or not.]

People at times acquire things just because they are approved by others. Information rendered via word of mouth or electronic media was found tempting and compelling enough to acquire things.

Source of Identification

Another related belief was found to be attaching identity with material possessions. People hoard things as they see their possessions reflecting their sense of self.

"These are not stuff, not possession. These are part of my identity.....if you throw it away, it's like throwing away a chunk of your identity you see yourself in those things."

The objects acquired can be related to one level of social competence achieved over time. People hoard objects for their uniqueness and in turn to show personal distinctiveness. For example,

"ہم چیزوں کی مدد سے اپنی ذات کی وضاحت کرنے کی کوشش کرتے ہیں"
[*We try to explain our self through material stuff*]

Their possessions help them maintain their sense of individuality and hence bring them a particular identity that distinguishes them from others.

Religious Construction

Participants' narratives illustrate that people acquire and hoard more things because they do not follow Islamic teachings of simplicity and brotherhood. As mentioned;

"جس طرح کی زندگی گزارنی چاہیے ہم اسطرح کی نہیں گزار رہے۔ ہم زندگی گزار رہے ہیں انگریزوں کی طرح، ہندؤ کی طرح۔ ہم اسلام کے مطابق زندگی نہیں

گزار رہے، اب ہم چیز دینا گوارہ نہینکرتے۔ بھائی چارہ ختم ہو گیا ہے۔ سارے مسائل دین کی دوری کے باعث ہیں۔"

[*We are not living the kind of life we should live. We are living like an Englishman, like a Hindu, we are not living life according to Islam. Now we don't share things. Brotherhood has been abolished. All problems are because of getting detached from religion*]

It is asserted that society as a whole undermines Islamic values and has lost the sense of what is appropriate and what is not. The element of sharing is lacking and selfishness and self-centeredness have increased that are leading to hoarding of material possessions. As said;

"پہلے ہم ضرورت کی چیز رکھتے تھے۔ آج مذہب سے دوری ہے۔ ہمارے پاس دس دس جورے ٹنگے ہیں۔ دنیاداری کوٹ کوٹ کر بھری ہے۔ اس معاشرے میں بس یہ سوچ ہے کہ دُنیا اکٹھی کرنی ہے۔"

[*Earlier we use to keep things that were needed. Today we are away from religion. We have many dresses hung. We are too much into worldly things. This society only thinks of gathering the material world*]

The stance was put forth in almost every group discussion. It asserts that people have lost faith in religion and try to get a sense of security and power from their material possessions. As they value material objects more, therefore, they accumulate more.

Affective Component

The concept entails the emotional reaction one has towards the hoarded object. It brings to the surface the feelings and emotions associated with an object which make them more than a material. The group of responses under this theme are establishing connection, positive emotions, and avoiding negative emotions (Figure 5).

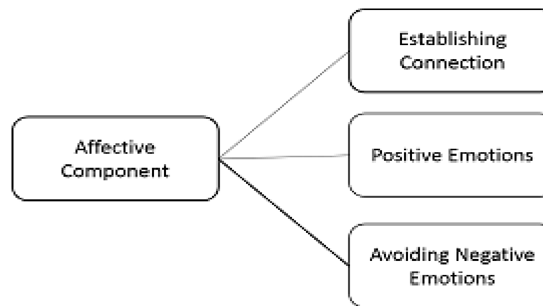


Figure 5. Categories under the affective component of hoarding behavior

Establishing Connection

Responses of the informants reveal that several objects are hoarded because of the associated memories and affiliations one keeps with them. For example,

> "صرف یہ ہوتا ہے کہ وہ ایک اچھا لمحہ ہوتا ہے۔ اچھی یاد ہوتی ہے۔ سنبھال کر رکھتے ہیں۔ خوش ہوتے رہتے ہیں۔"
> [*It's just that they (things) are like a good moment. Good memory. We keep them with care and feel happy*]

Hoarded objects serve as a mode or medium of connection between the keeper and the event, keeper and the giver, and the keeper and certain mental states, etc. They serve the link between the past and instigate the same emotions once felt. They mean a lived moment, a reminder of an important event or a person and a felt emotion that becomes such an integral part of one's existence that one never wants to deny. In that sense, the object for them becomes much more than a simple material commodity as illustrated;

> "میری بیٹی نے جو پہلا کھلونا توڑا تھا۔ وہ آج تک پڑا ہوا ہے۔ مجھے آج بھی یاد ہے وہ لمحہ --- تو وہ میری اس وقت کے احساسات ہیں۔ جو میں نے رکھے ہوئے ہیں۔ میرا نہیں خیال کہ میں اس کو ضائع کر پاؤں گی۔ وہ میری پراپرٹی ہے----- میں اپنے بچوں کو ہاتھ نہیں لگانے دیتی تو کوڑے دان میں کیسے پھینک سکتی ہوں۔"
> [*The first toy that my daughter broke, is kept till this day. I still remember that moment…so it's my feeling of that time that I am keeping. I don't think I can waste it (that broken toy). It's my property. I don't allow my kids to touch it so how can I throw it in the dustbin*]

Similarly, objects not only jog one's memories but the people also develop a direct relationship or affiliation and feelings with the objects. The time invested leads to relationship strength with the object and the magnitude of feelings attached and makes the discarding an impossible endeavor. As expressed in the following excerpt;

"وہ کسی کام کا نہ سہی میرے لیے اہم ہے۔ میرے لیے وہ ان سے تعلق کا باعث ہے۔"

[*Its (used soap bar) of no use but it's important to me. For me it's a source of connection with him (deceased husband)*]

Positive Emotions

In the same vein is the set of emotions like satisfaction, pleasure, and pride that tend to increase the desire for acquiring and hoarding several objects. As expressed;

"اطمینان کے لیے بھی چیز اپنے پاس رکھ لیتے ہیں، آرام کے لیے، جمالیات کو مطمئن کر رہی ہوتی ہیں، میرے پیپرز تھے جن میں ٹیچر کے ریمارکس بہت اچھے تھے میں نے پھاڑ کر اپنے پاس رکھ لیے، ہمیں خوشی ملتی ہے چیزیں رکھ کر۔"

[*We keep things for satisfaction, for comfort, to satisfy our aesthetics. I had papers with very good remarks from my teacher. I ripped those and kept them with me. We get happiness by keeping things*]

To be able to attain something brings a sense of satisfaction and helps to practice control and power. Hoarded objects provide the owner with a sense of achievement and competence. Large quantities of valuables bring pride and prestige to one's sense of self and make the owner feel worthy and capable.

"لوگ کہتے ہیں خاندانی عورت ہے ہر چیز بنا کھی ہے۔"

[*People say, the women are worthy. She had made everything*]

Avoiding Negative Feelings

The narrative of informants shows that there are a lot of negative feelings attached to the thought of discarding any object which keeps people from letting go of things. For example,

> "ہمارے روم میں پڑی ہوئی بہت ساری چیزیں ایسی ہوتی ہیں کہ جن کی ضرورت نہیں ہوتی لیکن اٹھا کر باہر رکھتے ہوئے تکلیف ہو رہی ہوتی ہے، بہت برا محسوس ہوتا ہے، ایسے جیسے کوئی چیز بس آپ سے الگ ہو کر چلی گئی ہے۔"
>
> [*Many of the things in our room are those that we don't need but it hurts placing them outside. It feels very bad as if something just gets separated from you]*

As objects serve as a source of connection and keep a lot of associated memories and emotions, the act of throwing them away or letting them go result in feelings of loss and grief. For them throwing those objects away means discarding associated memory/emotion/ time or part of the self. For example,

> "میرے بیٹے کی ڈیتھ ہو گئی تھی--- لیکن میں آج تک وہ پیمپر نہیں پھینک سکی جو اس نے پہنا ہوا تھا۔ مجھے پتہ ہے وہ میرے یا کسی کے بھی کام کا نہیں ہے۔ لیکن وہ اس کے جسم کے ساتھ تھا میں نے سنبھال کر رکھا ہوا ہے۔ حالانکہ اب میرے 3 بچے ہیں۔ مجھے وہ یاد بھی وہ بہت کم آتا ہے لیکن وہ پیمپر میں نہیں پھینک سکی۔"
>
> [*My son died…but I couldn't throw away the diaper that he was wearing at that time till this day. I know it's of no use to me or anyone else. But it touched his body so I have kept it with care. Though I have three kids now. I rarely remember him but that diaper I can't throw it away]*

The same way is the fear of losing something important. People find it difficult to give away as they feel uncertain and afraid of not having the thing when required or feel uncertain of not getting it again if the time comes. They think that they need to have everything to avoid the embarrassment of asking others and in fear of suspecting refusal of help from others if they ever needed it.

Personality Dynamics

The set of responses under this theme relates to the underlying causes of individual behavior within a person and the adaptation to one's environment. The theme involved the categories (Figure 6) of characteristic features and learned patterns of behaviors.

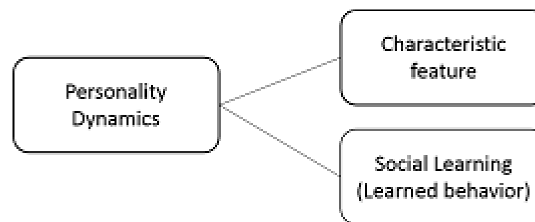


Figure 6. Categories under personality dynamics related to hoarding behavior.

Characteristic Features

Descriptions of the participants show that some people have got certain traits that lay the ground for hoarding behavior to occur. For example,

"لوگوں کا دل تھوڑا تنگ تنگ ہے۔ خود غرضی کا عنصر کہا جا سکتا ہے،
لالچ ہے کہ میں چیز کسی کو نہیں دیتا کہ یہ چیز کبھی میرے کام آسکتی ہے،
وہ اتنے سوشل نہیں ہوتے۔ ان کا انسانوں سے اتنا کنکشن نہیں ہوتا۔ اُن کو
چیزوں سے زیادہ پیار ہوتا ہے۔ عموماً اکیلے ہوتے ہیں۔ چیزیں رکھ کر اپنے
آپ کو ایکسپریس کرتے ہیں۔"

[*People are stingy. You can take it as meanness. They don't give way things out of greed as it may come into their use at any point in time… They are not very social. They don't have much connection with people. They have more love for material things. They are mostly alone. They express themselves by keeping things*]

Narratives show that characteristics like miserliness, jealousy, lack of sociability, etc. are considered associated with increased hoarding of items. People with such tendencies find it difficult to discard things. As mentioned,

"بس یہ عادت ہے کہ چیزنہیں دینا ۔ بھلے خراب ہو۔ جگہ بھی گھیری
ہو"

[It's just a habit that we don't give away things. May it get worn out or unnecessarily occupy space]

Similarly, people who spend more time in isolation feel more attached to material objects they keep and find it more difficult to give away which results in the hoarding of objects. For them, objects are their world, with and through which they communicate their presence.

Social Learning

Trends in data show that certain rearing practices and experiences can bring about the hoarding of objects. Environmental influences are seen

"ھمارے گھر میں بچپن میں آتے تھے شیمپو کے ساشے۔ ہمیں وہ آدھا استعمال کرنا
ہوتا تھا۔ پورا نہیں کر سکتے تھے۔ حالانکہ ہمارے ریسورسز تھے میں نے-----
انھوں نے کہا بیٹا میں تمھاری عادتیں نہیں خراب کرنا چاہتا۔ تو اب دیکھیں عادت
ہوگئی ہے۔ کہ میرا کمرہ، کپڑوں، جوتوں، ٹائی، بکس----"

[*In my childhood we use to bring sachets of shampoo in our home. We have to use half of it. We were not allowed to use the whole sachet though we had the resources. I once asked my father why can't we use the complete sachet? He said I don't want to spoil your habits. So, now I have got habitual that my room is filled with clothes, shoes, tie, books…]*

as a strong factor that results in the development of certain personality attributes. Imitating significant others and modeling in the form of norms signifies the direction in which one grows. Narratives assert that as children, individuals are taught to be caring and dutiful towards objects of use

"ہمیں بچپن سے بات بات پر بتایا جاتا ہے کہ چیز کو سنبھال کر رکھو۔"

[*We are taught time to time from our childhood to keep things with care*]

and this inculcates a sense of responsibility towards the material objects that results in retentive personality leading to increased hoarding attitude. They learn from their

parents the ethics to use things with care and avoid wastage. This results in developing the habit of keeping things to the maximum and presents them with difficulty in discarding.

Socio-cultural aspect

The theme referred to the influences derived from customs, perceptions, and beliefs that can be the possible contributing factor towards hoarding behavior. The constituent categories are socio-economic status, materialistic culture, and gender roles (as shown in figure 7).

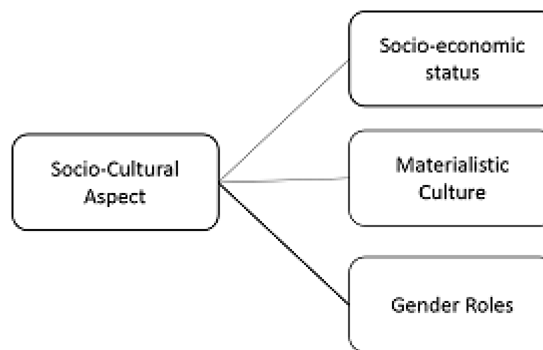


Figure 7. Categories under the socio-cultural aspect of hoarding behavior

Socio-Economic Status

Accounts of the informants revealed that factors like pocket size, urge for luxury, and objects being indicators of status, etc. contribute towards the development and maintenance of hoarding behaviors.

> "ہم بتانا چاہ رہے ہوتے ہیں کہ میرے پاس ریسورسز اتنے اچھے ہیں۔ میں اس آرام دہ زون سے تعلق رکھتا ہوں جہاں یہ چیزیں آسانی سے مل جاتی ہیں، بہت لوگ جج ہی آپ کو اس چیز سے کرتے ہیں کہ آپ نے کیا پہنا ہوا ہے۔"
>
> [*We want to show off our status through resources. I belong to this social class where these things are easily available. Many people judge you by what you are wearing*]

Excerpts from the data show that people try to acquire everything possible to make their life more comfortable and luxurious. They acquire to make sure their inclusion in certain social classes. Keeping the right type and amount of objects marks one's social class. In that sense, objects are the vehicles to import one's value in society and demarcate one class from the other. Therefore, the objects indicate one's level of social competence and relate to the survival instinct.

> "ہم سیکیور محسوس کرتے ہیں۔ اب لوگ چیزوں کو شو آف کر کے۔ ڈرائنگ روم بہت اچھا بنا کر چیزیں رکھ کر۔ مختلف چیزیں جو ہیں سٹیٹس کی نشاندہی کرتی ہیں مطلب جیسے ہم لوگوں کی ڈریسنگ دیکھ کر کسی نے کیا پہنا ہوا ہے۔ چیزیں ہم کو واضع تو کرتی ہیں۔"
>
> [*We feel secure by showing of things, by decorating drawing room with things as different things mark the status of a person. For instance by looking at the dressing, what someone is wearing. Things do elucidate us*]

indicates the sense of security that material objects bring to one's self. One's possessions are the indicators or markers of one's position in society. People strive hard to make their possessions and that's why feel difficult to discard their earnings. To them, it's like discarding the invested time and energy to get that object.

Similarly as expressed;

> "میں نے بہت سے ایسے لوگ دیکھے ہیں جن کے پاس بچپن میں جو چیز نہیں ہوتی تو جب اُن کے پاس پیسہ آتا ہے۔ وسائل آتے ہیں تو وہ اس چیز پر زیادہ خرچ کرتے ہیں جو وہ نہیں لے سکے ہوتے۔ اُن کے اندر جو کمی رہ جاتی ہے۔ وہ پھر بعد میں پوری کرتے ہیں۔"
>
> [*I have seen many such people, when they have money and resources they spend more on things they were not able to get in their childhood. They try to fill the void (through things) that is left in them.*]

People also hoard things as a compensatory behavior to the deprivation and associated feelings. To satisfy earlier unmet needs, they use to acquire a lot and find it difficult to discard due to the fear and threat that deprivation has brought into them.

Materialistic Culture

This category refers to the changing lifestyles and growing competition as a result of modernization as illustrated in the following excerpt;

> "اصل میں سوسائٹی نے کامیاب لوگوں کی کچھ ڈیفینیشن رکھی ہیں ۔ یہ جو کلاسسز بنی ہوئی ہیں نا یہ اپر کلاس ہے یہ مڈل کلاس ہے-----، جب آپ دوسرے سے اپنے آپ کو کمپیر کرتے ہیں۔ اس میں بھی بہت سی چیزیں خریدنی پڑتی ہے۔ چاہئے ضرورت نہیں ہوتی۔"
> [*Actually, society has a definition for successful people. This class system, upper class, middle class,…when you compare yourself with others you buy many things even if you don't need them*]

People acquire and keep things as a show to maintain a particular standing in society. Material possessions are the means to show their superiority and power. Through objects they possess, people are recognized and respected.

> "کلاس کا سسٹم ہے۔ ہم اپنی خوشیاں دیکھتے ہیں۔ ہر بندے کے وسائل ہیں۔ جب بندے کے پاس وسائل آتے ہیں تو ضرورت تو ایف ایکس بھی پوری کر رہی ہے یونیورسٹی آنے جانے کے لیے پھر پراڈو کیوں؟---"
> [There is the class system. We look for our happiness. Every person has resources. When people get resources (they spend more) for example, fx satisfies the need for going to university then why do people use Prado?]

There is a lot of stuff available and a continuous introduction of newer, more sophisticated materials. This tempts people to acquire new things, at the same time maintaining the older items which result in adding to the stuff. They just can't resist being updated to maintain their identity attached to material possessions though they recognize that older items serve the purpose well. And as the older items are still valid, they feel it difficult to discard them which results in the form of a hoard.

Similarly, as the people are getting more oriented towards materials, they try to make the status quo. In doing so, shifting from one status to a better one demands

an increased number and quality of possessions. Their experiences of struggling for materials make the smooth transformation difficult for them

"ہمارے پاکستان میں بلکہ اپنی بات کروں تو میں ایک ٹرانزیشنل کلاس سے
تعلق رکھتا ہوں لوئر سے مڈل اور مڈل سے اپر مڈل--- زیادہ تر ایسا ہوتا ہے۔
تو اگر میرے والدین--- تو انھوں نے وہ ساری چیز دیکھی ہوتی ہے کہ کس
طرح سے بُرے حالات میں بندہ رہتا ہے۔"

[In Pakistan instead, if I talk of myself, I belong to a transitional class, moving from lower to middle and middle to upper-middle class (the way it goes). My parents have experienced all those things that how one lives in bad circumstances]

and the objects in that situation become a medium to keep their struggle alive and valuable.

Gender Role

Every culture defines different roles to different genders. These roles serve differently towards hoarding behavior. Data suggests that as females in Pakistani culture are mostly housewives they depend on their male counterparts for their finances. This dependency makes them avail every opportunity to acquire. The fear that they may not be able to get the thing again compels them to acquire. At the same time, as they spent most of their time in making and serving their home, for them objects become the primary focus through which they can depict their abilities and skills making it difficult for them to discard. For example,

"ہماری عموماً جو خواتین ہیں ہاؤس وائفسز ہیں ۔ گھر کے اندر ہی رہتی ہیں اُن
کا یہ ہوتا ہے کہ گھر ہی میں رہتی ہیں۔ میں نے دو چار چیزیں {-----} میاں
سے کہنی ہیں وہ مجھے لے کر دے گا۔ ورکنگ ہو بندہ تو چیزوں کی اتنی
پرواہ نہیں کرتا کیونکہ اسے پتہ ہوتا ہے کہ لے لو گا کماتا ہوں۔"

[*Generally, our women are housewives. They stay indoors. They have to ask husbands to buy them things. A working person doesn't care for things much because they know that they can acquire things as they earn*]

Moreover, females in our society are supposed to be responsible for the care and nurturance of family and relationships. They practice the same caring role for the material objects in their custody which makes discarding a difficult practice for them. Furthermore, objects give them the way to practice their control and make the home their territory that they feel power over.

In the case of men, they are the earning members and have money to buy things. Their self-sufficiency in terms of money matters makes it possible for them to acquire. On the other hand, their dominant position in the house makes it easier for them to keep the hoard. As expressed by one of the informants;

> "ہمارے ہاں فیملی میں مرد کا زیادو ہولڈ ہوتا ہے۔ کیونکہ مردانہ فیکڑ ہوتا ہے ایکانومی اُن کے پاس ہوتی ہے۔ پیٹریلچل (patriarchal) سوسائٹی ہے۔ تو مردوں کا عموماً گھر میں ہولڈ زیادہ ہے اور وہ چیزیں اکٹھی کرتا جاتا ہے۔"
> [*Men have more hold in our families. They have the economy. It's a patriarchal society. That's why men have more control in house and they keep on gathering things*]

Data also indicates that males when involved in hoarding are more rigid in attitude as compared to females and are difficult to convince to discard their hoarded objects because of the male dominating rearing practices in the society as a whole.

Hoarding as a Clinical Concern

Analysis of the interviews from clinicians revealed five main themes (see Figure 8) showing the essential patterns across the data set. The emergent themes provided a significant description regarding the phenomenon of hoarding in clinical settings as seen and interpreted from the perspectives of the informants. The details are as below;

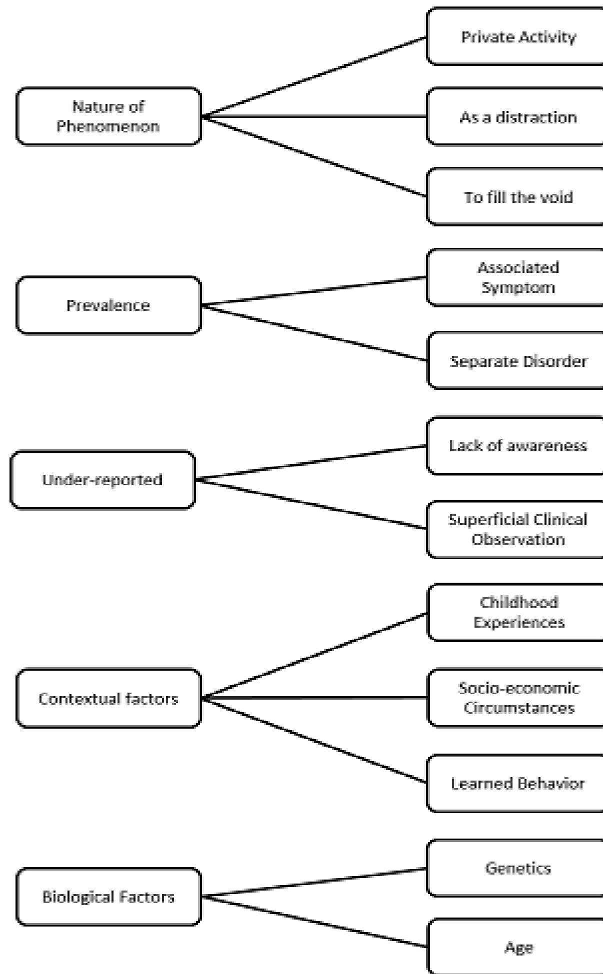


Figure 8. Themes and sub-themes of hoarding as a clinical concern

Nature of Phenomenon

Narratives of the informants show that hoarding exists as a personal activity that people do privately and don't usually share with others. Findings suggest that people when getting disappointed by surrounding human beings start investing their emotional input in material objects as they appear to be least threatening as reported

> "انسان جب ریلیشن شپس سے پریشان ہو جاتا ہے۔ ناکام ہو جاتا ہے یا دکھ پہنچتا ہے تو وہ میڑیل چیزوں کی طرف آجاتا ہے، وہ کسی سے بات نہیں کر سکتا---- ریپرس کرنے کی عادت ہے--- وہ غصے کا مظہر ہے اس کو باہر نہیں پھینکتا۔"
>
> [*People when get troubled by relationships. Becomes unsuccessful or gets hurt then he moves to material things. He*

> *can't talk to anyone…or has a habit to repress… he keeps anger and doesn't ventilate it (then he turns to things)]*

They usually keep a general sense of insecurity and feel incapable to express themselves proficiently. These objects, therefore, serve as a distraction from the worry brought about by social interaction as mentioned

> "کوئی باطنی ضرورت ہوتی ہے کسی انسان کی، جو لوگ کلچرل موافقت اچھے سے نہیں کر پاتے۔ خود کو اندر سے غیر محفوظ محسوس کرتے ہیں۔ اور اُن میں اپنی بات دوسروں تک پہنچانے کی ہی سکل نہیں ہوتی۔"
> [*There is some internal need of a man. People who cannot socialize well, feel insecure from the inside. And they don't keep the skill to say their standpoint to others*]

They have a lot of junk in their minds in the form of day-to-day conflicts. In that stance, these objects around them are a reflection of their mental states. People also hoard to show their superiority by the number of objects around them. It helps them spot their prominence and feel esteemed. For example

> *"They think of themselves to be known by these things. By the number of objects they keep. It's a kind of their identity for them… Therefore use the hoarded object as a source of self-esteem if they could not have all these things to show you by skill, they can take pride in. They will fill that gap with objects".*

They feel so associated with their things that discarding brings anxiety in them. This anxiety may not be related to that particular object rather may be general overall anxiety that manifests itself in those particular objects.

Accounts of participants show hoarding also tends to occur under depression when people are in a "state of possibility of predicting losses in their lives". In some cases difficulty discarding is the result of "grandiose or delusional meanings people attach with their possessions" and that's another reason to keep the whole activity secret as well. They never make it public and are usually brought to the surface by the

family and people around them as and when accumulating unnecessary larger amount of things obstructs the working of a house and creates relationship difficulties.

Prevalence

Narratives of the informants show that as hoarding is a secret activity that is usually not made public, it's very difficult to estimate the prevalence of the behavior. Though it is listened to and seen around generally it's not reported in clinical settings. It can be part of personality and appears as a symptom with different psychopathologies like obsessive-compulsive disorder, depression, anxiety, schizophrenia, and other organic brain disorders. However, it's rarely seen as a separate disorder as there are very few cases reported. The measures of it being part of other disorders are considered much more common. Moreover, such cases primarily come for other reasons and not for hoarding as a primary concern. Though they might meet the criteria for the disorder if investigated thoroughly.

> *"It has not been entitled as specifically a disorder but its present. It happened two-three times that when I was going into the details of everything that I come to know about the characteristics of this behavior..... But usually, we don't dig down to the things that much….*"

However, as a behavioral trend in the general population, it's considered much prevalent. And the presence of a significant number of people with the condition as a clinical concern is suspected as it is not considered a culture-specific phenomenon as stated

> "جہاں جہاں نفسیاتی مسایل ہیں وہاں وہاں ہورڈنگ بھی نفسیاتی ہیلتھ سے منسلک ہے یہ کلچرل باونڈ سینڈروم نہیں ہے کہ مغرب میں ہوتا ہے۔ مشرق میں نہیں ہوتا"۔

[*Wherever there are psychological issues, hoarding is attached with psychological health. It's not a culture-bound syndrome that it's present in West and not present in Eastern culture*]

A general lack of disease-related research orientation also presents as a barrier in providing prevalence estimates not only for hoarding but for most of the psychopathologies in general.

Underreported

Narratives reveal that the phenomenon of hoarding in Pakistan's clinical settings goes underreported because of several associated factors. Patients are generally not investigated or observed thoroughly for concerns during intake. Usually, diagnoses are made on the presenting complaints. Even in most associated disorders like OCD, hoarding is considered a marginalized behavior that is not usually asked about. As quoted;

"ہم نہیں کرتے *unfortunately* کیونکہ جب کوئی آتا ہے تو ہم عموماً
شکایات کی روک تھام پر قائم ہوتے ہیں جیسے کہ اگر ڈیپریشن ہے،
اضطراب ہے تشخیص ہو جاتی ہے تو ہم آٹومیٹکلی اس میں شفٹ ہو جاتے ہیں
کہ اب تو عجیب رویے ہونے ہی ہونے ہیں۔ "

[*We don't do that because when someone comes we usually work on symptomatic treatment. Like if its depression, we diagnose it and automatically accept that now strange behaviors will happen* and hoarding could be one of such strange behaviors]

"We don't usually dig into that and we don't develop any specific insight related to that."

On the part of patients and families, they largely lack the awareness that it can be part of psychological disturbance warranting clinical attention. Moreover, having a collectivistic culture, the organizational efforts on part of extended family refrains the condition to become an active dispute in most of the cases. It is considered more of a

“bad behavior rather than an unwell behavior” which further minimizes its chances to be reported as a clinical concern. The private nature of the phenomenon also adds to the situation as the patients tend to be secretive about it which keeps them from reporting it and in some cases leads to total denial of the situation.

Peripheral Factors

Accounts of the informants show that certain contextual factors contribute towards the development and manifestation of hoarding behavior. For example,

> "وہ بچے یا لوگ جن کو محروم رکھا گیا ہو بچپن میں ایسی چیزوں سے۔ چھوٹی چھوٹی چیزوں سے تو وہ لاشعوری طور پر ایسوسیشن کو بنا لیتے ہیں کہ مطلب اچانک ضرورت نہ پڑ جائے۔"
> [*Those children or people who are kept deprived of little things in childhood. They unconsciously develop an association with things that they might need* in the future]

show that socio-economic factors like scarcity of resources can contribute towards the development and maintenance of the condition. Material deprivation cultivates an increased sense of worth attached to objects and can leave a person preoccupied with material possessions. The sense of vulnerability presented by lack of desired objects induces a general sense of insecurity in people that can lead to hoarding of an increased number of items.

Similarly, in the overall scenario, socio-economic circumstances of the society as a whole lead to poor treatment of resources on the part of institutions as well. As mentioned;

> "میں اور آپ جس ملک میں رہتے ہیں وہاں 50٪ سے زیادہ مریض جو کہ نفسیاتی مسائل کا شکار ہیں ان کا علاج ہی نہیں کروایا جاتا۔ تو ہو گا ضرور یہ لیکن پاکستان میں جو علاج کروانے کے معیار ہیں اس کے اندر ہم اس حد تک پہنچے ہی نہیں ہیں کہ ہم ہورڈنگ کو سبجیکٹ سٹیڈی کریں کبھی"۔
> [*You and I live in a country where more than 50% of patients with psychological issues are not treated. So it (hoarding disorder)*

may exist but according to the standards of treatment in Pakistan we have not reached a point where we study hoarding as a subject]

Besides that people on average are not able to afford medical treatment and it is a usual practice that they consult professionals only when the situation gets out of control rather become unbearable and difficult for them to manage on their own.

Experiences of childhood abuse and the factors like social isolation, repression, and lack of expression in the family environment are also found to be contributing to the condition as evident in the narratives of the respondent while quoting a case example;

"اس کے اپنے والد کے ساتھ تعلقات کافی ڈسڑب تھے۔ اور اس کی وجہ یہ تھی کہ اس نے انہیں بہت *dominating* پایا تھا۔ اس کی والدہ کے ساتھ اس کا رویہ بہت *abusive* تھا۔ مارنا، پیٹنا، جھگڑنا اور اس نے بچپن میں کئی دفعہ انھیں ایسا کرتے دیکھا تھا۔ اور جب وہ روتا تھا شور کرتا تھا تو اسے کہا جاتا تھا کہ آواز نہ نکالے ۔"

[*His relations with his father were very disturbed. And the reason was that he found him very dominating. His (father) behavior with his (patient) mother was very abusive. He saw him fighting and beating her many times in his childhood. And when he used to cry and shout, he was asked to keep quiet*]

Moreover, hoarding does exist as a learned behavior. People hoard by following others both from the family and the society. Material possessions not only provide them with a sense of security but brings with them a sense of accomplishment which makes the individual keep on adding to the stuff.

Biological factors

Narratives of the informants show that genetics play an important role in the expression of hoarding behavior and if one has got the predisposition, triggers in the environment can lead to expression of genes as indicated;

> *"Foremost probably genetics that of course if you are genetically insecure, you are genetically predisposed that it is expected of all behaviors, they express themselves give certain cues in the environment".*

Age is found to be another significant factor related to hoarding behavior. About clinical settings, hoarding is found to be rare in young or middle age groups while much more common in the elderly population as expressed by the informants.

> "میری فیملی میں بہت سارے لوگوں نے اور میرے کولیگز نے رپورٹ کیا۔ جنھوں نے مجھے refer کیا۔ اور directly اور indirectly پتہ چلا اور اتفاقاً یہ سارے بزرگ ہی ہیں ۔ درمیانہ عمر کا کوئی نہیں تھا۔ سب بوڑھے لوگ تھے۔"
>
> [*Many people in my family and my colleagues reported. They referred (cases) to me and directly or indirectly I came to know. And by chance they all were elderly. None of them was of the middle age group. All were elderly people*]

It is a cultural norm that the elderly are usually not disturbed or questioned for their actions out of respect

> "ہماری فیملیز میں عموماً بڑوں کو interrupt نہیں کیا جاتا۔"
>
> [*In our families we don't usually interrupt elders*]

Several inconvenient behaviors on their part are considered acceptable as a part of their aging process which makes it possible for them to hoard. Data also indicates that they are much more rigid in their attitudes and are difficult to handle for their fixedness with their possessions.

Discussion

The goal of the research was to understand more about the phenomena of hoarding in Pakistan's indigenous context. The study's findings imply that when cognitive, affective, psychological, and socio-cultural factors are included, the idea of hoarding behavior can be made implicit. Because the goal was to gain understanding

and insight into the clinical nature of the hoarding behavior. The research looks on the elements that underpin major themes about the type and prevalence of hoarding as a mental health issue. Below are the findings of the inquiry on the parallels and differences with existing literature.

First, the study backs up existing research on the importance of emotional attachments, associated positive and negative affect, specific personality traits, and early experiences in the development and maintenance of hoarding behavior (Steketee & Frost, 2007). Second, the study reveals that material goods create a feeling of identity to the owner (Keefer, 2012), provide a sense of identity to the owner (Hartl et al, 2005), and are considered status symbols in society (Hartl et al, 2005). (Shaeffer, 2012). Finally, it considers socio-cultural factors such as status shifts and the accompanying sense of competitiveness, gender roles, the influence of material hardship, and religious construction to explain phenomena as more context-specific features in Pakistan's indigenous settings.

It is commonly known that humans acquire emotional attachments to tangible objects and form emotional associations with them. They place a higher value on things in terms of both instrumental and sentimental value, and they treasure the sense of security and comfort they get from their possessions. They feel responsible for their belongings and are concerned about their possible use worth, which prevents them from abandoning the majority of them (Kyrios, Steketee, Frost, & Oh, 2002). Similarly, a sense of unpredictability about the future encourages people to acquire more and not miss any opportunities (Oglesby, Medley, Norr, Capron, Korte, & Schmidt, 2013). People build emotional attachments to their goods, according to the current study, making it difficult for them to part from them. These mental linkages

act as an invisible thread that connects them to the past through memories, emotions, and interests. At the same time, they connect them to their hopes for the future. As a result, these things serve as a link between their past, present, and future selves, providing them with a feeling of self and identity.

According to research, people collect artefacts because they believe they will be useful in the future, even though they are considered junk or waste by the majority of people. They are usually responsible for the thing and see it as a possible opportunity that should not be missed (Steketee & Frost, 2007). The current study also reveals that the most common rationale for the number of objects people hoard is the belief in their potential utilitarian worth. They are adamant that everything has a function and should thus be preserved and cared for. The informants' stories also illustrate that if they entrust their personal belongings to someone, they must ensure that they will be treated with care by the recipient.

The way one interacts with objects is interpreted as a reflection of one's inner qualities and aids in the understanding of one's personality (Fromm, 1947). Possessiveness (Millon, Meagher, & Grossman, 2001) can result from controlling and withholding nature, leading to object hoarding. Hoarders, according to Fromm (1947), retain their miserly tendencies and place value on both material and intangible items. They are afraid of and distrustful of the outside world, but they feel safe with their hoarded possessions. The current study backs up the above theoretical assumptions, indicating that certain personality qualities such as miserliness, selfishness, jealousy, procrastination, rigidity, and others are linked to hoarding behavior. The findings also show that these personality aspects may be learnt behaviors, since early childhood rearing approaches develop ethics of being loving, responsible, and dutiful to items of

use. This could contribute to the development of traits such as retentive personalities, which can lead to object hoarding.

According to literature, material goods have always been appreciated for reasons other than their utility. They help convey one's opportunities and abilities in the outside world by serving as substantial representations of one's sense of self (James, 1890). Objects increase one's self-worth and serve as a means of expressing one's social status. Rapid industrialization and the manufacture of a greater number and variety of items at cheap prices, as well as the introduction of new brands, have had a huge impact on society (Simmel, 2003). The current study's findings further show that material influx and the status quo are causing a shift in values by establishing a generalised materialistic viewpoint. Because a single product is available in a variety of quality levels, practically any socioeconomic class can purchase it as a result, achieving a contemporary appearance is now simple. This has resulted in a great deal of competitiveness among various social groups. People are tempted to purchase more goods to mark their social standards since objects are markers of one's social position. This, in turn, causes envy in others, motivating them to work more and achieve more. As a result, the culture of greater object buying and display is gaining acceptance. Furthermore, while people work hard to achieve these societal standards, the time and energy invested encourages them to cling on to their goods tightly. For them, material goods are portrayals of their accomplishments, clues to their identity, images of their fight through life, and symbols of their existence, rather than tangible items. Together with hard-won experiences with items and the status quo, a preoccupation with material possessions emerges, which may lead to the phenomenon of hoarding.

The impact of material deprivation on the development of hoarding behavior is one of the study's key results. According to the findings, material deprivation and related events cause a general sense of insecurity, which leads to a perception of enhanced object value. People are vulnerable as a result of the threat posed by a scarcity of material goods, and they dread being caught in similar situations in the future. This causes individuals to become too sensitive to the value of objects, making discarding a tough task for them. However, existing literature contradicts the findings, as research indicates that there is no clear link between material hardship and hoarding (Tompkin, 2011). In a related research, Landau and colleagues discovered no link between material deprivation and hoarding (Landau, Iervolino, Pertusa, Santo, Singh, & Mataix-Cols, 2011). Frost and Gross (1993) also claimed that the findings on the significance of material deprivation in hoarding behavior are inconsistent.

Deviance and psychopathology are not abstract concepts; they are defined in terms of society standards and cultural expectations (Widom, 1984). Every religion has ramifications for mental health and illness due to its belief system. From the standpoint of mental health, religion gives much-needed rules that can assist individuals in charting a direction for their life. Believers can cope better with life's stresses and hardships, as well as its uncertainties. However, the notion that religion and psychiatry have always been at odds persists (Behere, Das, Yadav, & Behere, 2013). In a similar line, the current study's findings show that religious discourse about the phenomenon is a culturally distinctive feature of the investigation. Informant accounts, which associated an accumulation of material property with a negative meaning, disapproved of the development as a result of eroding Islamic

ideals in society. It is seen as a result of the collapse of the higher virtue of simplicity, which is seen as a result of modernity and Western culture's followership.

According to research, hoarding correlates differently for men and women on several factors, with dependent personality being one of the signs (Samuels et al, 2008). The findings of this study also point to the cultural implications of gender roles on hoarding. Females are vulnerable to accumulating and hoarding material goods due to their financial dependence and duty as caretakers. Women's domestic role appear to make them more material-oriented because they spend the majority of their time making and maintaining such objects, resulting in future financial and household security. Aside from that, it instils in children a sense of responsibility and care for the goods, making discarding a tough decision for them. Men, on the other hand, as independent and powerful counterparts, are less likely to feel compelled to spend and, as a result, hoard the goods. The study also found that women hoard more than men, and that men's hoarding behaviour is associated with a high level of intensity of attitude. However, research shows that men have much higher rates of hoarding than women (Iervolino et al, 2009).

Hoarding exists as a unique clinical condition, has shown to occur as a symptom and a comorbid condition in several mental health issues (Sorensen, 2011). Research indicates its existence with an additional diagnosis of Axis I or Axis II disorders as well (Tolin, 2011). The findings of this study support its prevalence as an associated symptom in several psychopathologies and suspect its comorbidity as a comorbid condition in different mental disorders. However, as a separate disorder, it's not well recognized in the clinical settings of Pakistan. Lack of awareness among the general public regarding its being part of psychopathology, superficial clinical

observation by mental health professionals, and secret nature of the activity are considered the contributing factors regarding the unrecognized and under-reported nature of the phenomenon. Additionally, it only comes to notice when family or concerned people report the issue (Frost & Steketee, 2014). Therefore, the prevalence is thought difficult to estimate. Furthermore, the scenario in broader terms of overall economic conditions of the country, lack of medical facilities and less than the ideal environment at the institutional level, poverty and unaffordability of treatment at individual level make it impossible to give an exact picture of the phenomenon as a clinical concern in indigenous settings of Pakistan.

Despite the fact that the study confirms many characteristics of the phenomenon that have been hypothesized by earlier studies, as stated above, there were few differences in this group. Memory-related considerations were not explicit in informant descriptions when it came to the phenomenology of the activity. This could be due to the fact that the sample was drawn from the general public, but an analysis based solely on a sample of hoarders might offer different results. Similarly, because of the collectivistic culture, the clutter part of the behavior looks to be completely different, but it can be predicted that the family's organizing efforts and throw-away attitude could prove to be a source of increased stress and relationship trouble. As a result, additional study on a more typical sample of hoarders is needed to clarify these findings and better explain this under-recognized mental health issue.

Conclusion

It can be concluded from the findings of qualitative exploration of the phenomenon that hoarding behavior in the present cultural context exhibit

considerable similarity with existing literature on the construct. However, there have been few culture-specific attributes like increasing materialistic orientation in people, gender role, and religious interpretation of phenomenon that appear to be the unique aspects of present context influencing the behavior under study and call for further consideration. Based on the findings of this qualitative study, an indigenous scale was devised in an attempt to accommodate the unique cultural aspects of hoarding behavior found in the present context. Using the verbatim from FGD's conducted in the present study, an item pool was generated and a systematic procedure was followed for the purpose of scale development that is described in detail in the succeeding chapter.

Phase I: Development of Determinants of Hoarding Scale (DHS)

Chapter IV

Phase I: Development of Determinants of Hoarding Scale (DHS)

The symptoms of hoarding are the focus of several standardized tests like Hoarding Rating Scale (Tolin, Frost, & Steketee, 2010), Saving Inventory Revised (Frost, Steketee, & Grisham, 2004), and Clutter Image Rating (Frost, Steketee, Tolin, & Renaud, 2008). These tests give an overall assessment of hoarding severity, but they don't ask about the specifics of what factors contribute towards hoarding. For example, the items in Saving Inventory Revised include "How much clutter in your home interferes with your social work or everyday functioning?" and "To what extent does clutter in your home cause you distress?" Likewise, items in Hoarding Rating Scale ask "Because of the clutter or number of possessions, how difficult is it for you to use the rooms in your home?" Similarly, Clutter Image Rating gives a pictorial presentation of different thresholds of clutter and measures the amount of clutter in various rooms of the house, but it ignores the functional problems that clutter causes. As a result, most questionnaires offer broad assessments of hoarding symptoms but little detail regarding development and maintenance of hoarding behavior. Only one instrument that is Saving Cognitions Inventory (Steketee, Frost, & Kyrios, 2003) assesses beliefs and attitudes that play role in emergence and maintenance of hoarding behavior. Some typical examples of these dysfunctional beliefs are the exaggerated significance and inflated emotional attachment ascribed to preserved items, the excessive need and desire to maintain control over them, and the decreasing faith in one's memory. However, this instrument is also limited to measuring only the cognitive aspect of the phenomenon. All of these are excellent study scales but limited

in scope that they do not measure the different factors associated with hoarding behavior. Moreover, as most of the research has been done in western cultures, the instruments also represent their cultural depiction and manifestation of the behavior. Though world has become a global village and people from different cultures share a great deal of similar beliefs and behaviors yet role of cultural values and norms cannot be denied.

Research showed that context-specific questionnaires have higher predictive validity and accuracy than general questionnaires (Pomerance & Converse, 2014). The objective of developing an indigenous measure for the present research serves the same purpose. It aims to construct a comprehensive instrument suited to the local needs, while retaining the psychometric standards of established assessment measures. As evident in the qualitative inquiry of hoarding behavior in present indigenous context, there are certain factors relating to the phenomenon that appeared to be more of culture specific in Pakistan. For example, economic and political circumstances of the country, rearing practices and other environmental influences including cultural variation in gender roles and religious attributions to development and maintenance of hoarding behavior that needs further consideration as possible contributing factors towards hoarding behavior.

Research indicates that distinct social classes and economic status levels have different stress thresholds and risk tolerances. A high family income may provide people with better material security and a stronger ability to bear the risks (Zhao et al., 2022). While Pakistan is a developing country and majority of people struggle for the daily necessities. Also, uncertainty prevails for even people with better social status

due to socio-political situation and deteriorating economy of Pakistan. As risk minimization theory points out (McKinnon, Smith, & Hunt, 1985), in present situation of socio-political uncertainty, hoarding can originate as an adaptive response to an anticipated future of want. In an attempt to protect oneself from future loss, deprivation, and uncertainty, the individual hoards. Similarly, excessive physical discipline of children and making them responsible and careful towards material possession that is ingrained in cultural values of Pakistan as indicated in qualitative exploration of hoarding behavior need additional reflection as a vulnerability factor towards development and maintenance of hoarding tendencies. Likewise, association of practicing female gender role as house-maker that involves spending most of time and effort with active involvement with material stuff can possibly increase one's inclination towards accumulation and associating anthropomorphic qualities with material things.

Since, there is scarcity of research in Pakistan on scale development in general and on hoarding behavior in particular, identifying the factors associated with hoarding behavior in cultural context of Pakistan is crucial and to tap these factors effectively, creating an indigenous scale is deemed necessary. Also, the existing measures on hoarding behavior are majorly developed in Euro-American background (Naz & Ijaz, 2015). Living conditions and preferences in these regions greatly differ from those in present cultural context. To adequately tap these culturally relevant factors and to study their relationship with hoarding behavior in Pakistan it was thought necessary to develop an indigenous scale. A mix of deductive and inductive method was used for the purpose. Hence along with qualitative inquiry done

in previous study, a comprehensive literature review was carried out to effectively capture the different dimensions of phenomenon of hoarding.

Method

Objectives

1. To develop a scale measuring the factors determining hoarding behavior in cultural context of Pakistan
2. To establish the psychometric properties of the newly developed scale.
3. To examine the relationship between demographic variables (age, gender, marital status, and family system) and factors associated with hoarding behavior.

Procedure

Item pool generation. Item pool for the scale was generated from the data collected through qualitative exploration. Respondents verbatim from the qualitative exploration of hoarding behavior done earlier in study-I was used to write the item statements. Also extent literature was reviewed thoroughly to elucidate the construct and already existing measures on hoarding i.e. Saving Inventory Revised (SI-R; Frost, Steketee, & Grisham, 2004), and Saving Cognitions Inventory (SCI; Steketee, Frost, & Kyrios, 2003) were also consulted. Most of the aspects of hoarding behavior like emotional association with objects, perceived future use, instrumental value of stuff, their significance as identity substitutes etc. were found as universal aspects. However, memory related concerns like buying excessively because of forgetting the earlier purchase or already having the required stuff didn’t emerge in indigenous exploration of hoarding behavior. Therefore, items were included for the memory issues from already existing measures to explicate the construct exhaustively. Initially

180 items in item pool were written on the basis of verbatim of the respondents under the categories generated in qualitative exploration of phenomenon including the items on memory related concerns from already existing measure of hoarding as they didn't emerge in focus group discussions. Which were then shortlisted on the basis of similarity and overlapping thus 112 items (see Appendix C) were put forth for expert's opinion

Experts feedback. Specialists working in the field were consulted to assess the items for structure, clarity and construct relevance. Item booklet along with definitions of different dimensions of the construct as emerged in qualitative inquiry was given to eight experts of whom five were Ph.D. faculty members while three were Ph.D. students in the field of Psychology. They were asked to first familiarize themselves with background information and working definitions of the construct provided in the booklet and then match each item to the relevant dimension on their experience and judgement. Instructions (see Appendix D) were also given to scrutinize each potential item on construct relevance, language complexity, clarity, and comprehensibility of expression. They were also asked to point out for any redundant and double barreled items and suggestions for alternative wording for confusing or awkwardly inclined items were appreciated. Moreover, they were requested to write-in any additional comments on individual items and to identify any important indicators of the construct that they observe to be under-represented or absent while going through the item booklet. Criteria for the item to be considered was set to be as an agreement of five out of eight experts. An item pool of 80 (see Appendix E) was finalized on the basis of expert opinion including repetition of one item with rephrasing to decide later on for which statement is more comprehensive

and remaining twenty three items were dropped as they were considered to be the repetitions. These finalized items were cross checked for wording, clarity, and structure by additional expert panel ($N = 4$) comprising of two Ph. D faculty members and two Ph. D. students of Psychology. Four items were rephrased as suggested by the experts.

Pre-testing. Before administering the resultant questionnaire to the target population, it was pretested to identify for any difficulty or concern with respect to understanding the individual items and to check for the approximate time taken to fill the questionnaire. For the purpose, it was administered to students ($N = 15$) from Masters and Ph.D program. Time was noted for the participants to complete the questionnaire to see if they were taking longer than expected to comprehend the questionnaire which can be taken as an indication of problem with item structure or expression making it difficult for the participants to understand and respond the items. Also to estimate the average time required for completing the questionnaire that can further help estimate the total time required of participants in main study where the scale will be used along with other study measures. Time taken to complete the questionnaire was found to be within 17 and 22 (Avg = 22) minutes. After the completion of questionnaire respondents were asked to state if they observed any item or word difficult to understand or confusing. Random statements were also asked from different participants to see if they perceive them correctly. Filled questionnaires were also checked if there are any missing responses in order to identify any problematic area. There were no missing items found and participants also didn't mention any difficulty while taking the questionnaire.

The 80 item questionnaire was then field tested on target population in further two phases. Phase-I was meant to explore the factor structure and to check the reliability and internal consistency of the scale. While Phase-II aimed at confirmatory factor analysis along with examining the role of demographic variables.

Phase 1

Objectives.

1. To explore the factor structure of the scale.
2. To examine the reliability estimates of the scale.

Sample.

Data was collected using convenient sampling technique. The inclusion criteria was set to be as an adult (between 18 and 60 years) who is able to read and understand Urdu language. Data was collected from 400 individuals on which factor structure of the scale was determined and preliminary psychometric properties were established. Sample consisted of individuals from diverse socio-economic backgrounds including university students (n = 103), house wives (n = 89), teachers (n = 87), and working individuals from different professions other than teaching (n = 121). For details of the sample see Table 3.

Table 3

Demographics Characteristics of the Participants (N=400)

	N=400			
Demographics	*f*	%	Mean	*SD*
Age (in years)			34.64	11.32
Gender				
Men	164	41		
Women	236	59		
Education				
Matriculation	49	12.4		
Intermediate	38	9.6		
Graduation	130	32.5		
Masters	177	44.3		
Missing	6	1.5		
Marital Status				
Single	164	41		
Married	206	51.5		
Widowed	01	.3		
Divorced/Separated	-	-		
Missing	29	7.3		
Family System				
Nuclear	258	64.5		
Joint	139	34.8		
Missing	3	.8		

Data Collection and Analysis

After taking informed consent data was collected from the target population. Information was collected on demographic variables like age, gender, education, family system, etc. using a demographic sheet along with item pool. Data was analyzed using Statistical Package for Social Sciences (SPSS). Item total correlation and factor analysis were employed for scale development. Factor structure of the scale was determined using different criteria like Scree plot, Eigen values, minimum number of item in each factor, and factor loadings and items were evaluated for theoretical convergence, loadings and cross loadings. Once the factor structure was finalized subscales were named using experts opinion. Alpha coefficients of subscales and scale were calculated to check for reliability statistics.

Results

Table 4

Items total Correlation of 80 Items of the Scale (N=400)

Item No.	*r*	Item No.	*r*	Item No.	*r*
1	.29**	28	.52**	55	.48**
2	.38**	29	.61**	56	.51**
3	.45**	30	.58**	57	.61**
4	.40**	31	.64**	58	.58**
5	.48**	32	.36**	59	.68**
6	.46**	33	.57**	60	.56**
7	.55**	34	.59**	61	.58**
8	.57**	35	.57**	62	.62**
9	.24**	36	.52**	63	.62**
10	.57**	37	.43**	64	.55**
11	.58**	38	.52**	65	.65**
12	.28**	39	.62**	66	.48**
13	.53**	40	.56**	67	.59**
14	.36**	41	.46**	68	.57**
15	.46**	42	.45**	69	.54**
16	.47**	43	.55**	70	.51**
17	.40**	44	.47**	71	.45**
18	.57**	45	.62**	72	.60**
19	.58**	46	.63**	73	.64**
20	.64**	47	.57**	74	.51**
21	.58**	48	.55**	75	.63**
22	.51**	49	.50**	76	.60**
23	.55**	50	.43**	77	.56**
24	.50**	51	.55**	78	.49**
25	.45**	52	.57**	79	.68**
26	.60**	53	.48**	80	.52**
27	.59**	54	.49**		

**$p \leq 01$.

Table 4 shows the Item total correlation for 80 items of scale in development. Results reveal that all of the items have significant positive correlation with the total score showing a highly significant internal consistency of the scale. As most of the items have high correlation with total scale score, this suggests that the factors

underlying the scale are also correlated. Therefore, oblique rotation method could be employed while running factor analysis (Williams, Onsman, & Brown, 2010).

Exploratory Factor Analysis

Analysis was done using IBM SPSS Statistics 21 software. Exploratory factor analysis was employed to delineate the underlying structure of the data. To assess the adequacy of sample Kaiser-Meyer-Olkin Measure that is .94 and Bartlett's test of sphericity (Table 5) was used which proved the data to be appropriate for carrying out exploratory factor analysis.

Table 5

KMO and Bartlett's Test of Sphericity for sampling adequacy (N = 400)

		(N = 400*)*
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.942
	Approx. Chi-Square	16409.642
Bartlett's Test of Sphericity	*Df*	3160
	Sig.	.000

Oblique rotation is thought to be the best towards rotation strategy as it allows the factors to correlate as most of factors in social sciences are considered inter-correlated. Moreover, both Orthogonal and Oblique rotations yield similar solutions in case the factors stem to be uncorrelated (Costello & Osborne, 2005). Therefore, Promax rotation was applied since different facets of hoarding behavior are thought to be interconnected and the items total correlation also suggests the same. For retaining the factors, criteria of Eigen values greater than 1, examining the Scree plot, and exclusion of factors with items less than 3 was applied.

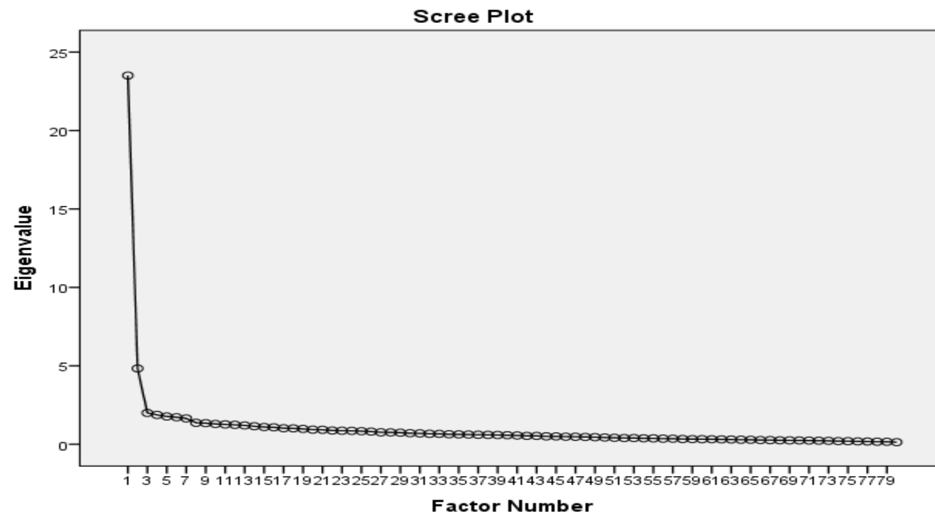


Figure 9. Scree plot for the exploratory factor analysis of the developing scale

Different factor solutions were extracted with 2, 3, 4, and 5 factors to get theoretically sound factor solution. Carefully observing all these factor solution, a three factor structure appeared to have more coherent items. The resultant factor solution explained 30.16% of variance. However the items with factor loadings of .4 and greater were retained and remaining were deleted. Item that were cross loading on more than one factor were also deleted. The exploratory factor analysis was rerun (Cabrera-Nguyen, 2010; Costello, & Osborne, 2005) as the factor loadings and parameters change after removing an item. Consequently, the solution comprised of 46 items was achieved. Factor 1 consisted of 24 items, factor 2 has 12 while factor three comprised of 10 items. However, within these factors were dispersed many of the items from personality dynamics dimension (see Chapter III) of hoarding behavior that did not emerge as a separate factor. Therefore, the items of these factors were seen for theoretical coherence and an expert opinion was sought to finalize the items. All the items from personality dynamics along with some others that were not

consistent with most of the items of a particular factor and had factor loadings below threshold ultimately got deleted. This led to development of a scale with overall 22 items falling in three subscales. It was then given to three Ph.D. students of Psychology to suggest the names for sub-scales based on the content and were also asked to mark the statements that they think doesn't fit with in the factor. Consequently, the scale was named as Determinants of Hoarding Scale (see Appendix F) with the three subscales labeled as Materialism (n = 8), Perceived Utility Value (n = 7) and Emotional Associations (n = 7).

Table 6

Factor Loadings of the Determinants of Hoarding Scale obtained through Promax rotation (N=400)

Sr. No	Factor Label	Item No. in Scale	Items	Factor Loadings		
				F1	F2	F3
1	Materialism	11	I gather most of things to get social supremacy on others.	**.72**	-.16	.08
2		19	I gather many things because they may get expensive.	**.63**	.19	-.21
3		20	I gather most of things by following others.	**.63**	-.02	.01
4		14	Things get accumulated because I don't keep the courage to give away my things to someone else.	**.62**	-.11	.07
5		15	I feel difficulty in giving away things because it took me a lot of time to get them.	**.62**	.19	-.16
6		18	I gather most of things to compete with others.	**.60**	-.14	.21
7		21	I keep on gathering things because importance of material things in our society is increasing.	**.58**	.18	-.10
8		1	I feel it easier to spend time with things as compare to humans.	**.44**	-.10	.20

Continued…

Sr. No	Factor Label	Item No. in Scale	Items	Factor Loadings		
9	Perceived Utility Value	10	I keep most of things so that I don't need to ask others.	-.17	**.70**	.09
10		16	I keep things because they can be used (useful) in hard times.	.01	**.68**	.02
11		7	I keep most of things because they could be needed in future.	.03	**.67**	.02
12		2	I keep things with care out of a thought that they can come in use at some time	-.20	**.63**	.11
13		22	I gather things to make my or my kids/sibling's life comfortable.	.16	**.51**	-.02
14		3	I gather most of things to avoid embarrassment because of shortage of anything.	.12	**.51**	.08
15		4	I gather many things while planning for coming times (future).	.21	**.44**	-.01
16	Emotional Associations	9	My things are a source of pride for me.	-.02	.09	**.65**
17		5	My things ascertain my individuality.	-.14	.11	**.58**
18		13	My things give me a sense of security.	.10	-.06	**.57**
19		6	My things become a source of getting rid of my loneliness.	.25	.07	**.49**
20		8	I keep things because they give me a sense of ownership.	.20	.01	**.46**
21		12	I gather things because they mark my identity to people.	.29	.01	**.44**
22		17	Gathering things give me feelings of accomplishment.	.18	.12	**.44**
Eigen values				12.96	3.71	1.69
% of Variance				30.16	8.62	3.94
Cumulative %				30.16	38.78	42.72

Note. The scale is originally developed in Urdu and is translated by two Ph.D. scholars into English for convenience in understanding.

Determinants of Hoarding Scale

The final scale as shown in Table 6 consisted of three factors/subscales delineating the phenomenon of hoarding in indigenous context of Pakistan. It is a Likert type scale with 5 point response options of *Never* = 1 to *Always* = 5 with a score range of 22 to 110 on overall Determinants of Hoarding Scale. As the "determinants refers to any factor which strongly influences and affects behavior" (Sam, 2013), therefore the scale was given the name as it determines the factors that

influence the development and maintenance of hoarding behavior. Higher scores obtained on the scale suggest display of higher levels of hoarding behavior and vice versa. The three subscales can be illustrated as:

Materialism. It comprise of 8 items (1, 11, 14, 15, 18, 19, 20, and 21). The items included in this subscale specify the notion that belongings and affluence are the most important things. And an idea that one can have social supremacy by way of gathering material possessions, acquisition of goods as an approach to success, and difficulty in let go of things because of importance attached with material stuff. The score on this subscale range between 8 and 40 with higher score indicating higher levels of materialistic orientation.

Perceived utility value. This subscale comprises of 7 items (2, 3, 4, 7, 10, 16, and 22). The items of this scale represent the utilitarian perspective of the possessions. The content of the items depict significance of material possessions for their seeming efficacy or usefulness for any point in time. It also include items showing importance of the inherent value and attached social worth of material things in time of need. The subscale has a score range of 7 to 35 and higher score means higher levels of perceived utility value attached with personal possessions.

Emotional associations. It consists of 7 items (5, 6, 8, 9, 12, 13, and 17). Items in this subscale indicate how different emotional connotations and feelings can increase the worth of an ordinary material good. It contains the items expressing significance of objects as identity substitutes and as a source of both inducing and overcoming certain positive and negative emotional states respectively. The score on the scale range between 7 and 35 with higher score suggesting higher levels of emotional associations formed with hoarded objects.

Reliability Statistics

To examine the internal consistency of the scale Alpha (α) coefficients for subscales and total scale were also calculated. Results revealed satisfactory α coefficients ranging from .81 to .83 (see Table 7). Additionally correlations between DHS total score and subscale scores were also computed.

Table 7

Descriptive statistics and Inter-correlations between DHS Scores (N=400)

Subscales	*K*	α	*M*	*SD*	Range		Skew	Kurt -osis	1	2	3
					Actual	Potential					
1. Materialism	08	.82	14.2	5.8	8-39	8-40	1.1	1.0	-	-	-
2. Perceived Utility Value	07	.81	19.7	6.0	7-35	7-35	.25	-.39	.41**	-	-
3. Emotional Associations	07	.83	14.0	5.6	7-33	7-35	.81	-.02	.67**	.51**	-
DHS total	22	.90	48.0	14.5	22-104	22-110	.74	.29	.83**	.78**	.87**

Note. DHS=Determinants of Hoarding Scale; SD=Standard deviation

***p*<.01

The Table 7 shows correlation coefficients, means, standard deviations, skewness and kurtosis for DHS subscales and total scale score. Results indicate that the subscales of the DHS correlate significantly with each other as well as with total scale score. The correlations ranged from .41 to .67 between subscales and from .78 to .87 for subscales and total scale score. Moderate correlation between sub-scales are indicative of relatively distinct aspects of the same construct that is hoarding. Whereas strong correlation between each subscale and total scale score show that these belong to same universe of content. Measures of skewness and kurtosis suggests relatively normal distribution of scores on scale and its subscales.

Discussion

This study primarily intended to develop an indigenous scale "Determinants of Hoarding Scale (DHS)" measuring the factors associated with hoarding in cultural context of Pakistan. The preliminary psychometric properties of the newly developed measure were also observed.

Hoarding is a fairly common behavior that exists across cultures. Though research suggest that there is considerable similarity between the characteristic features around the globe however there are many factors that vary with varying cultural and regional contexts like economic and living circumstances that can impact phenomenology of hoarding behavior. It is therefore essential to have culture specific measures to identify it reliably (Timpano et al., 2015). Development of DHS is intended to have a culture based instrument to identify factors related to hoarding in Pakistani context.

Measurement is an essential activity that empowers an investigator to assess the phenomenon of interest. Measurement tools allow to tap different variables that cannot be measured directly by way of devising different group of items. However, scale development is a complex procedure that involves methodological precision (Meneses et al., 2014). Present study also followed the standardized procedure with mix-method approach and devised a scale measuring factors associated with hoarding in cultural context of Pakistan. Items for the scales were generated from qualitative data collected through focus group discussions (for details see Chapter III). Few of the items were also taken from already existing measures to adequately tap the phenomenon. Following an empirical approach items were pretested on target population to check for any problem areas. Afterwards data was collected from adult

population to establish the structure and psychometric properties of the scale. Exploratory factor analysis using oblique rotation was utilized and different factor solutions were extracted. After analyzing all the factor solutions a three factor structure was finalized with 30.16% of explained variance. After carefully analyzing the item content a "Determinants of Hoarding Scale" consisting of 22 items comprising of three subscales namely, Materialism that is "focus of life-style is around acquisition and consumption as an indicator of overall life satisfaction"; Perceived Utility Value defined as "subjective perception of an object's worth or it's desirability" and Emotional Associations where "objects are seen as a source of connection with certain feelings and emotions" was devised.

Preliminary psychometric properties of the scale are found to be satisfactory with alpha coefficient ranging from .81 to .9. Strong correlation of subscales with total score and medium correlation within subscales are also indicative of internal consistency of the scale. Results of the study proposes DHS to be an internally consistent and reliable instrument for use in present cultural context.

Phase II

Objectives.

1. To confirm the priori established factor structure of the Determinants of Hoarding Scale.
2. To study the role of demographic variables (age, gender, marital status, and family system) with reference to hoarding related factors.

Sample. A data set comprising of 250 individuals was taken using convenient sampling procedure to confirm the factor structure of DHS scale already identified in Phase-I. Adults of age range between 18 and 60 years who were able to read and understand Urdu language participated in the study. They belonged to different educational and socio-economic groups. For details of sample see Table 8.

Table 8

Demographics Characteristics of the Participants (N = 250).

	(*N*=250)			
Demographics	*F*	%	*M*	*SD*
Age (in years)			38.62	10.97
Gender				
Men	111	44.4		
Women	139	55.6		
Education				
Matriculation	36	14.4		
Intermediate	31	12.4		
Graduation	81	32.4		
Masters	94	37.6		
Missing	8	3.2		
Marital Status				
Single	69	27.6		
Married	171	68.4		
Widowed	4	1.6		
Divorced/Separated	3	1.2		
Missing	3	1.2		
Family System				
Nuclear	147	58.6		
Joint	97	38.8		
Missing	6	2.4		

Data Collection and Analysis

Informed consent was taken before collecting data and right to withdraw at any point was given to the participants. They were also ensured for their privacy and confidentiality of information provided. Data was collected on 22 item DHS questionnaire along with certain demographic variables like age, gender, education, family system, etc. Already established factor structure was confirmed by running CFA. Also t-statistics and ANOVA were utilized to study the role of demographic variables.

Results

Descriptive statistics for the present sample and alpha reliabilities of the subscales and total scale score were determined and are presented in Table 9.

Table 9

Reliability Estimates and Descriptive Statistics of the Determinants of Hoarding Scale and Subscales (N = 250)

Subscales	*K*	α	*M*	*SD*	Range		Skew	Kurtosis
					Actual	Potential		
Materialism	08	.84	15.2	6.4	8-40	8-40	1.0	.5
Perceived Utility Value	07	.75	21.3	5.6	7-35	7-35	.2	-.3
Emotional Associations	07	.84	15.8	6.5	7-35	7-35	.6	-.3
DHS Total Scale	22	.90	52.4	15.6	22-110	22-110	.6	.3

Table 9 indicates alpha reliability, mean, standard deviation, skewness and kurtosis for DHS scale and subscales. Findings show DHS scale and its subscales have high alpha values ranging from .75 to .9 and scores on the scale and its subscales are normally distributed.

Confirmatory factor analysis. Confirmatory factor analysis was done to verify the established factor structure of DHS scale using AMOS version 22. Many of the Fit-indices can be used to examine the goodness of a model. For the present research the fit-indices included Chi-Square statistics, Tucker Lewis index (TLI), Goodness of Fit Index (GFI), Comparative Fit index (CFI), and Root Mean Square Error of Approximation (RMSEA). The fit indices are acceptable with value of ≥.9 for TLI, GFI, and CFI (Hu & Bentler, 1999). However for RMSEA a value of less than .08 is required to show a good model fit (Daire Hooper, et al., 2008). Results of the CFA for DHS scale are described in Table 10.

Table 10

Indices of Model Fit of Determinants of Hoarding Scale (N = 250)

	$\chi 2(df)$	GFI	TLI	CFI	RMSEA	$\chi 2/(df)$
Model 1	367.59 (206) P =.000	0.87	0.89	0.90	0.05	1.7
Model 2	305.27(197) P =.000	.90	0.93	0.94	0.04	1.5

Note. IFI = Incremental Fit Index; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; M1 = Default model with CFA for Determinants of Hoarding Scale with 3 factors; M2 = after adding error covariance.

Table 10 displays the values of fit indices for the three factor structure of DHS. Model 1 shows an acceptable values of fit indices with value of .87 for GFI, .89 for TLI, .90 for CFI and .05 for RMSEA. However to improve the model fit modification indices were observed.

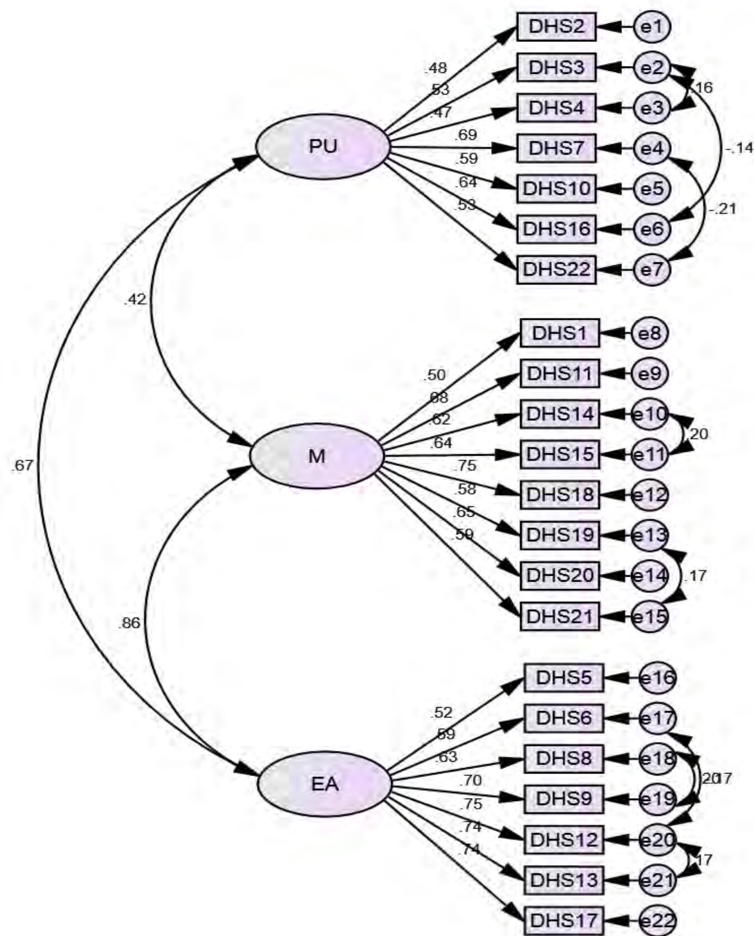


Figure 10. Confirmatory factor Analysis of DHS Scale

Factor loadings as shown in Table 11 were all above .3 suggesting acceptable validity. Thus covariances were examined and several covariances were added by allowing the residual terms to covary. This enhanced the model fit as can be seen in Model 2 with values of .90, .93, .94, and .04 for GFI, TLI, CFI, and RMSEA respectively.

Table 11

Factor loadings of Determinants of Hoarding Scale (N = 250).

Sub-scale	Item No.	Loading
Materialism	1	.50
	11	.68
	14	.62
	15	.64
	18	.75
	19	.58
	20	.65
	21	.50
Perceived Utility Value	2	.48
	3	.53
	4	.47
	7	.69
	10	.59
	16	.64
	22	.53
Emotional Associations	5	.52
	6	.59
	8	.63
	9	.70
	12	.75
	13	.74
	17	.74

Table 11 shows that all the items of DHS have satisfactory factor loadings with values ranging between .47 and .75.

Group differences on factors related to hoarding behavior. Group differences on different variables were computed to ascertain the role of demographics including gender, marital status, family system, and education. Results of the analysis are tabulated in subsequent section.

Table 12

Mean differences on hoarding related indigenous factors across Gender (N = 250)

Variables	Gender						95% *CI*		Cohen's *d*
	Male (n = 111)		Female (n = 139)						
	M	*SD*	*M*	*SD*	*t*	*p*	*LL*	*UL*	
MAT	15.89	6.94	14.71	6.08	1.43	.15	-.44	2.80	-
PUV	21.90	5.63	20.92	5.67	1.35	.17	-.44	2.39	-
EA	16.67	6.99	15.11	6.19	1.86	.06	-.08	3.20	-
DHS	54.46	16.42	50.75	14.92	1.86	.06	-.20	7.62	-

Note: MAT = Materialism, PUV = Perceived Utility Value, EA = Emotional Associations, DHS = Determinants of Hoarding Scale

Table 12 shows the mean differences between men and women on materialism, perceived utility value, and emotional association with objects. Results revealed that the differences were found to be non-significant. However, mean values for the scale and subscale scores are found slightly higher for men as compare to women which indicate that men show more hoarding behavior to some extent as compare to women but the difference is negligible.

Table 13

Mean differences on hoarding related indigenous factors across Family System (*N* = 250)

	Family System								
	Nuclear (*n* = 147)		Joint (*n* = 97)				95% *CI*		
Variables	*M*	*SD*	*M*	*SD*	*t*	*p*	*LL*	*UL*	*Cohen's d*
MAT	14.61	6.28	16.38	6.80	-2.08	.03	-3.44	-.09	.27
PUV	20.76	5.80	22.31	5.37	-2.11	.03	-3.01	-.10	.27
EA	15.21	6.52	16.81	6.62	-1.86	.06	-3.2	.08	-
DHS	50.58	15.39	55.51	15.93	-2.41	.01	-8.95	-.90	

Note. MAT = Materialism, PUV = Perceived Utility Value, EA = Emotional Associations, DHS = Determinants of Hoarding Scale
**p* < .05

Table 13 depicts the group differences for hoarding related factors between nuclear and joint family systems. Results indicate significant differences on materialism, perceived utility value, and total scale score with participants from joint family system scoring higher on these variables. However, differences were found to be non-significant for the construct of emotional association with objects.

Table 14

Post Hoc Analyses for Mean Differences on hoarding related indigenous factors across Marital Status (N = 250)

Variables	i-j	D (i-j)	*p*	*95%CI*	
				LL	*UL*
Materialism	1<2	-3.47	.001	-5.78	-1.16
Perceived Utility Value	1<2	-1.33	.35	-3.44	.76
Emotional Associations	1<2	-4.59	.000	-6.88	-2.30
Determinants of Hoarding Scale	1<2	-9.41	.00	-14.98	-3.83

Note: Married = 1; Single .

Table 14 represents the mean based differences on marital status of study participants. Results revealed that there are significant differences between married and unmarried individuals on materialism and emotional association. Other group differences were found to be non-significant.

Also, the group differences for different educational levels were computed and found to be non-significant for all the three hoarding related factors namely materialism, perceived utility value, and emotional association with objects.

Discussion

The study examined the confirmatory factor structure of the Determinants of Hoarding scale. It also aimed to observe the role of demographic variables for the present sample. Results revealed an acceptable model fit for the scale that ensures the construct validity of the instrument.

Different aspects of the phenomenon as measured by DHS that is materialism, perceived utility value, and emotional associations of the hoarding behavior as emerged in an indigenous context show considerable similarity with existing

literature. For example role of perceived worth and emotional attachment with objects are considered commonly associated factors with hoarding (Gilliam, & Tolin, 2010). At the same time certain differences like the emergence of construct of materialism as an hoarding associated factor have also been observed that might be attributed to difference in cultural context. Possible explanation for this unique finding could be the economic conditions of the country making people status conscious (Fang & Podoshen, 2017) and an equally important factor could be the media inculcating materialistic approach among common man (Ali, Ramzan, Razi, Khan, & Fatima, 2012). Such factors are making people vulnerable towards hoarding. However, the findings need to be explored further to enhance the accuracy and reliability of such evolving cultural differences.

Also, it is notable that some other culturally relevant themes like religious construction of phenomenon, rearing practices, and impact of gender roles on hoarding behavior (see chapter 3 for details) delineated in qualitative exploration of hoarding behavior didn't emerge as a factor while quantifying the construct of hoarding in an indigenous context. Though the broader theoretical categories did appear as factors explaining the construct. Also, the items from personality dimension got dispersed in other categories depicting the relevant behavior. One possible explanation could be that while quantifying a phenomenon and generalizing it to a larger population, the unique characteristics may remain under-identified. A construct is a conceptual framework that describes a group of things that are thought to be meaningfully connected in some manner or for some reason, even though they never happen all at once and are consequently only taken into account on more abstract levels as a single thing. They are essential to the understanding of processes since

they are always incomplete. Therefore, the only way to conceptualize process phenomenon is to generalize and abstract from their occurrences over time. Likewise, humans filter information about complex entities and lessen their complexity by stressing certain of their features and underscoring others according to their perceived (ir)relevance for a given meaning or purpose (Whitehead, 1929). Also, constructs can be created at every level of abstraction. In other words, constructs can also relate to other constructs that abstractly describe the same material at a higher level. This necessitates hierarchical conceptual structures where meanings can be inherited from several more specific constructs that they constitute (2022). They therefore indicate greater significance than the concrete indicators by which they may be experimentally researched and cannot be mirrored by a construct in the same manner that individual can perceive them at any given time (Vygotsky, 1962). However, future research needs to elaborate on these findings.

While studying the role of demographic variables it has been observed that family system appears to be an important contributing factor. Results of the present study suggest that people living in combined family system score higher on construct of materialism and perceived utility value of objects. This could be an indication of a general attitude where people are influenced by use of materialistic commodities as a clue to their identity and individuality and that can also inculcate an increased sense of utility value of objects. However, joint family system is a culture specific but important attribute as it can impact the manifestation of different aspects of hoarding by means of sharing physical space as well as involvement of significant others in organizational tasks. As most of the research on hoarding has been done in

individualistic cultures (de la Cruz, Nordsletten, & Mataix-Cols, 2016), the finding need further elaboration and research.

Besides this, the results are also suggestive of group differences on married and unmarried individuals on construct of materialism and emotional association formed with objects. It has been observed that unmarried and divorced individuals score higher on these constructs as compare to married individuals. The findings are consistent with extant literature (Tolin et al., 2008) that suggest a positive correlation between hoarding and people living alone. Also, non-significant differences have been observed with reference to gender and different educational levels in the present study on hoarding related factors which can be partially supported by the research (Timpano et al., 2011) suggesting similar findings with reference to hoarding behavior.

Conclusion

Results of the present chapter suggest that Determinants of Hoarding Scale is a reliable and valid instrument for use in Pakistan with acceptable preliminary psychometric properties as shown by alpha values and consistent factor structure. However, its convergent and divergent validity needs to be established that is undertaken in next chapter along with adaptation of other study measures.

Phase II: Translation & Validation of Research Instruments (HRS-I, SI-R, & FACES IV)

Chapter V

Phase II: Translation & Validation of Research Instruments (HRS-I, SI-R, & FACES IV)

This chapter describes the translation and validation of the study instruments that were not available in Urdu language to make them easily comprehensible for the target population. As Urdu, being the national language of Pakistan, is most widely used and understood among the general public, therefore, the study instruments that were not available in Urdu were translated and validated in Urdu language for their convenient and authentic use with diverse group of participants from different educational and socio-economic backgrounds. Thus Saving Inventory Revised, Hoarding Rating Scale, and Family Adaptability and Cohesion Evaluation Scales-IV were translated and validated to be used in present research. Saving Inventory Revised and Hoarding Rating Scale both measure severity of hoarding behavior. However for the present research Hoarding Rating Scale was translated and validated to establish the convergent validity of Saving Inventory Revised. Similarly Family Adaptability and Cohesion Evaluation Scale was adapted to measure different domains of family functioning. Moreover, association between study variables is also considered at this stage to see the preliminary trend of relationship between different study variables.

Objectives

1. To translate and adapt the Saving Inventory Revised (SI-R; Frost, Steketee, & Grisham, 2004), Hoarding Rating Scale (HRS-I; Tolin, Frost, & Steketee, 2010), and Family Adaptability and Cohesion Evaluation Scales-IV (FACES IV; Oslon,2011) from source language (English) into target language (Urdu) for their convenient use in Pakistan.
2. To examine the factor structure and reliability of adapted scales (Saving Inventory Revised, Hoarding Rating Scale, and Family Adaptability and Cohesion Evaluation Scales-IV)
3. To observe the preliminary trend of the association between different study variables.

Translation of Research Instruments

Translations were done using translation/back translation approach (Brislin, 1976) and involved the following steps.

Step-I. Forward translation. As a first step SI-R, HRS-I, and FACES IV were translated from English to the target language that is Urdu. For the purpose these scales were given to five bilingual experts keeping through understanding of both the original and the target language. They were informed about the nature of research and were introduced to the variables of interest before providing the instructions for carrying out the translations. The translators were asked to consider maximizing the content similarity among original and translated versions and to focus on conceptual and cultural equivalence not lingual equivalence. They were also advised not to remove any item and to keep it simple so that a common man can easily understand it. As the number of items were many therefore these scales were divided to two sets and

were given to separate translators. One comprised of SI-R and HRS-I and the other contained FACES-IV. Among the five bilinguals who translated SI-R and HRS-I three were M.Phil Psychology students, one Ph.D Psychology scholar, and one professional translator. FACES-IV was translated by two M.Phil, two Ph.D (Psychology) scholars and one professional translator. All of them were provided with scales, their instructions and response categories to be translated along with translation guidelines.

Step-II. Committee approach. After receiving all the translations for three scales committee approach was pursued. The main aim of the committee approach is to check for the accuracy of translation and to choose the one most closer to original item. It comprised of three experts of which one was a Ph.D faculty member and the other two were Ph.D scholars from the National Institute of Psychology, Quaid-i-Azam University. They examined the translations for semantic equivalence and selected the most consistent items considering the context and wording as well. Emphasis was to finalize the culturally most appropriate translation. The selected items were compiled into a questionnaire and got ready for back translation.

Step III. Back translation. The finalized translated versions of the scales in Urdu were given again to five independent bilingual experts (three M.Phil and two Ph.D scholars for each set) to translate them back to source language that is English following the same instructions as previously. The purpose of the approach was to look for translation inaccuracies. After getting back the translations from all the bilinguals, another committee approach was sought to assess the back translations.

Step IV. Committee approach. Once again a committee approach was convened to finalize the back translated version of the scale. The committee was

comprised of one Ph.D faculty member and two Ph.D scholars from National Institute of Psychology. The committee reviewed the back translations and cross checked the items with original items to validate the equivalence of the two versions. Translations were thoroughly reviewed and the one most closer to the original items of the scales was finalized.

In addition to the development of DHS and translation of SI-R, HRS-I, and FACES-IV there were other scales that were used in this research project. These already translated instruments included Depression Anxiety Stress Scale (Aslam, 2007), Obsessive Compulsive Inventory Revised (Qadir, Zafar, Khalid, & Essau, 2014), Adult Attachment Scale (Fatima, 2017), and five subscales of the Young Schema Questionnaire (Malik, 2013). After completing the translation procedure and finalizing the scales, a complete questionnaire booklet was compiled and administered to the target population for validation of study measures.

Validation of Research Instruments

Confirmatory factor analysis of Saving Inventory-Revised, Hoarding Rating Scale-Interview, and Family Adaptability and Cohesion Evaluation Scales was conducted to establish the construct validity of translated measures.

Sample

Using convenient sampling technique data was collected from 250 university students from different programs including BS, MS, and Ph.D. students from Psychology, Pakistan Studies, Education, Electronics, and Law department. Sample was collected from Quaid-i-Azam University (QAU), National University of Modern

Language (NUML), and International Islamic University Islamabad (IIUI). Administration was done both in group and individual format as most of the MS and Ph. D. research students have different schedules therefore they were approached individually. In individual format questionnaire booklet was handed over to participant and was collected back the next day. 17 questionnaire booklets were identified as with specific response format containing either neutral response or following same sequence of responding throughout the questionnaire while 12 were found to be mostly incomplete. These 29 questionnaires were therefore dropped and remaining 221 questionnaire booklets were finally considered for data analysis. Age range of the sample was between 19 to 36 years (*M* = 23.6, *SD* = 4.4). Demographic characteristics of the sample are presented in Table 15.

Table 15

Demographic characteristics of the sample (N = 221).

Demographics	*f*	%
Gender		
Men	112	50.7
Women	109	49.3
Age groups (in years)		
Young Adults (18-30)	191	86.4
Middle Adulthood (31-45)	30	13.6
Education		
F.Sc.	30	13.6
BS	113	51.1
MS	65	29.4
Ph.d.	13	5.9
Marital Status		
Single	191	86.4
Married	30	13.6
Family System		
Nuclear	112	50.7
Joint	109	49.3

Instruments

Saving Inventory Revised (SI-R). Saving Inventory Revised was used to identify hoarding behavior in the present study. Originally developed by Frost, Steketee, and Grisham (2004; Appendix G) SI-R is a 23 items most extensively used instrument to distinguish significant hoarding. It has five point Likert type response format ranging from 0 to 4 with a score range of 0 to 92. It comprises of three subscales that are Acquiring subscale (items = 7; score range = 0 to 28) which measures buying behavior and attitude towards acquisition of different things, Difficulty Discarding subscale (items = 7; score range = 0 to 28) that assesses the discomfort associated with removing of clutter, and Clutter subscale (items = 9; score range = 0 to 36) to evaluate the level of clutter and related issues with it. Higher scores show higher levels of hoarding behavior. A score of 41 for total score, 17 for Clutter subscale, 14 for Difficulty Discarding, and 9 for Acquiring subscale indicates a clinical cutoff for significant hoarding problem. Test-retest estimates of 2-4 weeks are found to be 0.86 for total scale score, .90 for Clutter subscale, .89 for Difficulty Discarding, and .78 for Acquiring subscale (Frost, Steketee, & Grisham, 2004). The scale is translated into Urdu by researcher following systematic procedure for the purpose of present research.

Hoarding Rating Scale Interview (HRS-I). Hoarding Rating Scale Interview (Tolin, Frost & Steketee, 2010; Appendix H) is a semi-structured scale with five items that can be used both as a questionnaire and a clinician interview. It examines different characteristics of hoarding disorder including difficulty discarding, excessive acquiring, clutter and associated impairment and distress. Response categories range from 0 (no problem) to 8 (extreme) with a score range of 0 to 40. A cut off score of 14

showed optimal level of sensitivity and specificity using Receiver operating characteristic (ROC) analysis. It has shown to be a reliable instrument with an alpha coefficient of .87. Urdu translation and validation of scale is done in the present research.

Family Adaptability and Cohesion Evaluation Scales (FACES-IV). Family Adaptability and Cohesion Evaluation Scales (Olson, 2011; Appendix I) is a self-report measure to examine family flexibility and family cohesion based on Circumplex Model of Family systems (Oslon, 2000). It is a comprehensive assessment that measures both healthy and problematic facets of family functioning. It is comprised of six scales used to assess the cohesion and flexibility dimensions of family with two scales (7 items each) measuring balanced cohesion and flexibility while four scales (7 items each) measuring unbalanced dimensions namely Enmeshed, Disengaged, Chaotic, and Rigid. Disengaged and Enmeshment belong to Cohesion dimension while Rigid and Chaotic are the two unbalanced scales for flexibility dimension. A ratio score of balanced/unbalanced scales is calculated for both Cohesion and Flexibility dimensions by dividing them with average of scores on two respective unbalanced scales (Oslon, 2011). Moreover Family Communication and Family Satisfaction (10 items each) are the two added scales. FACES IV is a Likert type scale with response categories of 1 (strongly disagree) to 5 (strongly agree). The scale is found to be internally consistent with alpha coefficients ranging from .7 to .89. The scale is translated into Urdu by researcher for use in present research.

Depression Anxiety Stress Scale (DASS). Depression Anxiety Stress Scale that is developed by Lovibond and Lovibond (1995) was used to assess the affective symptoms in present study. It is a self-report measure consisting of 21 items with

three subscales. Depression subscale considers low mood, lack of interest, hopelessness, devaluation of life, and low energy. Anxiety subscale measures subjective experience of anxiousness, autonomic arousal, muscular effects, and situational anxiety. Stress subscale is meant to evaluate nervous arousal, agitation, irritability, and difficulty relaxing. It uses a 4-point severity scale to measure the extent of each state as experienced in last week. It gives the total scale score (range = 0 to 63) as well as for each subscale (score range = 0 to 21) which is further interpreted as mild, moderate, severe and extremely severe. Higher score indicates higher level of each state experienced. The alpha score for each subscale is found to be .96 for Depression, .89 for Anxiety, and .93 for Stress. Already translated Urdu version (Aslam, 2007; Appendix J) of the scale is used in present research which has shown an alpha coefficients of .84, .86, and .87 for Depression, Anxiety, and Stress subscales respectively (Aslam, 2018).

Obsessive Compulsive Inventory Revised (OCI-R). Obsessive Compulsive Inventory Revised (Foa et al., 2002) is an 18 item self-report instrument used to measure obsessive compulsive symptom dimensions and related distress with them. It is comprised of six sub-scales (checking, washing, ordering, hoarding, obsessing, and neutralizing) with a Likert type 5 point response format. The score on OCI-R ranges from 0 to 72 with a cut off score of 41. It is a reliable instrument with retest coefficient of .74 to .91. Urdu translated version (Qadir et al., 2014; Appendix K) of the scale is used for the purpose of present research. It also has been found to be internally consistent with an Alpha value of 0.87 and has shown adequate convergent validity. For the present research, the scores on obsessive compulsive symptom dimensions were calculated as modified non-hoarding total score (OCI-NH) by

excluding items of hoarding subscale of obsessive compulsive inventory (Timpano et al., 2015).

Adult Attachment Scale (AAS). Adult Attachment Scale (Collins & Read, 1990) consists of 18 items distributed in three subscales with six items each. Secure Attachment is characterized as being comfortable with intimacy and reciprocity, secure in ones relationships and being less anxious regarding losses. Avoidant Attachment subscale focuses on distrust and discomfort associated with dependency in relationships while Anxious Attachment subscale measures anxiety regarding rejection and desire for intimacy. It is a Likert type scale with a response format of 1(completely disagree) to 5 (completely agree) with a score range of 6 to 30 for each respective sub-scale. The scale has shown an alpha values of .85, .84, and .78 for Avoidant, Secure, and Anxious attachment subscales. Urdu translated version (Fatima, 2017; Appendix L) of the scale with an Alpha values of .83, .67, and .83 for Avoidant, Secure, and Anxious attachment subscales respectively has been used for the present study.

Young Schema Questionnaire (YSQ-S3). Young Schema Questionnaire (Young, 2005) is a 90 item self-report measure. It assesses maladaptive core beliefs that develop in childhood and elaborate throughout life and can lead to development of maladaptive behaviors. It is comprised of 18 subscales containing 5 items each (score range = 6 to 30) that fall under five broad domains. It is Likert type scale with six response categories ranging from 1 (completely untrue) to 6 (perfectly true). Higher scores indicates presence of maladaptive core belief. For the present study only five schema sub-scales are measured that appear to be more relevant with respect to phenomenology of hoarding behavior. These five maladaptive schemas included

emotional deprivation, mistrust, social isolation, admiration seeking and insufficient self-control. It is a reliable instrument with alpha values ranging from .83 to .96 and retest coefficients of .50 to .82 (Schmidt et al., 1995). Urdu translated version (Malik, 2013; Appendix M) was used for the present study that has revealed sound psychometric properties with an Alpha value of .96 and two weeks test-retest coefficient of .93.

Procedure

Permission for the data collection was taken from the Head of Department of every single department from where data was collected in each university (Quaid-i-Azam University, National University of Modern Languages, and International Islamic University Islamabad). Before administering the questionnaire booklet, purpose and nature of study was explained and informed consent was taken from the participants. They were also assured for confidentiality of the information they provide and were given the right to withdraw from study at any time. The questionnaire booklet comprising of SI-R, HRS-I, FACES IV, DASS, OCI-R, and AAS was handed over to participants. As the average time needed to fill the complete questionnaire booklet was approximately 40 to 50 minitues, they were asked to submit it back next day because of their busy class schedules. After collecting back of questionnaire booklet statistical procedures were applied for adequate data analysis.

Results

Alpha reliability statistics, inter-scale correlations and confirmatory factor analysis (CFA), were calculated to establish the psychometric properties of study instruments. α statistics and correlation analysis were done to establish the internal consistency of the study scales while CFAs were computed to validate the instruments for their authentic use in main study. Results of the analysis are shown in subsequent segments.

Table 16

Alpha Reliability and Descriptive Statistics of the Study Scales (N = 221)

Subscales	*k*	α	*M*	*SD*	Range		Skew	Kurtosis
					Actual	Potential		
SI-R	18	.85	23.06	11.31	0-56	0-72	.18	-.57
HRS-I	5	.80	12.69	7.34	0-30	0-40	-.005	-.79
MAT	8	.81	16.35	6.71	8-36	8-40	.68	-.43
PUV	7	.72	22.00	5.54	7-35	7-35	.18	-.18
EA	7	.81	17.42	6.77	7-35	7-35	.36	-.53
COH	18	.75	34.34	8.54	28-86	18-90	-.25	-.77
FLEX	20	.70	33.31	6.86	24-90	20-100	.01	.55
FC	10	.82	34.80	10.31	10-96	10-100	.61	4.62
FS	10	.88	33.28	8.15	10-50	10-100	-.05	-.49
DEP	7	.81	7.32	4.77	0-21	0-21	.57	.06
ANX	7	.77	6.72	4.53	0-21	0-21	.61	-.13
OCI-NH	15	.86	23.64	11.64	0-60	0-60	.04	-.42
SA	6	.55	17.43	4.01	6-26	6-36	-.10	-.42
AV. A	6	.57	17.73	4.01	8-30	6-36	.08	.33
ANX. A	6	.68	17.30	4.44	6-30	6-36	.28	.35
ED	5	.76	13.30	6.22	5-29	5-30	.50	-.57
MIS	5	.66	14.84	5.22	5-30	5-30	.44	-.35
SI	5	.72	13.95	5.86	5-30	5-30	.72	-.13
AS	5	.63	14.19	5.34	5-29	5-30	.10	-.58
ISC	5	.66	14.64	5.59	5-30	5-30	.42	-.17

Note. SI-R=Saving Inventory Revised, HRS= Hoarding Rating Scale-Interview, MAT=Materialism, PUV=Perceived Utility Value, EA=Emotional Associations, , COH= Cohesion, FLEX= Flexibility, FC= Family Communication, FS= Family Satisfaction, DEP=Depression, ANX=Anxiety, OCI-NH= Non-hoarding Obsessive Compulsive Inventory, SA= Secure Attachment, AV-A= Avoidant Attachment, ANX-A= Anxious Attachment, ED= Emotional Deprivation, MIS= Mistrust, SI= Social Isolation, AS= Admiration Seeking, ISC= Insufficient Self Control

Table 16 shows alpha reliability statistics, mean, standard deviations, skewness and kurtosis for all the study variables. Results indicate that all the variables have scores that are normally distributed and most of the scales have shown acceptable alpha co-efficient values. However, the two subscales of secure attachment (.55) and avoidant attachment (.57) have shown comparatively low alpha value. Overall alpha value for scales and subscales ranged from .55 to .88.

Confirmatory Factor Analysis of Hoarding Rating Scale-Interview

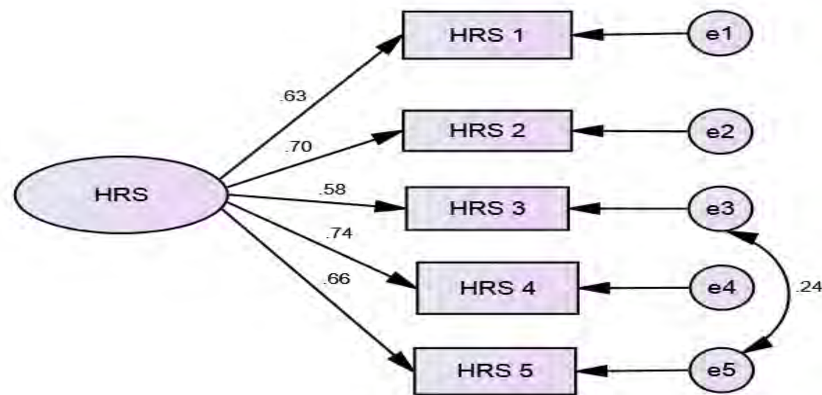


Figure 11. Confirmatory Factor Analysis of Hoarding Rating Scale-Interview

Table 17

Goodness-of-Fit Indices for Hoarding Rating Scale Interview (N = 221)

	χ2(d*f*)	GFI	TLI	CFI	RMSEA	χ2/(d*f*)
HRS (Model 1)	14.561 (5) P =.000	.97	.93	.96	.09	2.9
HRS (Model 2)	6.200 (4) P =.185	0.98	0.98	0.99	0.05	1.5

Table 17 indicates fit indices of HRS-I. Value of GFI, TLI, and CFI is found to be acceptable (>.9). However value of RMSEA (Model 1) was greater than .08 therefore a covariance was added between item 3 and 5 that resulted in an acceptable value of .05 for RMSEA (Model 2).

Table 18

Factor loadings of Hoarding Rating Scale Interview (N = 221)

Item no.	Loading
1	.63
2	.70
3	.58
4	.74
5	.66

Table 18 indicates the factor loadings of HRS-I. All the loadings are above the criteria (>.3) ranging from .58 to .74. It is therefore used in the main study without any modifications.

Confirmatory Factor Analysis of Saving Inventory-Revised

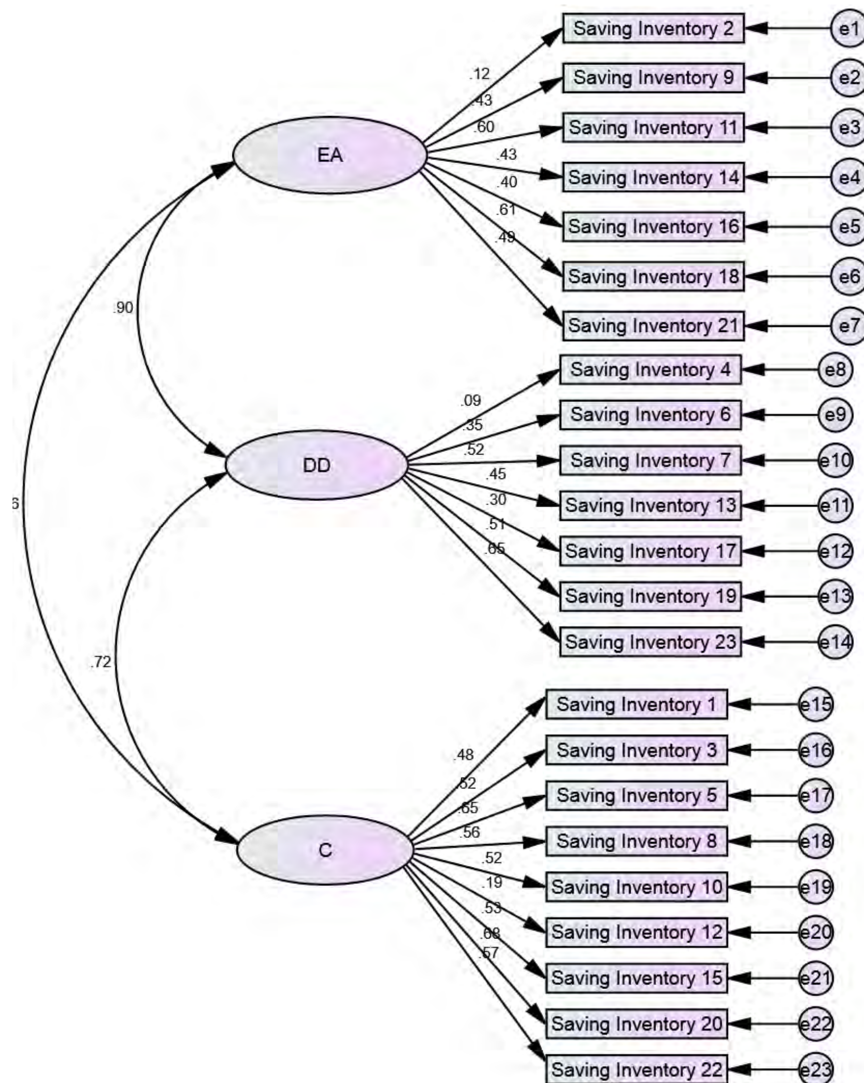


Figure 12. Confirmatory Factor Analysis of Saving Inventory-Revised

Table 19

Goodness-of-Fit Indices for Saving Inventory Revised (N = 221)

	χ2(d*f*)	GFI	TLI	CFI	RMSEA	χ2/(d*f*)
SI-R (Model 1)	420.214(227) P=.000	0.86	0.78	0.80	0.06	1.8
SI-R (Model 2)	242.262 (163) P=.000	.90	.90	.91	.04	1.4

Table 19 shows the fit indices for a three factor model of SI-R. Results indicate that the original model (Model 1) does not fit the data well. Values of GFI, TLI, and CFI are less than .9 and doesn't lie in acceptable range. However, after deleting the items with low factor loadings and adding few covariance the indices as shown in Model 2 became satisfactory. However, this led to further drop in factor loadings (Table 20) of item 2 and 4 below an acceptable criteria (.3).

Table 20

Factor loadings of Saving Inventory Revised (N = 221)

Sub-scale	Item no.	Loading
Excessive Acquiring	2	.12
	9	.43
	11	.60
	14	.43
	16	.40
	18	.61
	21	.49
Difficulty Discarding	4	.09
	6	.35
	7	.52
	13	.45
	17	.30
	19	.51
	23	.65
Clutter	1	.48
	3	.52
	5	.65
	8	.56
	10	.52
	12	.19
	15	.53
	20	.68
	22	.57

Table 20 indicates the factor loadings of the items of SI-R. Results show that item 2 from acquiring dimension, 4 of difficulty discarding, and 12 from clutter dimension have loading less than .3. These low loadings of items against their

respective factors could be a reason for the poor fit indices of the model depicted in Table 20. To improve the model items with low loadings were removed and few covariance were added which resulted in acceptable fit indices (see Model 2 in Table 19). Conversely the factor loadings of item six and seventeen were decreased to .24 and .26 respectively. Therefore an exploratory factor analysis was carried out to determine if there is any difference in underlying factor structure due to a different cultural background.

Exploratory Factor analysis of SI-R. EFA was run with Principal Axis Factoring and Promax rotation (Costello & Osborne, 2005) as most of the items have shown significant positive item total correlation (see Table 21). Sampling adequacy was found to be acceptable as shown by Kaiser-Meyer-Olkin (.82) index and Bartlett's test of sphericity.

Table 21

Items total Correlation of 23 items of the Saving Inventory Revised (N = 221)

Item No.	*r*	Item No.	*r*	Item No.	*r*
1	.49**	11	.62**	21	.50**
2	.09	12	.20**	22	.56**
3	.52**	13	.46**	23	.62**
4	.06	14	.48**		
5	.62**	15	.56**		
6	.23**	16	.46**		
7	.46**	17	.21**		
8	.54**	18	.61**		
9	.44**	19	.52**		
10	.54**	20	.67**		

**$p \leq 01$.

Table 21 shows the item total correlations of Saving Inventory Revised. Result reveals that most of the items have significant positive correlation with total score indicating the internal consistency of scale. However item 2 and 4 have positive but non-significant correlation. As most of the items have shown positive correlation therefore an oblique rotation was used.

While employing factor analysis Eigen values >1, inspecting the Scree plot, and dropping the factors having < 3 items were used as criteria for retention of final factor solution. Initial solution resulted in seven factors with eigenvalues above one and 24.19% of explained variance.

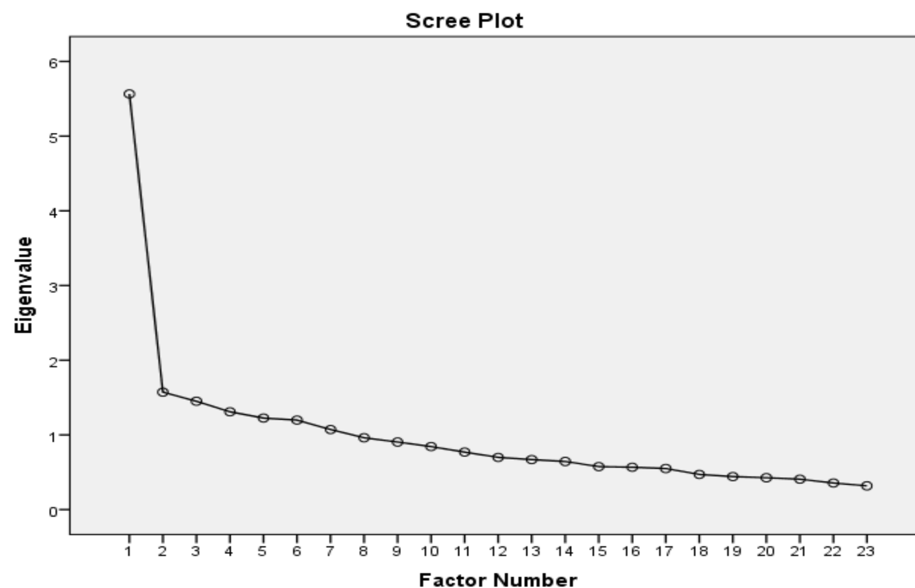


Figure 13. Scree plot showing EFA of Saving Inventory Revised

However three factors have less than three items thus analysis was reran and retaining the items with factor loadings above .3 different factor solutions (see Appendix N) were examined. Items from acquiring and difficulty discarding dimensions of SI-R got merged in each other and did not appear as distinct factors as

in original factor structure of the scale. Only Clutter subscale retained the item content much close to the original SI-R. As none of the above mentioned factor structures were well matched with original scale, a uni-dimensional model was tested and the items with loadings above .3 were retained. Moreover, examination of scree plot also suggested single factor solution as can be seen in Figure 12.

Table 22

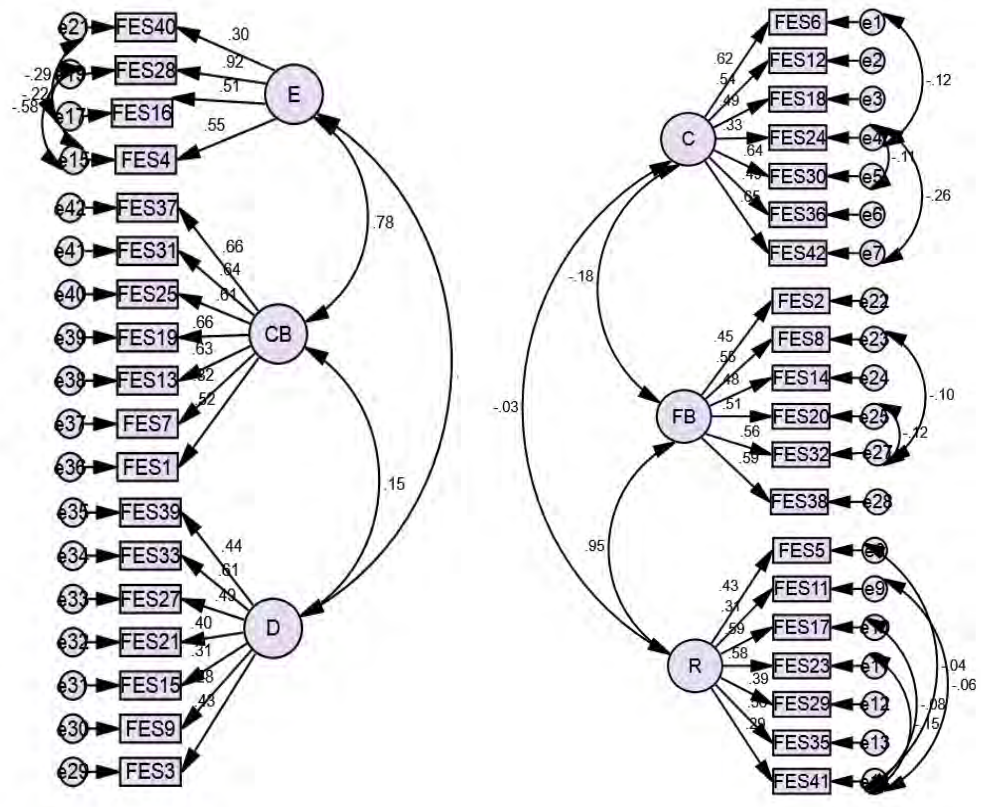
Factor loadings of uni-dimensional model of SI-R (N = 221)

Item Number	Factor Loadings
Item 20	**.65**
Item 5	**.60**
Item 23	**.59**
Item 18	**.58**
Item 11	**.58**
Item 22	**.54**
Item 15	**.51**
Item 8	**.50**
Item 10	**.50**
Item 19	**.48**
Item 3	**.47**
Item 21	**.46**
Item 1	**.45**
Item 7	**.43**
Item 14	**.42**
Item 16	**.40**
Item 13	**.40**
Item 9	**.40**
Item 6	.26
Item 17	.24
Item 12	.20
Item 2	.11
Item 4	.07

Table 22 shows factor loadings from EFA of uni-dimensional model of SI-R. Eighteen out of twenty three items have shown loadings above .3 and were retained.

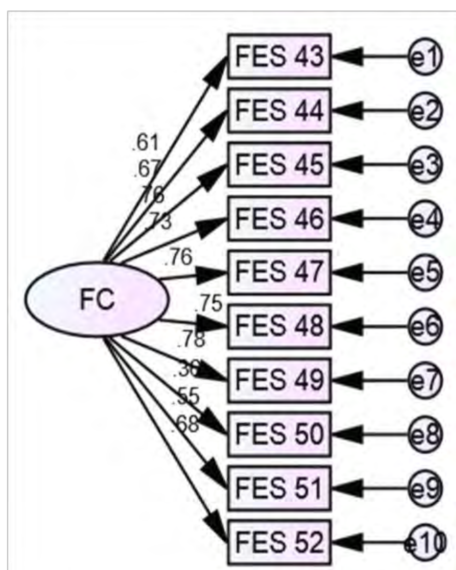
Remaining five items with low factor loadings were dropped. CFA of the uni-dimensional model of SI-R is examined in the main study which is used in all further analysis.

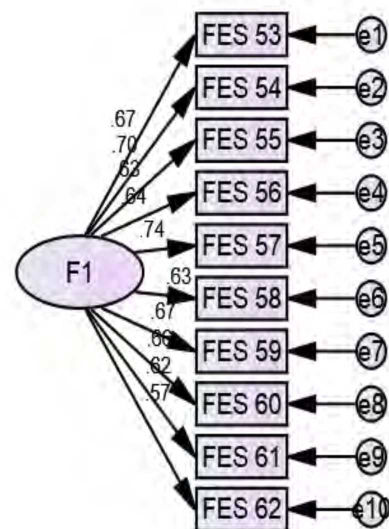
Confirmatory factor analysis of Flexibility and Cohesion Evaluation Scales-IV. FACES IV is based theoretically on Circumplex model of family functioning which hypothesize cohesion and flexibility as the main strength of a healthy functioning family (Gladding, 2011). It has been adapted and validated in different languages with supportive findings (Kouneski, 2002). However, modifications in factor structure has been noticed in cultural adaptation studies especially in collectivist cultures. Following the procedure adopted by Turkdogan, Dura, and Balkis (2020), FACES IV was factor analyzed separately on dimensions of flexibility and cohesion to maximally preserve the original structure of the scale.



Family Cohesion

Family Flexibility





Family Communication

Family Satisfaction

Figure 14. Confirmatory Factor Analysis of Flexibility and Cohesion Evaluation Scales

Table 23

Goodness-of-Fit Indices for Flexibility and Cohesion Evaluation Scales-IV (N = 221)

	χ2(d*f*)	GFI	TLI	CFI	RMSEA	χ2/(d*f*)
Cohesion (Model 1)	370.741(186) *p* = .000	0.86	0.78	0.77	0.06	1.9
Cohesion (Model 2)	241.655 (129) *p* = .000	0.91	0.89	.91	0.05	1.8
Flexibility (Model 1)	326.843 (186) *p* = .000	0.87	0.81	0.85	0.05	1.7
Flexibility (Model 2)	279.365 (158) *p* = .000	0.90	0.90	0.92	0.05	1.5
Family Communication	61.640 (35) *p* = .004	0.94	0.96	0.97	0.05	1.7
Family Satisfaction	78.660 (35) *p* = .000	0.93	0.93	0.94	0.05	2.2

Table 23 displays the fit indices for Family Adaptability and Cohesion Evaluation Scales. Fit indices of Balanced Flexibility and Balanced Cohesion have shown a poor fit as depicted by the values less than .9 of GFI, TLI, and CFI in model 1. To improve the model fit item number 10 (.01), 22 (.16), and 34 (.10) with very low factor loadings from Enmeshed subscale of Family Cohesion dimension were deleted and few co-variances were added. Similarly item number 26 from Balanced Family Flexibility subscale was deleted and several error terms were allowed to co-vary. This improved the model fit of both the scales with factor loadings above .3 for all the items of all subscales of FACES-IV. Model 2 of both the scales show the values of fit indicators after modification and show an acceptable fit. Family Communication and Family Satisfaction scales have shown acceptable fit indices as shown by the values of GFI, TLI, and CFI above .9 and RMSEA less than .08.

Table 24

Factor loadings of items of FACES IV (N = 221)

Sub-scale	Item no.	Loading
Balanced Cohesion	1	.52
	7	.32
	13	.63
	19	.66
	25	.61
	31	.64
	37	.66
Enmeshed	4	.47
	10	.01
	16	.49
	22	.16
	28	.78
	34	.10
	40	.25
Disengaged	3	.43
	9	.28
	15	.30
	21	.40
	27	.48
	33	.61
	39	.45
Balanced Flexibility	2	.47
	8	.54
	14	.47
	20	.49
	26	.25
	32	.55
	38	.59
Chaotic	6	.62
	12	.56
	18	.49
	24	.21
	30	.64
	36	.49
	42	.63
Rigid	5	.41
	11	.30
	17	.58
	23	.59
	29	.37
	35	.53
	41	.22

Continued…

Sub-scale	Item no.	Loading
Family Communication	43	.61
	44	.67
	45	.76
	46	.73
	47	.76
	48	.75
	49	.78
	50	.36
	51	.55
	52	.68
Family Satisfaction	53	.67
	54	.70
	55	.63
	56	.64
	57	.74
	58	.63
	59	.67
	60	.66
	61	.62
	62	.57

Table 24 shows the factor loadings of items of FACES IV in their respective factors before any modifications applied to the model. Item number 26 (.25) of balanced flexibility, item 24 (.21) of chaotic, item 41 (.22) of rigid, item 10 (.01), 22 (.16), 34 (.10), 40 (.25) of enmeshed, and item 9 (.28) from disengaged subscale have factor loadings less than .3.

Correlation between study variables. To examine the preliminary trend of association among different study variables and to assess the convergent and discriminant validity of study measures the inter-scale correlation coefficients (Table 25) were calculated. Results indicated significant positive relationship between materialism and emotional associations with objects. Similarly chaotic and disengaged family functioning has shown positive while balanced cohesion, balanced flexibility, family communication, and family satisfaction dimensions have significant negative correlation with hoarding behavior as measured by both saving inventory

revised and hoarding rating scale. Also self-destructing negative schemas (Emotional Deprivation, Mistrust, Social Isolation, Insufficient Self Control, and Admiration Seeking) have shown significant positive correlation with hoarding. Findings suggest a significant positive relationship of depression, anxiety, and obsessive compulsive symptom dimensions with hoarding behavior. Findings suggest that the direction of relationship among study variables is in hypothesized direction. Positive relationship between factors (materialism and emotional associations) related to hoarding, dimensions associated with negative functioning of family like chaotic and disengaged, and with self-destructing schemas point towards the predictive role of these factors in hoarding behavior. Similarly, significant negative correlation between balanced scales of family adaptability and cohesion evaluation scales and saving inventory and hoarding rating scale scores is suggestive of family environment as an important factor in determining development and maintenance of hoarding behavior. However, secure attachment has shown though non-significant but positive association with family functioning domains and negative correlation with maladaptive cognitive schemas and psychological distress. A significant positive correlation between depression, anxiety, obsessive compulsive symptoms and hoarding also suggest that there might be some overlap between the conditions.

Also, significant positive correlation of Saving Inventory with Depression and Anxiety scales and negative correlation with family cohesion, communication, and satisfaction indicate the convergent and discriminant validity of the scale respectively. Similarly, significant negative correlation of the FACES IV dimensions (Cohesion, Flexibility, Communication, and Satisfaction) with maladaptive cognitive schemas is suggestive of discriminant validity of the instrument.

Table 25

Inter-scale Correlations of the Study Variables (N = 221)

Scale/Subscale	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. MAT	.23**	.65**	.55**	-.27**	-.22**	-.18**	-.15*	.27**	.35**	-.04	.06	.12	.32**	.33**	.28**	.23**	.29**	.32**
2. PUV	-	.51**	.06	-.23**	-.02	-.16*	-.19**	.10	.09	.04	-.05	.02	.05	.05	.02	.03	.18**	.03
3. EA	-	-	.42**	-.06	-.08	-.08	-.07	.13	.19**	-.02	-.04	.002	.33**	.34**	.26**	.24**	.39**	.30**
4. SI-R	-	-	-	-.30**	-.28**	-.24**	-.18**	.48**	.49**	.02	.03	.11	.34**	.28**	.29**	.31**	.39**	.49**
5. COH	-	-	-	-	.19**	.76**	.68**	-.30**	-.32**	.07	-.001	.09	-.27**	-.16*	-.27**	-.31**	-.07	-.22**
6. FLEX	-	-	-	-	-	.23**	.19**	-.19**	-.17*	.08	-.02	-.07	-.005	-.09	-.04	-.04	-.05	-.16*
7. FC	-	-	-	-	-	-	.65**	-.31**	-.30**	.08	-.03	-.04	-.24**	-.13	-.20**	-.23**	-.11	-.17**
8. FS	-	-	-	-	-	-	-	-.32**	-.27**	.03	-.09	-.08	-.27*	-.18**	-.25**	-.27**	-.13*	-.17*
9. DEP	-	-	-	-	-	-	-	-	.75**	-.09	.14*	.20**	.40**	.36**	.40**	.36**	.26**	.50*
10. ANX	-	-	-	-	-	-	-	-	-	-.09	.001	.12	.37**	.34**	.37**	.35**	.26**	.49**
11. SA	-	-	-	-	-	-	-	-	-	-	-.19**	-.20**	-.11	-.109	-.01	-.03	-.11	.03
12. AV-A	-	-	-	-	-	-	-	-	-	-	-	.39**	.17**	.18**	.14*	.13*	.18**	.005
13. ANX-A	-	-	-	-	-	-	-	-	-	-	-	-	.26**	.15*	.14*	.16*	.20**	-.06
14. ED	-	-	-	-	-	-	-	-	-	-	-	-	-	.60**	.66**	.56**	.58**	.37**
15. MIS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.68**	.60**	.53**	.44**
16. SI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.67**	.49**	.46**
17. ISC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.53**	.43**
18. AS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.41**
19. OCI-NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note. MAT=Materialism, PUV=Perceived Utility Value, EA=Emotional Associations, SI-R=Saving Inventory Revised, FLEX= Flexibility, COH= Cohesion, FC= Family Communication, FS= Family Satisfaction, DEP=Depression, ANX=Anxiety, SA= Secure Attachment, AV-A= Avoidant Attachment, ANX-A= Anxious Attachment, ED= Emotional Deprivation, MIS= Mistrust, SI= Social Isolation, ISC= Insufficient Self Control, AS= Admiration Seeking, OCI-NH= Obsessive Compulsive Inventory Non Hoarding Score

$^{**}p < .01$, $^{*}p < .05$

Discussion

The main objective of this chapter was translation and adaptation of Saving Inventory Revised (SI-R), Hoarding Rating Scale Interview (HRS-I), and Family Adaptability and Cohesion Evaluation Scales (FACES-IV). It also aimed to examine the psychometric properties of study measures and to observe the direction of relationship among study variables.

Adaptation of SI-R, HRS-I, and FACES-IV

Adaptation is a process whereby a test is translated and adjusted to the target population to enhance its linguistic and cultural adequacy. Main aim of the procedure is to have an instrument that is close to original one and with comparable qualities. Cultural influences need to be addressed while adapting a test without which meaningful inferences cannot be made (Gjersing, Caplehorn, & Clausen, 2010). The basic objective of translation and validation of tests is to make it comprehensive for target culture keeping intact the construct being measured.

Hoarding is a newly added disorder in DSM-V and most of the research on the condition has been done in Euro-American culture. Therefore instruments that are standardized to tap the phenomenon mostly come from west (de la Cruz, Nordsletten, & Mataix-Cols, 2016). For reliable and valid use of these instruments in different cultural contexts like Pakistan, adaptation is an essential endeavor. Saving Inventory Revised and Hoarding Rating Scale interview are widely used such instruments to measure hoarding behavior. Similarly, based on Circumplex model of family system, FACES IV is a comprehensive instrument to assess family functioning. The present study intended to adapt SI-R, HRS-I, and FACES IV following standard procedure and guidelines to ensure the comparability across cultures.

For the purpose a standard procedure of Translation/Back Translation (Brislin, 1976) approach for test adaptation was followed. All the three instruments were first translated into Urdu and committee approach was sought to finalize the most appropriate one. The finalized Urdu version was translated back to source language by different bilingual experts and committee was convened to assess the translations. Comparison of the original and back translated version determined the accuracy of the translations. Looking at the factor structure over different language versions is one way to judge the quality of test adaptation. Therefore translated instruments were field tested and factor structures were examined to establish the construct validity. Other psychometric properties were also observed later.

Confirmatory Factor Analysis of HRS-I

Hoarding Rating Scale Interview (HRS-I; Tolin, Frost, & Steketee, 2010) is a psychometrically sound instrument to measure presence and severity of hoarding behavior according to diagnostic criteria presented in DSM V. It has shown excellent reliability and validity across different cultural contexts and discriminates well between hoarding and non-hoarding participants. It demonstrated strong correlations with hoarding and non-hoarding measures reflecting convergent and discriminant validity (Tsuchiyagaito et al., 2017; Faraci, Perdighe, Del Monte, Saliani, 2019). In line with these researches HRS-I was translated into Urdu language for its effective use in cultural context of Pakistan. To establish its construct validity CFA was computed and the results show a good fit as depicted by different indicators for a uni-dimensional model similar to original scale. It is therefore used in main study without any modifications.

Confirmatory Factor Analysis of SI-R

Saving Inventory Revised is a most widely used instrument to assess hoarding in clinical as well as non-clinical population. It consists of three subscales namely Acquiring, Difficulty Discarding and Clutter (Frost, Steketee, & Grisham, 2004). It has been translated into many languages and has shown strong internal consistency and validity estimates across different investigations. However there have been some differences noticed when applied to other than western regions specially Asian and collectivist cultures (de la Cruz., 2016). Modifications have been made to factor structure by removing items and difference in item content due to loading on different factors as compare to original version of SI-R. Likewise running the CFA of SI-R on present sample using three factor structure model resulted in poor fit indices with items (2, 4, 12) showing low factor loadings. Even after making required modifications, the model didn't fit well. Similar findings have been reported on a Chinese sample where even after removing item 2 and 4, the model fit failed to replicate on a second sample suggesting cultural influence and a need to reconsideration of factor structure of SI-R for its use in Chinese culture (Timpano et al., 2015).

Next an exploratory factor analysis was run and different factor structures were examined. A uni-dimensional model with 18 items appeared to be best among different factor solutions extracted. Support for a uni-dimensional model also come from the work of Meyer and Colleagues (2013). In their multitrait-multimethod investigation they examined the role of three key features of hoarding i.e. excessive acquiring, difficulty discarding, and clutter. Results revealed poor discriminant validity of the three factors and suggested merging of the subscales. Similar to their

study results it appears that acquiring of items, difficulty in discarding, and resulting clutter co-occur strongly in cultural context of Pakistan and therefore better be considered a uni-dimentional phenomenon. As indicated by Frost et al (2011) these characteristic features should better comprehended as part of a cohesive phenotype. However, the extracted uni-dimensional model will be confirmed in main study by running confirmatory factor analysis.

Confirmatory Factor Analysis of FACES IV

The Circumplex Model of Family Systems is a known theoretical model for examining family functioning across dimensions of cohesion, flexibility, and communication. It distinguishes a healthy functioning family from unhealthy functioning based on balanced levels of adaptability and flexibility (Hamilton & Carr, 2016). FACES IV is grounded on Circumplex model and specifically the curvilinear model of Family Adaptability and Cohesion Evaluation Scales IV is distinct in allowing for simultaneous evaluation of balanced and unbalanced functioning. It has extensively been used across different cultures. It has two balanced and four unbalanced scales assessing extremes of cohesion and flexibility. Additionally it contains scales to assess quality of family communication and satisfaction in a family system (Gladding, 2011). To examine the role of family environment in hoarding behavior FACES IV is translated and adapted into Urdu. For the purpose scale was factor analyzed using confirmatory factor analysis.

Family Cohesion dimension including three subscales balanced cohesion, enmeshed, and disengaged was examined and three factor model was tested. Analysis revealed a poor fit of the data. Three items (10, 22, and 34) from enmeshed dimension with low factor loadings were removed from the model and after adding few

covariances model fitted the data well with fit indices and factor loadings in acceptable range. A possible reason for this modification could be that enmeshed aspect of family functioning may not be perceived as unhealthy in a collectivist culture that endorse interdependence of family members (Kouneski, 2002). Similar, findings have been reported by Turkdogan, Duru, and Balkis (2018) while conducting an adaptation study in Turkish culture. Next, family flexibility dimension with balanced flexibility, chaotic, and rigid subscales was examined. Initial model didn't show a good fit therefore item 26 of balanced flexibility dimension with very low factor loading was excluded and few error terms were allowed to co-vary that successfully improved the model with fit indices in acceptable range. Construct validity of uni-factor model of both family communication and satisfaction scales were found to be good as shown by values of different model fit indices.

Results of the analysis revealed some differences from original structure with respect to item content though it retained the same number of scales with satisfactory model fit indices. Few items have been removed due to low factor loadings which is an acceptable modification and is common in adaptation studies of FACES IV. Similar modifications have been seen in Turkish (Turkdogan, Duru, & Balkis, 2018) and Spanish (Rivero, Martinez-Pampliega, & Olson, 2010) adaptations of the FACES IV suggesting that interconnectedness among family members as in case of enmeshed dimension is seen positively in certain cultural contexts. Yet the original form of the scale remained preserved even after removing few items as reduction of one or two items can be acceptable for establishing construct validity from a large item scale (Hair et al., 2014)

Reliability Statistics and Inter-scale Correlations of Study Variables

One of the objective of the study was to establish the psychometric properties of the study measures. To fulfill this aim alpha reliability co-efficient for all the scales and subscales of instruments used were computed. Alpha values for all the scales and sub-scales were found to be acceptable ranging from .51 to .88. Saving inventory has shown an alpha value of .85, HRS-I .80, and values of determinants of hoarding rating scale ranged from .72 to .81 showing good reliability estimates. Similarly alpha values of FACES IV subscales were also good ranging from .70 to .88. Depression and anxiety subscale have also shown good alpha co-effecients of .81 and .77 respectively. Likewise all the schema sub-scales (.63 to .76) and obsessive compulsive symptom dimensions on OCI have shown good internal consistency (.86) as shown by alpha values. However, secure (.55) and avoidant (.57) attachment subscales have shown lower but acceptable alpha values. Overall results are suggestive of acceptable to good internal consistency for all the scales and sub-scales of study measures indicative of their reliable use in main study.

Pearson correlation coefficients were also calculated for all the study variables. Subscales of all the study variables have shown moderate positive correlations with each other while strong positive correlation with the total scale scores which is an indication towards internal consistency of scales. Also significant positive correlations between subscales of DHS and SIR and HRS-I are indicative of convergent validity of the scale as well as predictive role of these factors in hoarding behavior. Similarly family cohesion, family flexibility, family communication and satisfaction scales have shown significant negative correlation with hoarding measure suggesting that cohesion among family members, flexibility in rules, adequate

communication and satisfaction levels with family functioning appear to be protective factors. Also negative correlation between materialism and balanced flexibility and balanced cohesion subscales of family functioning is suggestive of the divergent validity of DHS.

Similarly, significant positive correlations between schema subscales of emotional deprivation, social isolation, mistrust, admiration seeking, and insufficient self-control and hoarding measures indicate the positive role of maladaptive schemas in development and maintenance of hoarding behavior. However, attachment styles have shown non-significant correlation with SI-R and HRS-I though the direction of relationship is in hypothesized direction as shown by negative correlation of secure while positive correlation of avoidant and anxious attachment with SI-R. Measures of depression, anxiety, and obsessive compulsive symptoms also have shown significant positive correlations with hoarding measures suggesting comorbid existence of the conditions. On the whole correlations are in hypothesized direction for all the variables endorsing their use for main study.

Conclusion

To conclude all the study measures appear to be reliable and valid with acceptable psychometric properties as shown by alpha reliability coefficients, inter-scale correlation coefficients, and validity coefficients. HRS-I illustrated a uni-dimensional model without requiring any modifications similar to original scale, while in FACES IV few items (10, 22, 34 from enmeshed dimension and item 26 of balanced flexibility dimension) were removed for showing unacceptable factor loadings though the instrument retained the original number of scales and overall

structure. Summary of similarities and differences that emerged during adaptation process are shown in Table 26.

Table 26

Summary of modifications in study instruments during adaptation process.

Sr. No.	Instrument Name	Original Version	Adapted Version
1	**Hoarding Rating Scale**	Unidimensional (Items = 5)	Unidimensional (Items = 5)
2	**Saving Inventory Revised**	Three Subscales (Items = 23) • Acquiring (Items = 7) • Difficulty Discarding (Items = 7) • Clutter (Items = 9)	Unidimensional (Items = 18) (Item 2 from acquiring, item number 4, 6, and 17 from difficulty discarding, and item 12 from clutter subscales were deleted)
3	**Family Adaptability and Cohesion Evaluation Scales**	Eight Subscales (Items = 62) Cohesion Dimension • Balanced Cohesion (Items = 7) • Enmeshed (Items = 7) • Disengaged (Items = 7) Flexibility Dimension • Balanced Flexibility (Items = 7) • Rigid (Items = 7) • Chaotic (Items = 7) Family Communication (Items = 10) Family Satisfaction (Items = 10)	Eight Subscales (Items = 58) Cohesion Dimension • Balanced Cohesion (Items = 7) • Enmeshed (Items = 4; item no. 10, 22, and 34 were deleted) • Disengaged (Items = 7) Flexibility Dimension • Balanced Flexibility (Items = 6; item 26 was deleted) • Rigid (Items = 7) • Chaotic (Items = 7) Family Communication (Items = 10) Family Satisfaction (Items = 10)

However, in case of SI-R, instead of original three factor structure a unidimensional structure seemed to be the most appropriate among various factor solutions that emerged in present data. Which will be further confirmed in main study. Moreover the relationship between study variables is found to be in postulated direction. Results are satisfactory and provide ground for hypothesis testing in main study.

Personal and Familial Correlates of Hoarding Behavior

Chapter VI

Personal and Familial Correlates of Hoarding Behavior

This phase involved hypotheses testing for main study that intended to study the impact of family functioning and adult attachment style on development and maintenance of hoarding behavior. According to attachment theory, people who have an excessive emotional attachment to things often use them as a coping mechanism for their insecurities. For those with HD, things can provide solace and make up for the lack of trusting relationships with others (Frost & Gross, 1993). Interpersonally dissatisfied and lonely people may seek to lessen their loneliness or their discontent with their interpersonal interactions in a variety of methods that center on replacing human relationships with non-human ones. Which indicates that individuals with insecure attachment use compensatory object-oriented emotional regulation techniques to satisfy their unfulfilled interpersonal attachment-related requirements for love, relatedness, safety, and security (Nozick, 2016).

Research also indicates that people with HD report more nervous and avoidant attachment behaviors as well as negative early childhood experiences such as lack of emotional support and unpleasant memories of family warmth (Kyrios et al., 2018). Family functioning is the standard of emotional ties, norms, and communication in the family network. Strong empirical evidence supports the notion that healthy family functioning protects against psychopathology (Oslon, Russell, & Sprenkle, 1983) and favorably correlates with levels of mental health. On the other hand, dysfunctional family life is linked with significant physiological and psychological issues (Bahremand, Alikhani, Mohammadi, Shahebrahimi, & Janjani, 2015). The degree to

which family relationships provide enough social support has been found to be closely connected to the intensity of psychological and physical symptoms reported, as well as acting as a buffer between stressful life events and related symptoms (Sampson, 2013).

Hoarding has not yet been studied as a result of social or relational contexts; instead, studies have focused on hoarding as a result of heredity, biological features, mental illness, or cognitive-behavioral functions. Hoarding habits may in some way be a forerunner to or be contributing to the establishment and maintenance of contextual factors, such as experiences in familial or other close relationships. In light of this, the purpose of this study was to advance our understanding of how attachment styles and family functioning influence hoarding behavior and to give a contextually ingrained outlook of the condition as most of the work done so far has focused the individual based model. The proposed study additionally includes a construct of psychological distress in the analysis of the project because mental health symptoms and hoarding behavior have been so closely linked in prior research. As a result, several mediation models were used to analyze the relation through psychological distress and maladaptive cognitive schemas. The moderating role of demographic variables in association with hoarding behavior were also identified.

The broad objectives of this phase were

Objectives

1. To study the impact of different family functioning dimensions (cohesion, flexibility, communication, and satisfaction) on hoarding behavior among adults.

2. To study the role of attachment styles (secure, anxious, and avoidant) among hoarding behavior among adults.
3. To study the influence of related psychological conditions (depression, anxiety, and obsessive compulsive symptoms) on hoarding behavior among adults.
4. To study the role of maladaptive cognitive schemas (i.e., emotional deprivation, mistrust, social isolation, insufficient self-control, and admiration seeking) in hoarding behavior among adults.
5. To examine the impact of associated factors (materialism, emotional associations, and perceived utility value) on hoarding behavior among adults.
6. To study the differences among clinical and non-clinical groups on study variables.
7. To identify group mean differences for demographics (age, gender, education, marital status, and family system) on variables of interest.

Hypotheses

1. Family functioning domains of cohesion, flexibility, communication, and satisfaction will negatively predict hoarding behavior among adults.
2. Secure attachment style will negatively predict hoarding behavior among adults.
3. Anxious and avoidant attachment style will positively predict hoarding behavior among adults.

4. Maladaptive cognitive schemas (i.e., emotional deprivation, mistrust, social isolation, insufficient self-control, and admiration seeking) will positively predict hoarding behavior among adults.
5. Determinants of hoarding (materialism, perceived utility value, and emotional association) will positively predict hoarding behavior among adults.
6. Psychological distress (depression, anxiety, obsessive compulsive symptoms) will mediate the relationship between family functioning and hoarding behavior among adults.
7. Maladaptive cognitive schemas will play mediating role between family functioning and hoarding behavior among adults.
8. Psychological distress (depression, anxiety, obsessive compulsive symptoms) will mediate the relationship between attachment styles and hoarding behavior among adults.
9. Maladaptive cognitive schemas will play mediating role between attachment styles and hoarding behavior among adults.
10. Clinical group will perform low on Cohesion, Flexibility, Communication, and Satisfaction dimensions of family functioning as compare to non-clinical group.
11. Non-clinical group will score higher on secure attachment as compare to clinical group.
12. Clinical group will score higher on avoidant and anxious attachment as compare to non-clinical group.
13. Clinical group will score higher on psychological distress and hoarding as compare to non-clinical group.

14. Maladaptive cognitive schemas will be high in clinical group as compare to non-clinical group.

Operational Definitions of the Study Variables

Hoarding behavior. It is defined as the "*persistent difficulty discarding possessions due to a perceived need to save the items. Attempts to part with possessions create considerable distress and lead to excessive accumulation of items. The resulting clutter disrupts the ability to use living spaces*" (American Psychiatric Association, 2013). For present research it is measured as score on modified uni-dimensional Urdu version of SI-R.

Family cohesion. Cohesion among family is defined as "*the emotional bonding that family members have toward one another"* (Olson, Gorall, & Tiesel, 2006; p.3). For present research it is measured as score calculated by taking the average of score on Disengaged and Enmeshed subscales and dividing it by balanced cohesion subscale score on FACES IV.

Family flexibility. It is characterized as "*the quality and expression of leadership and organization, role relationships, and relationships rules and negotiations"* (Olson et al., 2006; p.3). In present study it is measured as score calculated by taking the average of score on Rigid and Chaotic subscales and dividing it by balanced flexibility subscale score on FACES IV.

Family communication. It is described as "*the positive communication skills utilized in the couple or family system"* (Olson et al., 2006; p.3). For current research it is assessed as higher score on family communication subscale indicating higher level of positive communication.

Family satisfaction. It is defined "*in terms of the degree to which family members feel happy and ful-filled with one other*" and for the present research is measured as score on family satisfaction scale of FACES IV (Costa-Ball, & Cracco, 2021; p. 161).

Secure attachment. Individuals with secure attachment feel confident about their relationships and are open to depending on others and having others depend on them. They tend to seek balance in intimacy and independence in their relationship (Hazan & Shaver, 1987). For the current study it will be measured as score on secure subscale of Adult Attachment Scale (Collins & Read, 1990).

Anxious attachment. People with this style of attachment seek high levels of intimacy, approval, and responsiveness from others and exhibit high levels of emotional expressiveness, worry, and impulsiveness in their relationships (Hazan & Shaver, 1987). In present research it is being measured as score on anxious subscale of Adult Attachment Scale (Collins & Read, 1990).

Avoidant attachment. It is characterized by relative lack of care about close relationships, and may prefer not to be too dependent upon other people or to have others be too dependent upon them. People with this attachment style often tend to suppress and hide their feelings, and they tend to deal with rejection by distancing themselves from the sources of rejection (Hazan & Shaver, 1987). For the purpose of present study it is assessed as score on avoidant subscale of Adult Attachment Scale (Collins & Read, 1990).

Emotional deprivation. It is defined as the "*expectation that one's desire for a normal degree of emotional support will not be adequately met by others*" (Young,

Klosko, & Wishar, 2003; p.8). For the purpose of current research it is measured as score on emotional deprivation subscale of YSQ-S3.

Mistrust. It can be stated as "*the expectation that others will hurt, abuse, humiliate, cheat, lie, manipulate, or take advantage. Usually involves the perception that the harm is intentional or the result of unjustified and extreme negligence*" (Young et al., 2003; p. 8). It is taken as score on mistrust subscale of YSQ-S3 for the present study.

Social isolation. It can be described as "*the feeling that one is isolated from the rest of the world, different from other people, and/or not part of any group or community"* (Young et al., 2003; p. 8). It is being assessed as score on social isolation subscale of YSQ-S3.

Admiration seeking. It is characterized as "*Excessive emphasis on gaining approval, recognition, or attention from other people, or fitting in, at the expense of developing a secure and true sense of self. Sometimes includes an overemphasis on status, appearance, social acceptance, money, or achievement -- as means of gaining approval, admiration, or attention"* (Young et al., 2003; p.9). For present study it is taken as score on admiration seeking subscale of YSQ-S3.

Insufficient self-control. It is defined as "*Pervasive difficulty or refusal to exercise sufficient self-control and frustration tolerance to achieve one's personal goals, or to restrain the excessive expression of one's emotions and impulses*" (Young et al., 2003; p.9). It is measured as score on insufficient self-control subscale of YSQ-S3.

Method

Research Design

The study was cross-sectional in nature and data was collected on all the study measures from participants using convenient sampling technique. Family environment and attachment styles were the independent variables for the present research while hoarding behavior was a dependent variable. Psychological distress was assumed as a mediator whereas role of different demographic variables was seen as moderator variables.

Sample

Sample for the main study consisted of adults from both a clinical group (n = 100) and a non-clinical group (n = 100). Patients suffering affective disorders (depression, anxiety, OCD) comprised a clinical group whereas non-clinical group included university students (n = 24), persons from different professions (n = 39), as well as non-working individuals (n = 37). Participants for clinical group were taken as diagnosed cases from different hospitals of Rawalpindi/ Islamabad, however were further evaluated using DASS and OCI-R. While non-clinical group was approached in different universities as well as different work settings. Age of the sample ranged from 19 to 60 years (M = 33.0, SD = 9.9). 55.5% of the sample consisted of men, 53.5% of the sample was married and most of them (64%) lived in nuclear family system. Detail description of demographic variables is presented in Table 27.

Table 27

Frequencies and Percentages of Demographic Characteristics of the Sample (N = 200)

	Total (*N* = 200)		Clinical (*n* = 100)		Non-Clinical (*n* = 100)	
Demographics	*f*	%	*f*	%	*F*	%
Gender						
Men	111	55.5	62	62.0	49	49.0
Women	89	44.5	38	38.0	51	51.0
Marital Status						
Married	107	53.5	45	45.0	62	62.0
Single	93	46.5	55	55.0	38	38.0
Age						
Young Adulthood (18-30 yrs)	95	47.5	52	52.0	43	43.0
Middle Adulthood (31-45 yrs)	84	42.5	40	40.0	45	45.0
Late Adulthood (46-60 yrs)	20	10	8	8.0	12	12.0
Education						
Matric	39	19.5	27	27.0	12	12.0
Intermediate	44	22.0	29	29.0	15	15.0
Bachelors	51	25.5	28	28.0	23	23.0
Masters & Above	65	32.5	16	16.0	49	49.0
Family System						
Nuclear	128	64	63	63.0	65	65.0
Joint	72	36	37	37.0	35	35.0
Diagnosis (n=100)						
Depression	47	23.5	47	47.0	-	-
Anxiety	21	10.5	21	21.0	-	-
OCD	32	16.0	32	32.0	-	-

Instruments

Following instruments were used in the main study. For detail description of the instruments please see phase II (page 106 - 110).

1. Saving Inventory Revised (Urdu; Appendix O)
2. Family Adaptability and Cohesion Evaluation Scales (Urdu; Appendix P)

3. Adult Attachment Scale (Appendix L)
4. Young Schema Questionnaire (Appendix M)
5. Depression Anxiety and Stress Scale (Appendix J)
6. Obsessive Compulsive Inventory Revised (Appendix K)
7. Determinants of Hoarding scale (Appendix F)

Procedure

Data was collected from clinical patients after taking permissions from head of psychiatry departments of Benazir Bhutto General Hospital Rawalpindi, Fauji Foundation Hospital Rawalpindi, and Pakistan Institute of Medical Sciences Islamabad. Purpose of the study was explained and commitment to ethical considerations was assured to related authorities before starting data collection. Participants of the study from both clinical and non-clinical groups were informed about the research objectives and the right to draw at any point during research was given. Informed consent was taken from study participants and were also explained about confidentiality and privacy. Moreover, they were assured that data collected will be used for research purpose only and results will be presented as aggregate and their identity will never be disclosed. They were asked to sign the consent form if they were willing to participate. Data was collected on booklet of questionnaires comprising of all study measures. From clinical sample data was collected from both inpatients as well as outpatients. It was made sure that patients are well oriented in time, place, and person and not under influence of any medication before collecting data. Some of the patients filled the booklet on same day, some took short breaks and then completed the questionnaire while others returned on the next day (inpatients) as

the questionnaire booklet was lengthy and took around 60 to 70 minutes by clinical group. Similarly data from non-clinical group was collected in groups from university students while was handed over to working and non-working individuals and collected after a day or two. It took approximately 40 to 50 minutes for the participants from non-clinical group to fill the questionnaire booklet.

Results

This section describes the results of the hypothesis testing for main study using appropriate statistical analysis. Group differences for demographic variables were computed using *t*-statistics and ANOVA. Regression analysis, mediation, and moderation analysis were run on different variables of interest to test the significance of different study hypothesis. Cross-sectional data can be directly used with regression algorithms that are typically used with time-ordered data. Cross-sectional regressions are easier in one way since there is no requirement to determine if the data are statistically controlled throughout time (Andrews, 2005). Moreover, confirmatory factor analysis was carried out to confirm the modified uni-factor structure of Saving Inventory Revised. Results are displayed in following tables.

Confirmatory factor analysis of SI-R. Saving Inventory Revised was modified for the present study in order to achieve an optimum fit in the previous study. To ensure the construct validity of modified uni- dimensional structure of the Saving Inventory Revised CFA (see Table 28) was employed and factor structure was confirmed by looking at different fit indices.

Table 28

Goodness-of-Fit Indices for Uni-Dimensional Model of Saving Inventory Revised (N = 200)

	$\chi2(df)$	GFI	TLI	CFI	RMSEA	$\chi2/(df)$
SI-R (Model 1)	248.607 (135) $p = .000$	.87	.85	.87	.06	1.8
SI-R (Model 2)	195.241 (130) $p = .185$	0.91	0.91	0.93	0.05	1.5

Table 28 depicts fit indices of SI-R. Values of different fit indices (GFI = .87, TLI = .85, CFI = .87, and RMSEA = .06) show that the model fit the data moderately. All the item loadings were in acceptable range (above .3). Therefore few error terms were allowed to co-vary to improve the model fit. This successfully improved the model as shown by the values of fit indices (Model 2).

Table 29

Factor loadings of items of Uni-Dimensional Model of SI-R (N = 200)

Item no.	Loading
1	.72
2	.68
3	.58
4	.58
5	.64
6	.56
7	.55
8	.52
9	.51
10	.47
11	.57
12	.44
13	.55
14	.39
15	.38
16	.41
17	.40
18	.39

Table 29 indicates the factor loadings of uni-factor SI-R after applying modifications. All the loadings are above the criteria (>.3) ranging from .38 to .72 indicating the construct validity of the scale.

Table 30

Reliability Estimates and Descriptive Statistics of the Study Variables (N = 200)

Scales/Sub-scales	*k*	*α*	*M*	*SD*	Range		Skew	Kurtosis
					Actual	Potential		
SI-R	18	.87	22.50	11.66	0-56	0-72	.35	-.46
HRS-I	5	.81	12.40	7.35	0-30	0-40	.01	-.84
COH	18	.77	35.23	8.51	18-50	18-90	-.41	-.56
FLEX	20	.74	36.42	7.54	20-72	20-100	-.12	.24
FC	10	.83	35.60	10.59	10-96	10-100	.48	.34
FS	10	.89	33.77	8.17	10-50	10-100	-.15	-.42
SA	6	.53	17.37	4.03	6-26	6-36	-.08	-.44
AV. A	6	.50	17.52	4.10	8-30	6-36	.20	.35
ANX. A	6	.64	17.13	4.53	6-30	6-36	.37	.29
DEP	6	.83	6.91	4.85	0-21	0-21	.74	.33
ANX	6	.77	6.46	4.61	0-21	0-21	.77	.06
OCI-NH	15	.87	26.27	13.7	0-60	0-60	.22	-.38
ED	5	.74	13.08	5.98	5-29	5-30	.53	-.47
MIS	5	.65	14.50	5.11	5-30	5-30	.46	-.40
SI	5	.71	13.63	5.71	5-30	5-30	.69	-.13
AS	5	.64	14.10	5.41	5-29	5-30	.15	-.56
ISC	5	.68	14.38	5.56	5-30	5-30	.43	-.19
MAT	8	.81	17.17	6.90	8-35	8-40	-.05	-.56
PUV	7	.75	22.35	5.78	7-35	7-35	.10	-.34
EA	7	.81	17.54	6.66	7-35	7-35	.35	-.45

Note. SI-R = Saving Inventory Revised, HRS = Hoarding Rating Scale-Interview, COH = Cohesion, FLEX = Flexibility, FC = Family Communication, FS = Family Satisfaction, SA = Secure Attachment, AV-A = Avoidant Attachment, ANX-A = Anxious Attachment, DEP = Depression, ANX = Anxiety, OCI-NH = Non-hoarding Obsessive Compulsive Inventory, ED = Emotional Deprivation, MIS = Mistrust, SI = Social Isolation, AS = Admiration Seeking, ISC = Insufficient Self Control, MAT = Materialism, PUV = Perceived Utility Value, EA = Emotional Associations

Table 30 depicts alpha reliability coefficients and descriptive statistics of study variables. Results suggest that most of the study scales have shown satisfactory alpha coefficients except secure attachment (.53) and avoidant attachment (.50) scales. Coefficients ranged from .50 to .89 Values for kurtosis and skewness are also in acceptable range indicating the normal distribution of data.

Predictive role of study variables for hoarding behavior. Multiple regression analysis using "Enter Method Approach" was done to study the impact of study variables including family functioning dimensions, attachment styles, maladaptive cognitive schemas, hoarding related indigenous factors, and hoarding associated clinical conditions on hoarding behavior. Following table presents the results of the analysis.

Table 31

Multiple Regression Analysis Predicting Hoarding Through Study Variables (N = 221)

Predictors	*B*	*SE*	*Β*	R^2	*F*
COH	-4.37	2.44	-.12	.58	13.39***
FLEX	-5.28	4.57	-.07		
FC	-.004	.09	-.003		
FS	.13	.10	.09		
SA	.17	.15	.06		
AV-A	.13	.16	.05		
ANX-A	.09	.15	.04		
DEP	.48	.21	.20*		
ANX	.25	.22	.09		
OCI-NH	.14	.06	.16*		
ED	.03	.15	.02		
MIS	.23	.17	.09		
SI	.22	.16	.11		
ISC	.09	.16	.05		
AS	.32	.16	.15*		
MAT	.17	.05	.19**		
PU	.29	.13	.15*		
EA	.65	.12	.37***		

Note. COH = Cohesion, FLEX = Flexibility, FC = Family Communication, FS = Family Satisfaction, Secure Attachment, AV-A = Avoidant Attachment, ANX-A = Anxious Attachment, DEP = Depression, ANX = Anxiety, OCI-NH = Non-hoarding obsessive compulsive inventory, ED = Emotional Deprivation, MIS = Mistrust, SI = Social Isolation, AS = Admiration Seeking, ISC = Insufficient Self Control, MAT = Materialism, PUV = Perceived Utility Value, EA = Emotional Associations

*ρ <.05, **ρ <.01, ***ρ <.001

Results of the table 31 show the impact of different study variable on hoarding behavior. Findings indicate that these variables jointly accounted for 54% of variance in hoarding with a significant F ratio (ΔR^2 = .54, F = 13.39, $p<.001$). Findings indicate emotional associations as strongest positive predictor (B = .65, β = *.37,* $p<.001$) of hoarding suggesting that one unit increase in emotional association with objects will result in .65 units increase in hoarding behavior. Similarly materialism appeared to be another significant positive predictor (B = .17, β = *.19,* $p<.01$) showing that one unit increase in materialism will lead to .17 units increase in hoarding. Moreover admiration seeking (B = .32, β = *.15,* $p<.05$), family flexibility (B = .22, β = *.14,* $p<.05$), depression (B = .48, β = *.20,* $p<.05$) and obsessive compulsive symptoms (B = .14, β =*.16,* $p<.05$) significantly positively while perceived utility value (B = -.29, β = *-.15,* $p<.05$) significantly negatively predicted hoarding. However all other study variables did not significantly predict hoarding.

Mediation analyses. Mediating role of psychological distress (depression, anxiety, obsessive compulsive symptoms) and maladaptive cognitive schemas (mistrust, emotional deprivation, social isolation, insufficient self-control, and admiration seeking) and indigenous factors (materialism, emotional association, perceived utility value) associated with hoarding was assessed in order to describe the relationship between family functioning dimensions (cohesion, flexibility, communication, and satisfaction) and attachment styles (secure, avoidant, anxious). Macro Process Analysis (Hayes, 2013) was used to test mediation of these variables. Results with significant mediation are tabulated only and presented in subsequent tables.

Table 32

Psychological Distress as a Mediator between Family Functioning and Hoarding Behavior (N=200)

Mediators			Predictors											
			Family Functioning											
			COH			Flex			COM			SAT		
			Effect	R^2	*F*	Effect	R^2	*F*	Effect	R^2	*F*	Effect	R^2	*F*
Depression	Total	B	-16.89***	.21	51.14***	-27.01***	.13	30.79***	-.24**	.04	9.7***	-.15	.01	1.9
	Direct	B	-11.89***	.30		-17.79***	.27		-.1	.22		.05	.22	
	Indirect	B	-5.00	.09	42.87***	-9.22	.14	36.37***	-.14	.18	23.89***	-.20	.21	20.10***
		95%CI	[-7.65, -2.84]			[-1.24, -.41]			[-.23, -.08]			[-.33, -.10]		
Anxiety	Total	B	-16.89***	.21	51.14***	-27.01***	.13	30.78***	-.23**	.05	9.7**	-.16	.08	1.87
	Direct	B	-10.95***	.34		-15.91***	.31		-.05	.27		.07	.27	
	Indirect	B	-5.94	.13	49.90***	-11.09	.18	43.25***	-.18	.22	27.81***	-.23	.19	26.31***
		95%CI	[-8.85, -3.43]			[-16.38, -6.43]			[-.02, .009]			[-.35, -.13]		
OCI-NH	Total	B	-16.89***	.21	51.14***	-27.01***	.13	30.79***	-.24**	.04	9.7**	-.16	.01	1.87
	Direct	B	-12.66***	.36		-16.92***	.30		-.14	.27		-.05	.26	
	Indirect	B	-4.22	.15	55.92***	-10.09	.17	42.80***	-.10	.23	30.76***	-.11	.25	25.35***
		95%CI	[-7.27, -2.19]			[-15.94, -5.29]			[-.19, -.03]			[-.24, -.01]		

Note. COH = Cohesion, FLEX = Flexibility, COM = Communication, SAT = Satisfaction, OCI-NH = Non-hoarding Obsessive Compulsive Inventory

***p<.01, ***p<.001*

Table 32 shows the mediating role of psychological distress (depression, anxiety, and OCD) for the relationship between family functioning domains (cohesion, flexibility, communication, and satisfaction) and hoarding behavior. Results reveal significant direct effect of cohesion (B = -16.89, *p* = <.001) on hoarding as well as through the mediating effect of depression (B = -5.00, 95% CI = -7.65, -2.84). The mediational model explains 30% of the variance with additional 9% of variance explained by indirect effect of cohesion on hoarding through depressive symptoms. Anxiety (B = -5.94, 95% CI = -8.85, -3.43) also significantly mediated the relationship by explaining 34% of variance while mediating role of OCI-NH (B = -4.22, 95% CI = -7.27, -2.19) was also found to be significant explaining 36% of variance.

Similarly, flexibility (B = -27.01, *p* = <.001) revealed significant direct effect on hoarding. Mediational model explained 27% of variance through the mediating effect of depression (B = -9.22, 95% CI = -1.24, -.41), 34% of variance is explained through the mediating effect of anxiety (B = -11.09, 95% CI = -16.38, -6.43), and 36% of variance is caused by OCI-NH (B = -16.29, 95% CI = -15.94, -5.29) in relationship between flexibility and hoarding behavior.

Communication (B = -27.01, *p* = <.001) also displayed significant direct effect on hoarding behavior as well as through mediating effect of psychological distress. Depression (B = -.14, 95% CI = -.23, -.08) and OCI-NH (B = -.10, 95% CI = -.19, -.03) mediated the relationship with significant indirect effect explaining 22% and 23% of variance in each mediational model respectively.

Likewise, significant mediation has been shown by depression, anxiety and OCI-NH for the relationship between family satisfaction and hoarding behavior. Mediational model explained 22% of variance with additional 21% of variance explained through indirect effect of depression (B = -.20, 95% CI = -.33, -.10). Significant mediation has been observed through anxiety (B = -.23, 95% CI = -.35, -.13) for the relationship between family satisfaction and hoarding explaining 27% of variance in the mediational model. Also, OCI-NH (B = -.11, 95% CI = -.24, -.01) significantly mediated relationship with a significant indirect effect explaining 25% of additional variance in the model.

Table 33

Maladaptive Cognitive Schemas as Mediator between Family Functioning and Hoarding Behavior (N=200)

Mediators			Predictors											
			Family Functioning											
			COH			Flex			COM			SAT		
			Effect	R^2	*F*	Effect	R^2	*F*	Effect	R^2	*F*	Effect	R^2	*F*
ED	Total	B	-16.89***	.21	51.14***	-27.01***	.13	30.79***	-.23**	.05	9.69**	-.16	.01	1.87
	Direct	B	-14.39***	.28		-20.83***	.21		-.13	.15		.0002	.14	
	Indirect	B	-2.49	.07	38.11***	-6.18	.08	26.45***	-.10	.1	19.67***	-.16	.13	17.29***
		95%CI	[-4.69, -1.09]			[-10.35, -3.11]			[-.19, -.05]			[-.28, -.09]		
MIS	Total	B	-16.89***	.21	51.14***	-27.01***	.13	30.79***	-.24*	.05	9.54*	-.16	.01	1.87
	Direct	B	-15.20***	.25		-22.64***	.18		-.20*	.12		-.08	.09	
	Indirect	B	-1.69	.04	32.92***	-4.37	.05	21.48***	-.03	.07	13.99***	.08	.08	8.37**
		95%CI	[-3.45, -.52]			[-8.70, -1.34]			[-.09, .003]			[-.16, -.02]		
SI	Total	B	-16.89***	.21	51.14***	-27.01***	.13	30.79***	-.24**	.05	9.69**	-.16	.01	1.87
	Direct	B	-15.29***	.12		-23.06***	.18		-.17*	.11		-.05	.09	
	Indirect	B	-1.59	.06	11.32***	-3.95	.05	21.87***	-.06	.06	10.21**	-.11	.08	8.23**
		95%CI	[-3.62, -.38]			[-7.95, -1.40]			[-.14, -.01]			[-.19, -.05]		
AS	Total	B	-16.89***	.21	51.14***	-27.01***	.13	30.79***	-.24**	.05	9.54**	-.16	.01	2.44
	Direct	B	-15.92***	.25		-23.85***	.25		-.19*	.17		-.12	.15	
	Indirect	B	-.96	.04	33.04***	-3.15	.13	32.83***	-.04	.12	21.49***	-.03	.14	17.87***
		95%CI	[-3.00, 1.18]			[-7.75, .51]			[-.10, .03]			[-.01, .003]		
ISC	Total	B	-16.89***	.21	51.14***	-27.01***	.13	30.79***	-.24**	.05	9.69**	-.16	.01	1.87
	Direct	B	-14.66***	.27		-21.96***	.21		-.16*	.14		-.02	.13	
	Indirect	B	-2.23	.06	36.78***	-5.04	.08	25.99***	-.07	.09	13.59***	-.13	.12	11.75***
		95%CI	[-4.57, -.65]			[-9.91, -1.91]			[-.16, -.03]			[-.23, -.05]		

Note. COH = Cohesion, FLEX = Flexibility, COM = Communication, SAT = Satisfaction, ED= Emotional Deprivation, MIS= Mistrust, SI= Social Isolation, AS= Admiration Seeking, ISC= Insufficient Self Control.
**p<.05, **p<.01, ***p<.001*

Table 33 shows mediating effect of maladaptive cognitive schemas (emotional deprivation, mistrust, social isolation, admiration seeking, and insufficient self-control) in relationship between family functioning domains (cohesion, flexibility, communication, and satisfaction) and hoarding behavior. Results indicate significant direct effect (B = -16.89, *p* = <.001) of cohesion on hoarding behavior. Emotional deprivation (B = -.14.39, 95% CI = -4.69, -1.09), mistrust (B = -1.69, 95% CI = -3.45, -.52), social isolation (B = -1.59, 95% CI = -3.62, -.38), and insufficient self-control (B = -2.23, 95% CI = -4.57, -.65) significantly mediated relationship between cohesion and hoarding behavior explaining 28%, 25%, 12%, and 27% of variance in each mediational model respectively.

Flexibility also has shown significant direct effect (B = -27.01, *p* = <.001) on hoarding behavior. Emotional deprivation (B = -6.18, 95% CI = -10.35, -3.11), mistrust (B = -4.37, 95% CI = -8.70, -1.34), social isolation (B = -3.95, 95% CI = -7.95, -1.40), and insufficient self-control (B = -5.04, 95% CI = -9.91, -1.91) significantly mediated relationship between flexibility and hoarding behavior explaining 21%, 18%, 18%, and 21% of variance in each mediational model respectively.

Similarly, family communication revealed significant direct effect (B = -.23, *p* = <.001) of on hoarding behavior. Emotional deprivation (B = -.1, 95% CI = -.19, -.05), social isolation (B = -.06, 95% CI = -.14, -.01), and insufficient self-control (B = -.07, 95% CI = -.16, -.03) significantly mediated relationship between communication and hoarding behavior explaining 15%, 12%, 11%, and 14% of variance in each mediational model respectively.

Family satisfaction has significant direct effect (B = -.16, *p* = <.001) on hoarding behavior. Emotional deprivation (B = -.16, 95% CI = -.28, -.09), mistrust (B = .08, 95% CI = -.16, -.02), social isolation (B = -.11, 95% CI = -.19, -.05), and insufficient self-control (B = -.13, 95% CI = -.23, -.05) significantly mediated relationship between satisfaction and hoarding behavior explaining 14%, 9%, 9%, and 13% of variance in each mediational model respectively.

Table 34

Determinants of Hoarding as a Mediator between Family Functioning and Hoarding Behavior (N=200)

Mediators			Predictors											
			Family Functioning											
			COH			Flex			COM			SAT		
			Effect	R^2	F	Effect	R^2	F	Effect	R^2	F	Effect	R^2	F
MAT	Total	B	-16.87***	.21	50.86**	-27.06***	.14	30.38***	-.24**	.05	9.32	-.16	.01	2.51
	Direct	B	-13.74***	.28		-21.11***	.23		-.18	.18		-.18	.17	
	Indirect	B	-3.13	.07	37.58**	-5.95	.09	29.15***	-.06	.13	5.82	.02	.16	19.83***
		95%CI	[-10.46, -1.95]			[-19.46, -3.64]			[-.02, -.001]			[-.25, .11]		
PUV	Total	B	-16.84***	.20	49.21***	-27.35***	.13	30.82***	-.24**	.04	9.12**	-.16	.01	2.35
	Direct	B	-17.43***	.22		-27.40***	.14		-.25**	.06		-.20	.02	
	Indirect	B	.58	.02	27.20***	.05	.01	16.22***	.02	.02	5.91**	.04	.01	2.35
		95%CI	[-.06, 2.11]			[-1.05, 1.82]			[-.005, .10]			[-.005, .14]		
EA	Total	B	-16.88***	.21	50.27***	-27.36***	.14	30.87***	-.24**	.05	9.36**	-.16	.01	2.44
	Direct	B	-12.99***	.37		-21.39***	.34		-.19**	.29		-.15	.27	
	Indirect	B	-3.89	.16	56.95***	-5.97	.20	49.30***	-.04	.24	39.19***	-.01	.26	35.45***
		95%CI	[-6.86, -1.73]			[-11.12,-1.05]			[-.14,.04]			[-.11, .11]		

Note . COH = Cohesion, FLEX = Flexibility, COM = Communication, SAT = Satisfaction, MAT=Materialism, PUV=Perceived Utility Value, EA=Emotional Associations

***p<.01, ***p<.001*

Table 34 shows mediating effect of determinants of hoarding (materialism, perceived utility value and emotional associations) in relationship between family functioning domains (cohesion, flexibility, communication, and satisfaction) and hoarding behavior. Results indicate significant direct effect (B = -16.87, p = <.001) of cohesion on hoarding behavior. Materialism (B = -3.13, 95% CI = -10.46, -1.95), and emotional associations (B = -3.89, 95% CI = -6.86, -1.73) significantly mediated relationship between cohesion and hoarding behavior explaining 28% and 37% of variance in each mediational model respectively.

Flexibility has shown significant direct effect (B = -27.06, p = <.001) on hoarding behavior. Materialism (B = -5.95, 95% CI = -19.46, -3.64) and emotional associations (B = -5.97, 95% CI = -11.12,-1.05) significantly mediated relationship between flexibility and hoarding behavior explaining 23%, and 34% of variance in each mediational model respectively.

Similarly, family communication revealed significant direct effect (B = -.24, p = <.01) on hoarding behavior. Materialism (B = -.06, 95% CI = -.02, -.001) significantly mediated relationship between communication and hoarding behavior explaining 18% of variance in mediational model. All other mediational effects were found to be non-significant.

Table 35

Psychological Distress as a Mediator between Adult Attachment and Hoarding Behavior (N=200)

Mediators			Predictors: Adult Attachment								
			SA			AV.A			ANX.A		
			Effect	R^2	*F*	Effect	R^2	*F*	Effect	R^2	*F*
Depression	Total	B	-.004	.00	.0004	.21	.01	1.06	.35	.02	3.63
	Direct	B	.101	.22		.01	.22		.08	.22	
	Indirect	B	-.10	.22	27.55***	.22	.21	27.36***	.27	.20	27.50***
		95%CI	[-.35, .09]			[-.44, -.02]			[-.48, -.09]		
Anxiety	Total	B	-.004	.00	.0004	.21	.01	1.06	.35	.02	3.63
	Direct	B	.06	.26		.16	.27		.21	.27	
	Indirect	B	-.06	.26	35.38***	.05	.26	35.91***	.14	.25	36.51***
		95%CI	[-.03, .01]			[-.27, .15]			[-.35, .05]		
OCI-NH	Total	B	-.004	.00	.0004	.21	.01	1.06	.35	.02	3.63
	Direct	B	-.06	.26		.19	.26		.22	.26	
	Indirect	B	.05	.26	33.86***	.01	.25	34.64***	.13	.24	35.06***
		95%CI	[-.20, .27]			[-.24, .20]			[-.37, .07]		

Note. SA= Secure Attachment, AV-A= Avoidant Attachment, ANX-A= Anxious Attachment, OCI-NH = Non-hoarding Obsessive Compulsive Inventory

*$p<.05$, **$p<.01$, ***$p<.001$

Table 35 shows the mediating role of psychological distress (depression, anxiety, and OCD-NH) for the relationship between adult attachment styles (secure, avoidant, and anxious) and hoarding behavior. Results reveal significant mediation through depression (B = -.22, 95% CI = -.44, -.02) between avoidant attachment and hoarding behavior. Depression also mediated the relationship between anxious attachment and hoarding behavior with an indirect effect (B = -.27, 95% CI = -.48, -.09) and explaining 22% of variance in each mediational model. Results indicate non-significant mediation for all other variables.

Table 36

Maladaptive Cognitive Schemas as Mediator between Adult Attachment and Hoarding Behavior (N=200)

Mediators			Predictors Adult Attachment								
			SA			AV.A			ANX.A		
			Effect	R^2	*F*	Effect	R^2	*F*	Effect	R^2	*F*
ED	Total	B	-.004	.00	.0004	.21	.04	1.06	.35	.02	3.63
	Direct	B	.11	.14		.01	.14		.09	.14	
	Indirect	B	-.11	.14	16.00***	.22	.10	15.82***	.25	.12	15.99***
		95%CI	[-.29, .04]			[-.43, -.05]			[-.42, -.13]		
MIS	Total	B	-.004	.00	.0004	.21	.04	1.06	.35	.02	3.63
	Direct	B	.09	.09		.01	.09		.21	.09	
	Indirect	B	-.09	.09	10.04***	.19	.05	9.91***	.14	.07	10.65***
		95%CI	[-.26, .03]			[-.40, -.06]			[-.28, -.04]		
SI	Total	B	-.004	.00	.0004	.21	.04	1.06	.35	.02	3.63
	Direct	B	-.02	.09		.07	.09		.24	.09	
	Indirect	B	.01	.09	9.65***	.14	.05	9.72***	.11	.07	10.63***
		95%CI	[-.12, .13]			[-.35, -.006]			[-.25, -.02]		
AS	Total	B	-.004	.00	.0004	.21	.04	1.06	.35	.02	3.63
	Direct	B	.21	.15		.02	.15		.10	.15	
	Indirect	B	-.22	.15	17.65***	.23	.11		.25	.13	17.12***
		95%CI	[-.39, -.06]			[-.43, -.08]			[-.40, -.12]		
ISC	Total	B	-.004	.00	.0004	.21	.04	1.06	.35	.02	3.63
	Direct	B	.02	.13		.04	.13		.17	.13	
	Indirect	B	-.03	.13	14.09***	.17	.09	14.11***	.17	.11	14.65***
		95%CI	[-.21, .13]			[-.37, -.02]			[-.36, -.06]		

Note. SA= Secure Attachment, AV-A= Avoidant Attachment, ANX-A= Anxious Attachment, ED= Emotional Deprivation, MIS= Mistrust, SI= Social Isolation, AS= Admiration Seeking, ISC= Insufficient Self Control.
**p<.05, **p<.01, ***p<.001*

Table 36 shows mediating effect of maladaptive cognitive schemas (emotional deprivation, mistrust, social isolation, admiration seeking, and insufficient self-control) in relationship between adult attachment styles (secure, avoidant, and anxious) and hoarding behavior. Results revealed significant indirect effect of emotional deprivation (B = -.22, 95% CI = -.43, -.05), mistrust (B = -.19, 95% CI = -.40, -.06), social isolation (B = -.14, 95% CI = -.35, -.006), admiration seeking (B = -.23, 95% CI = -.43, -.08) and insufficient self-control (B = -.17, 95% CI = -.37, -.02) on hoarding behavior explaining 14%, 9%, 9%, 15%, and 13% of variance in each mediational model respectively.

Similarly, anxious attachment indicated significant indirect effect of emotional deprivation (B = -.25, 95% CI = -.42, -.13), mistrust (B = -.14, 95% CI = -.28, -.04), social isolation (B = -.11, 95% CI = -.35, -.02), admiration seeking (B = -.25, 95% CI = -.40, -.12) and insufficient self-control (B = -.17, 95% CI = -.36, -.06) on hoarding behavior explaining 14%, 9%, 9%, 15%, and 13% of variance in each mediational model respectively. Mediation results of maladaptive cognitive schemas for relationship between secure attachment and hoarding behavior were found to be non-significant.

Table 37

Psychological Distress as a Mediator between Family Functioning and Hoarding Behavior in Clinical Group (N=100)

Mediators			Predictors											
			Family Functioning											
			COH			Flex			COM			SAT		
			Effect	R^2	F	Effect	R^2	*F*	Effect	R^2	*F*	Effect	R^2	*F*
Depression	Total	B	-16.77***	.16	18.28***	-22.13**	.09	9.45**	-.21*	.04	4.04*	.15	.01	.85
	Direct	B	-14.05***	.23		-17.83*	.18		-.14	.15		.29	.16	
	Indirect	B	-2.72	.07	14.71***	-4.30	.09	10.87***	-.07	.11	8.17***	-.14	.15	9.18***
		95%CI	[-5.98, -.31]			[-10.97, -.03]			[-.15, .004]			[-.33, -.02]		
Anxiety	Total	B	-16.77***	.16	18.28***	-22.13**	.09	9.45**	-.21*	.04	4.04*	.15	.01	.85
	Direct	B	-11.86**	.29		-13.56	.25		-.08	.22		.30*	.25	
	Indirect	B	-4.91	.13	19.53***	-8.57	.16	15.85***	-.13	.18	13.76***	-.15	.24	16.15***
		95%CI	[-9.21, -1.60]			[-15.74, -2.61]			[-.27, -.05]			[-.29, -.02]		
OCI-NH	Total	B	-16.77***	.16	18.28***	-22.13**	.09	9.45**	-.21*	.04	4.04*	.15	.01	.85
	Direct	B	-11.73**	.27		-13.35	.23		-.08	.21		.33*	.25	
	Indirect	B	-5.04	.11	18.31***	-8.78	.14	14.88***	-.13	.17	12.93***	-.18	.24	15.79***
		95%CI	[-9.75, -1.45]			[-16.76, -2.67]			[-.23, -.05]			[-.42, -.01]		

Note. COH = Cohesion, FLEX = Flexibility, COM = Communication, SAT = Satisfaction, OCI-NH = Non-hoarding Obsessive Compulsive Inventory

***p<.01, ***p<.001*

Table 37 shows the mediating role of psychological distress (depression, anxiety, and OCD) in relationship between family functioning domains (cohesion, flexibility, communication, and satisfaction) and hoarding behavior in clinical group. Results reveal significant direct effect of cohesion (B = -14.05, $p = <.001$) on hoarding as well as through the mediating effect of depression (B = -2.72, 95% CI = -5.98, -.31). The mediational model explains 23% of the variance with additional 7% of variance explained by indirect effect of cohesion on hoarding through depressive symptoms. Anxiety (B = -4.91, 95% CI = -9.21, -1.60) also significantly mediated the relationship by explaining 29% of variance while mediating role of OCI-NH (B = -5.04, 95% CI = -9.75, -1.45) was also found to be significant explaining 27% of variance.

Similarly, flexibility (B = -17.83, $p = <.01$) revealed significant direct effect on hoarding. Mediational model explained 18% of variance through the mediating effect of depression (B = -4.30, 95% CI = -10.97, -.03), 25% of variance is explained through the mediating effect of anxiety (B = -8.57, 95% CI = -15.74, -2.61), and 23% of variance is caused by OCI-NH (B = -8.78, 95% CI = -16.76, -2.67) in relationship between flexibility and hoarding behavior.

Similarly, anxiety (B = -.13, 95% CI = -.27, -.05) and OCI-NH (B = -.13, 95% CI = -.23, -.05) mediated the relationship between family communication and hoarding behavior in clinical group with significant indirect effect explaining 22% and 21% of variance in each mediational model respectively.

Likewise, significant mediation has been shown by depression, anxiety and OCI-NH for the relationship between family satisfaction and hoarding behavior

among clinical group. Mediational model explained 16% of variance with additional 15% of variance explained through indirect effect of depression (B = -.14, 95% CI = -.33, -.02). Significant mediation has been observed through anxiety (B = -.15, 95% CI = -.29, -.02) for the relationship between family satisfaction and hoarding explaining 25% of variance in the mediational model. Also, OCI-NH (B = -.18, 95% CI = -.42, -.01) significantly mediated relationship with a significant indirect effect explaining 25% of additional variance in the model.

Table 38

Determinants of Hoarding as a Mediator between Family Functioning and Hoarding Behavior in Clinical Group (N=100)

Mediators			Predictors											
			Family Functioning											
			COH			Flex			COM			SAT		
			Effect	R^2	F	Effect	R^2	F	Effect	R^2	F	Effect	R^2	F
MAT	Total	B	-16.77***	.16	18.28***	-22.12**	.09	9.45**	-.21*	.04	4.04*	.15	.01	.85
	Direct	B	-8.78*	.39		-5.36	.37		-.05	.36		.18	.37	
	Indirect	B	-7.99	.23	32.32***	-16.77	.28	28.08***	-.16	.32	27.79***	-.03	.36	29.05***
		95%CI	[-14.63, -2.95]			[-25.47, -9.33]			[-.26, -.02]			[-.25, .18]		

Note . COH = Cohesion, FLEX = Flexibility, COM = Communication, SAT = Satisfaction, MAT=Materialism, PUV=Perceived Utility Value, EA=Emotional Associations

***p<.01, ***p<.001*

Table 38 shows mediating effect of determinants of hoarding (materialism, perceived utility value and emotional associations) in association between family functioning domains (cohesion, flexibility, communication, and satisfaction) and hoarding behavior in clinical group. Results indicate significant direct effect (B = -8.78, p = <.05) of cohesion on hoarding behavior. Materialism (B = -7.99, 95% CI = -14.63, -2.95) significantly mediated relationship between cohesion and hoarding behavior explaining 39% of variance in mediational model. Also, materialism significantly mediated the relationship of family flexibility (B = -16.77, 95% CI = -25.47, -9.33) and family communication (B = -.16, 95% CI = -.26, -.02) with hoarding explaining 37% and 36% of variance in each mediational model respectively.

Table 39

Psychological Distress as a Mediator between Family Functioning and Hoarding Behavior in Non-Clinical Group (N=100)

Mediators			Predictors											
			Family Functioning											
			COH			Flex			COM			SAT		
			Effect	R^2	F	Effect	R^2	F	Effect	R^2	F	Effect	R^2	F
Depression	Total	B	-15.87***	.23	28.85***	-28.34***	.16	19.17***	-.20	.03	3.27	-.25	.04	3.69
	Direct	B	-9.63***	.34		-15.20*	.31		.005	.27		-.07	.28	
	Indirect	B	-6.25	.11	25.01***	-13.14	.15	21.94***	-.21	.24	18.25***	-.18	.24	18.49***
		95%CI	[-10.99, -2.94]			[-22.02, -6.54]			[-.39, -.08]			[-.38, -.03]		
Anxiety	Total	B	-15.87***	.23	28.85***	-28.34***	.16	19.17***	-.20	.03	3.27	-.25	.04	3.69
	Direct	B	-10.56***	.34		-17.58**	.31		-.006	.26		-.05	.26	
	Indirect	B	-5.32	.11	24.99***	-10.76	.15	22.03***	-.19	.23	16.87***	-.19	.22	16.97***
		95%CI	[-9.32, -.07]			[-18.89, -5.11]			[-.36, -.07]			[-.36. -.07]		
OCI-NH	Total	B	-15.87***	.23	28.85***	-28.34***	.16	19.17***	-.20	.03	3.27	-.25	.04	3.69
	Direct	B	-13.08***	.39		-18.72**	.32		-.18	.28		-.17	.27	
	Indirect	B	-2.79	.16	31.36***	-9.62	.16	22.63***	-.02	.25	18.91***	-.07	.23	18.19***
		95%CI	[-6.26, -.48]			[-18.37, -3.53]			[-.14, -.08]			[-.22, -.06]		

Note. COH = Cohesion, FLEX = Flexibility, COM = Communication, SAT = Satisfaction, OCI-NH = Non-hoarding Obsessive Compulsive Inventory

**p<.01, ***p<.001

Table 39 shows the mediating role of psychological distress (depression, anxiety, and OCD) for the relationship between family functioning domains (cohesion, flexibility, communication, and satisfaction) and hoarding behavior in non-clinical group. Results reveal significant direct effect of cohesion (B = -15.87, p = <.001) on hoarding as well as through the mediating effect of depression (B = -6.25, 95% CI = -10.99, -2.94). The mediational model explains 34% of the variance with additional 11% of variance explained by indirect effect of cohesion on hoarding through depressive symptoms. Anxiety (B = -5.32, 95% CI = -9.32, -.07) also significantly mediated the relationship by explaining 34% of variance while mediating role of OCI-NH (B = -2.79, 95% CI = -6.26, -.48) was also found to be significant explaining 39% of variance.

Similarly, flexibility (B = -28.34, p = <.001) revealed significant direct effect on hoarding. Mediational model explained 31% of variance through the mediating effect of depression (B = -13.14, 95% CI = -22.02, -6.54), 31% of variance is explained through the mediating effect of anxiety (B = -10.76, 95% CI = -18.89, -5.11), and 32% of variance is caused by OCI-NH (B = -9.62, 95% CI = -18.37, -3.53) in relationship between flexibility and hoarding behavior.

Significant mediation has also been shown by depression, anxiety and OCI-NH for the relationship between family communication among non-clinical group. Mediational model explained 27% of variance with additional 24% of variance explained through indirect effect of depression (B = -.21, 95% CI = -.39, -.08). Significant mediation has been observed through anxiety (B = -.19, 95% CI = -.36, -.07) for the relationship between family satisfaction and hoarding explaining 26% of variance in the mediational model. Also, OCI-NH (B = -.02, 95% CI

= -.14, -.08) significantly mediated relationship with a significant indirect effect explaining 28% of additional variance in the model.

Likewise, significant mediation has been shown by depression, anxiety and OCI-NH for the relationship between family satisfaction among non-clinical group. Mediational model explained 28% of variance with additional 24% of variance explained through indirect effect of depression (B = -.18, 95% CI = -.38, -.03). Significant mediation has been observed through anxiety (B = -.19, 95% CI = -.36, -.07) for the relationship between family satisfaction and hoarding explaining 26% of variance in the mediational model. Also, OCI-NH (B = -.07, 95% CI = -.22, -.06) significantly mediated relationship with a significant indirect effect explaining 27% of additional variance in the model.

Table 40

Maladaptive Cognitive Schemas as Mediator between Family Functioning and Hoarding Behavior in Non-Clinical Sample (N=100)

Mediators			Predictors											
			Family Functioning											
			COH			Flex			COM			SAT		
			Effect	R^2	*F*	Effect	R^2	*F*	Effect	R^2	*F*	Effect	R^2	*F*
ED	Total	B	-15.87***	.23	28.85***	-28.34***	.16	19.17***	-.20	.03	3.27	-.25	.04	3.69
	Direct	B	-13.36***	.33		-20.23**	.25		-.14	.19		-.13	.19	
	Indirect	B	-2.51	.10	23.77***	-8.12	.09	16.53***	-.07	.16	11.81***	-.12	.15	11.42***
		95%CI	[-5.30, -.44]			[-14.23, -3.04]			[-.17, -.02]			[-.24, -.02]		
MIS	Total	B	-15.87***	.23	28.85***	-28.34***	.16	19.17***	-.20	.03	3.27	-.25	.04	3.69
	Direct	B	-13.78***	.29		-22.29**	.21		-.16	.14		-.16	.14	
	Indirect	B	-2.09	.06	19.22***	-6.04	.05	13.11***	-.04	.11	8.21***	-.09	.10	7.86***
		95%CI	[-4.92, -.38]			[-12.61, -.99]			[-.13, .04]			[-.17, -.01]		
SI	Total	B	-15.87***	.23	28.85***	-28.34***	.16	19.17***	-.20	.03	3.27	-.25	.04	3.69
	Direct	B	-13.78***	.28		-22.37**	.21		-.12	.13		-.13	.13	
	Indirect	B	-2.09	.05	19.04***	-5.98	.05	12.58***	-.08	.10	7.26**	-.12	.09	7.13**
		95%CI	[-4.65, -.42]			[-12.08, -.71]			[-.16, -.01]			[-.21, -.03]		
AS	Total	B	-15.87***	.23	28.85***	-28.34***	.16	19.17***	-.20	.03	3.27	-.25	.04	3.69
	Direct	B	-13.41***	.41		-21.69***	.35		-.20	.29		-.19	.28	
	Indirect	B	-2.46	.18	33.06***	-6.65	.19	25.98***	-.001	.26	19.74***	-.06	.24	18.70***
		95%CI	[-5.29, -.23]			[-12.58, -1.65]			[-.11, .11]			[-.17, .06]		
ISC	Total	B	-15.87***	.23	28.85***	-28.34***	.16	19.17***	-.20	.03	3.27	-.25	.04	3.69
	Direct	B	-13.48***	.29		-23.22***	.22		-.13	.13		-.12	.13	
	Indirect	B	-2.39	.06	19.77***	-5.12	.06	13.81***	-.07	.10	7.51***	-.12	.09	7.20**
		95%CI	[-4.98, -.52]			[-10.96, -.94]			[-.17, .01]			[-.25, -.03]		

Note. COH = Cohesion, FLEX = Flexibility, COM = Communication, SAT = Satisfaction, ED= Emotional Deprivation, MIS= Mistrust, SI= Social Isolation, AS= Admiration Seeking, ISC= Insufficient Self Control.
*$p<.05$, **$p<.01$, ***$p<.001$

Table 40 shows mediating effect of maladaptive cognitive schemas (emotional deprivation, mistrust, social isolation, admiration seeking, and insufficient self-control) in relationship between family functioning domains (cohesion, flexibility, communication, and satisfaction) and hoarding behavior. Results indicate significant direct effect (B = -15.87, p = <.001) of cohesion on hoarding behavior. Emotional deprivation (B = -2.51, 95% CI = -5.30, -.44), mistrust (B = -2.09, 95% CI = -4.92, -.38), social isolation (B = -2.09, 95% CI = -4.65, -.42), admiration seeking (B = -2.46, 95% CI = -5.29, -.23) and insufficient self-control (B = -2.39, 95% CI = -4.98, -.52) significantly mediated relationship between cohesion and hoarding behavior explaining 33%, 29%, 28%, 41% and 29% of variance in each mediational model respectively.

Flexibility also has shown significant direct effect (B = -28.34, p = <.001) on hoarding behavior. Emotional deprivation (B = -8.12, 95% CI = -14.23, -3.04), mistrust (B = -6.04, 95% CI = -12.61, -.99), social isolation (B = -3.95, 95% CI = -7.95, -1.40), admiration seeking (B = -5.98, 95% CI = -12.08, -.71) and insufficient self-control (B = -5.12, 95% CI = -10.96, -.94) significantly mediated relationship between flexibility and hoarding behavior explaining 25%, 21%, 21%, 35% and 22% of variance in each mediational model respectively.

Similarly, emotional deprivation (B = -.07, 95% CI = -.17, -.02) and social isolation (B = -.08, 95% CI = -.16, -.01), significantly mediated relationship between family communication and hoarding behavior explaining 19% and 13% of variance in each mediational model respectively.

Emotional deprivation (B = -.12, 95% CI = -.24, -.02), mistrust (B = .09, 95% CI = -.17, -.01), social isolation (B = -.12, 95% CI = -.21, -.03), and insufficient self-control (B = -.12, 95% CI = -.25, -.03) significantly mediated relationship between family satisfaction and hoarding behavior explaining 19%, 14%, 13%, and 13% of variance in each mediational model respectively.

Table 41

Determinants of Hoarding as a Mediator between Family Functioning and Hoarding Behavior in Non-Clinical Group (N=100)

Mediators			Predictors					
			Family Functioning					
			COH			Flex		
			Effect	R^2	*F*	Effect	R^2	*F*
MAT	Total	B	-15.80***	.23	27.71***	-28.88**	.17	18.89***
	Direct	B	-8.25**	.41		-15.05*	.41	
	Indirect	B	-7.55	.18	32.63***	-13.83	.24	32.81***
		95%CI	[-12.10, -4.04]			[-22.63, -6.69]		
EA	Total	B	-15.80***	.23	27.71***	-28.88***	.17	18.89***
	Direct	B	-12.46***	.35		-25.18***	.35	
	Indirect	B	-3.34	.12	24.54***	-3.71	.18	25.38***
		95%CI	[-6.85, -.88]			[-10.69, 2.59]		

Note . COH = Cohesion, FLEX = Flexibility, COM = Communication, SAT = Satisfaction, MAT=Materialism, PUV=Perceived Utility Value, EA=Emotional Associations
***p*<.01, ****p*<.001

Table 41 shows mediating effect of determinants of hoarding (materialism and emotional associations) in relationship between family functioning domains (cohesion and flexibility) and hoarding behavior. Results indicate significant direct effect (B = -15.80, *p* = <.001) of cohesion on hoarding behavior. Materialism (B = -7.55, 95% CI = -12.10, -4.04), and emotional associations (B = -3.34, 95% CI = -6.85, -.88) significantly mediated relationship between cohesion and hoarding behavior explaining 41% and 35% of variance in each mediational model respectively.

Similarly, family flexibility has shown significant direct effect (B = -28.88, *p* = <.01) on hoarding behavior. Materialism (B = -13.83, 95% CI = -22.63, -6.69) significantly mediated relationship between family flexibility and hoarding behavior explaining 41% of variance in mediational model. All other mediations were found to be non-significant.

Moderation Analysis. Moderating role of different demographic variables was explored in order to explain the relationship between hoarding behavior and family functioning. Research has shown that demographic variables play a significant role in hoarding behavior. Being unmarried, unemployed, getting income assistance, belonging to a lower socioeconomic group, and, to a lesser extent, being female and having a lower household income have all been linked to higher hoarding behavior scores. (Samuels et al., 2008; Spittlehouse, Vierck, Pearson, & Joyce, 2016; Wheaton et al., 2008). Statistics from Pakistan also indicates hoarding behaviour scores as higher among women, older age groups, and lower socio-economic status. This was linked by authors to women's house-making roles, which cause them to be more protective and caring of their belongings. Hoarding behavior was found to be inversely correlated with monthly household income, and this finding is consistent with past research from around the world (Inam, Akhtar, Kashif, & Nadeem, 2021). Other research, however, has not discovered any differences between hoarders and non-hoarders for a variety of socio-demographic factors (Bulli et al., 2013; Mueller et al., 2009). Therefore, results need further elaboration. Thus, moderating role of different demographic variables was explored in order to explain the relationship between hoarding behavior and family functioning using different moderation models were tested using Macro Process Analysis as suggested by Hayes (2013). Only significant results are presented in following tables.

Table 42

Moderating effect of Marital Status on relationship between Family Cohesion and hoarding behavior (N = 200)

Variable		*B*	*SE B*	*t*	Hoarding *p*	*95%CI*	
Constant		22.69	.81	27.86	.000	[21.08,	24.29]
Mar_Status		4.11	1.65	2.49	.013	[.86,	7.36]
Cohesion		-.35	.09	-3.52	.0005	[-.55, -.15]	
Mar_Status × Cohesion		.39	.19	1.98	.049	[.001, .78]	
R^2	.11						
F	8.85				.000		

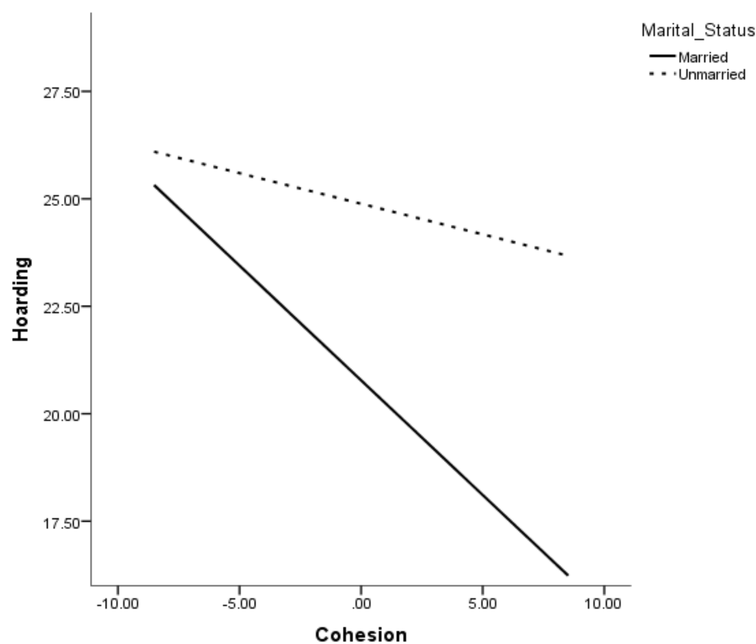


Figure 15. Moderating effect of marital status in predicting hoarding by family cohesion

Table 42 illustrates the moderating role of marital status in association between family cohesion and hoarding behavior. Model illustrates the interaction effect of marital status and family cohesion. Findings indicate that marital status and family cohesion interactively produce 11% (B=.39, R^2 = .11, F =8.85, p < .05) of variance in explaining hoarding behavior. Mod graph further explains that being

married is boosting the buffering effect of family cohesion in relation to hoarding behavior.

Table 43

Moderating effect of Education on relationship between Family Flexibility and Hoarding behavior (N = 200)

				Hoarding		
Variable	*B*	*SE B*	*t*	*p*	*95%CI*	
Constant	22.52	.78	28.97	.000	20.99	24.05
Education	.64	.73	.87	.383	-.80	2.08
Flexibility	.57	.11	5.09	.000	.35	.79
Education × Flexibility	.23	.10	2.27	.024	.03	.43
R^2	.16					
F	10.46			.000		

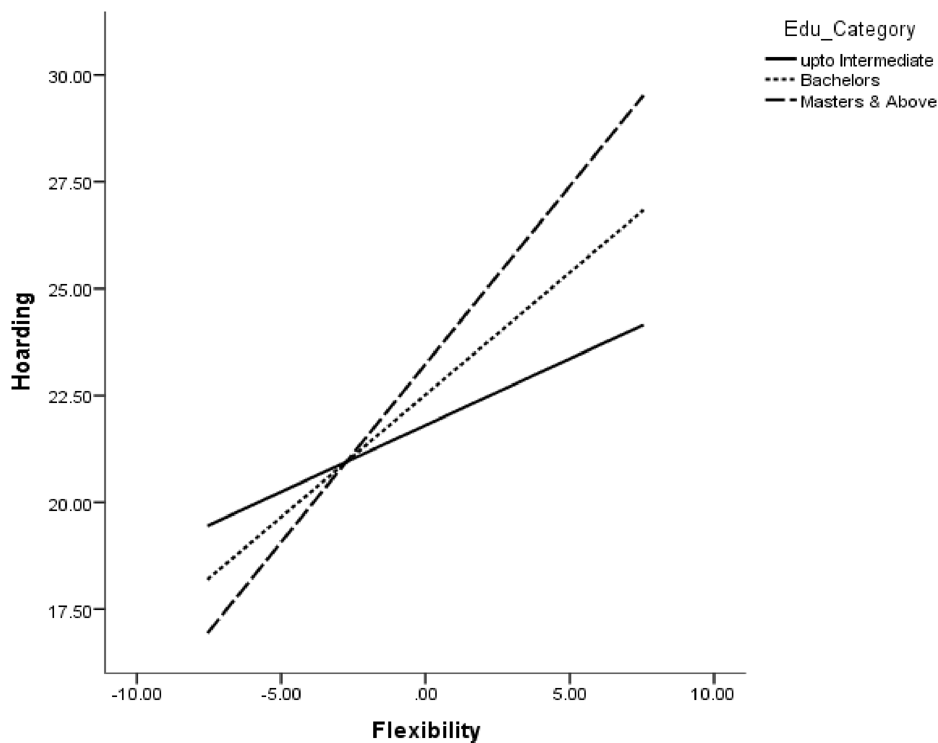


Figure 16. Moderating effect of education in predicting hoarding by family flexibility

Table 43 illustrates the moderating role of education in association between family flexibility and hoarding behavior. Model illustrates the interaction effect of education and family flexibility. Findings indicate that education and family flexibility interactively produce 16% (B=.23, $R^2 = .16$, $F = 10.46$, $p < .05$) of variance in explaining hoarding behavior. Mod graph further explains that higher levels of education maximized the effect of family flexibility in association with hoarding behavior.

Table 44

Mean differences on variables of the study across clinical and non-clinical groups (*N* = 200)

	Clinical (*n* = 100)		Non-clinical (*n* = 100)				*95% CI*		
Variables	*M*	*SD*	*M*	*SD*	*t*	*p*	*LL*	*UL*	*Cohen's d*
SI-R	25.13	11.81	19.87	10.94	3.27	.001	2.08	8.43	.46
COH	33.37	8.49	37.10	8.15	-3.17	.002	-6.05	-1.40	.45
FLEX	36.56	8.10	36.29	6.96	.246	.806	-1.84	2.37	-
COM	34.17	11.30	37.04	9.68	-1.93	.055	-5.80	.06	-
SAT	31.74	7.31	35.81	8.52	-3.63	.000	-6.28	-1.85	.51
SA	16.52	4.04	18.23	3.87	-3.06	.003	-2.81	-.61	.43
AV.A	17.18	3.95	17.87	4.24	-1.19	.235	-1.83	.45	-
ANX.A	16.35	4.05	17.91	4.86	-2.47	.015	-2.81	-.31	.35
DEP	8.33	5.04	5.49	4.22	4.32	.000	1.54	4.14	.61
ANX	7.62	4.64	5.31	4.32	3.64	.000	1.06	3.56	.52
OCI-NH	26.92	13.56	25.62	14.03	.67	.506	-2.55	5.14	-
ED	14.96	5.37	11.20	6.005	4.67	.000	2.17	5.34	.66
MIS	15.57	5.37	13.44	4.64	3.001	.003	.73	3.53	.43

Continued…

Variables	Clinical (n = 100)		Non-clinical (n = 100)				95% CI		Cohen's d
	M	*SD*	*M*	*SD*	*t*	*p*	*LL*	*UL*	
SI	14.65	5.74	12.61	5.52	2.56	.011	.47	3.61	.36
ISC	15.69	5.67	13.08	5.16	3.40	.001	1.09	4.12	.48
AS	15.23	5.13	12.98	5.41	3.01	.003	.78	3.7	.43
MAT	18.37	7.18	15.95	16.9	1.31	.192	-1.22	6.07	-
PUV	22.44	5.65	22.27	5.96	.21	.832	-1.46	1.81	-
EA	19.56	6.63	15.46	6.07	4.52	.000	2.31	5.88	.65

Note: SI-R=Saving Inventory Revised, , COH= Cohesion, FLEX= Flexibility, FC= Family Communication, FS= Family Satisfaction, SA= Secure Attachment, AV-A= Avoidant Attachment, ANX-A= Anxious Attachment, DEP=Depression, ANX=Anxiety, OCI-NH = Non-hoarding obsessive compulsive inventory, ED= Emotional Deprivation, MIS= Mistrust, SI= Social Isolation, AS= Admiration Seeking, ISC= Insufficient Self Control, MAT=Materialism, PUV=Perceived Utility Value, EA=Emotional Associations

Table 44 indicates mean differences for clinical and non-clinical groups on all study variables. Values show that family cohesion, family satisfaction, and secure attachment were significantly higher in non-clinical group whereas emotional association, hoarding (as measured by saving inventory), psychological distress (depression, anxiety, obsessive compulsive symptoms), and maladaptive cognitive schemas (emotional deprivation, mistrust, social, insufficient self-control, admiration seeking) were found to be high in clinical group. Group differences for other variables were non-significant.

Table 45

Mean differences on variables of the study across hoarders and non-hoarders (N = 100)

	Hoarders (n = 48)		Non-hoarders (n = 152)				*95% CI*		
Variables	*M*	*SD*	*M*	*SD*	*t*	*p*	*LL*	*UL*	*Cohen's d*
SI-R	38.52	5.61	17.44	7.88	20.44	.000	19.04	23.12	3.08
COH	.86	.23	1.08	.31	-5.46	.000	-.31	-.15	.81
FLEX	.63	.12	.74	.16	-4.97	.000	-.15	-.06	.78
COM	33.27	8.66	36.34	11.06	-1.99	.049	-6.12	-.02	.31
SAT	33.83	8.19	33.78	8.19	.04	.967	-2.64	2.76	-
SA	17.71	4.45	17.26	3.91	.61	.542	-.99	1.87	-
AV.A	17.00	4.12	17.69	4.09	-1.02	.313	-2.05	.66	-
ANX.A	16.75	4.42	17.25	4.57	-.68	.500	-1.97	.97	-
DEP	9.54	4.88	6.08	4.55	4.36	.000	1.88	5.05	.73
ANX	9.56	4.85	5.49	4.09	5.26	.000	2.53	5.62	.91
OCI-NH	29.43	11.39	20.36	11.38	4.81	.000	5.32	12.83	.79
ED	15.21	5.39	12.41	6.03	3.05	.003	.97	4.63	.49
MIS	16.48	5.39	13.88	4.89	2.98	.004	.86	4.34	.51
SI	15.67	6.39	12.99	5.35	2.63	.010	.65	4.71	.45
ISC	16.65	5.79	13.67	5.31	3.16	.002	1.09	4.85	.54
AS	15.62	4.41	13.65	5.61	2.47	.016	.38	3.56	.39
MAT	21.58	5.09	14.79	6.36	7.54	.000	5.01	8.59	1.18
PUV	22.39	5.49	22.36	5.89	.04	.971	-1.81	1.88	-
EA	21.29	5.68	16.34	6.53	5.07	.000	3.01	6.89	.81

Note: SI-R=Saving Inventory Revised, , COH= Cohesion, FLEX= Flexibility, FC= Family Communication, FS= Family Satisfaction, SA= Secure Attachment, AV-A= Avoidant Attachment, ANX-A= Anxious Attachment, DEP=Depression, ANX=Anxiety, OCI-NH = Non-hoarding obsessive compulsive inventory, ED= Emotional Deprivation, MIS= Mistrust, SI= Social Isolation, AS= Admiration Seeking, ISC= Insufficient Self Control, MAT=Materialism, PUV=Perceived Utility Value, EA=Emotional Associations

Table 45 indicates mean differences for hoarding and non-hoarding groups on all study variables. Values show that family cohesion, family flexibility, and family communication were significantly higher in non-hoarding group whereas psychological distress (depression, anxiety, obsessive compulsive symptoms), maladaptive cognitive schemas (emotional deprivation, mistrust, social, insufficient self-control, admiration seeking) and materialism were found to be high in hoarding group. Group differences for other variables were non-significant.

Table 46

Mean differences on variables of the study across marital status ($N = 200$)

	Married (n =107)		Un-married (n =93)				95% CI		
Variables	*M*	*SD*	*M*	*SD*	*t*	*p*	*LL*	*UL*	*Cohen's d*
SI-R	20.29	11.11	25.03	11.81	-2.91	.004	-7.93	-1.53	.41
SA	17.55	3.67	17.17	4.42	.66	.509	-.75	1.50	-
AV.A	17.82	4.19	17.18	3.98	1.10	.272	-.50	1.78	-
ANX.A	17.58	4.68	16.60	4.31	1.54	.125	-.27	2.24	-
COH	36.13	7.52	34.20	9.46	1.60	.111	-.44	4.29	-
FLEX	36.21	7.05	36.67	8.08	-.43	.665	-2.57	1.64	-
COM	37.10	10.64	33.88	10.33	2.16	.032	.28	6.15	.31
SAT	34.15	7.48	33.33	8.92	.71	.478	-1.46	3.11	-
DEP	6.28	5.16	7.63	4.38	-1.98	.049	-2.70	-.007	.28
ANX	5.84	4.63	7.18	4.51	-2.06	.040	-2.62	-.06	.29
OCI-NH	24.33	13.31	28.49	14.03	-2.14	.033	-7.97	-.34	.30
ED	11.48	5.62	14.91	5.90	-4.20	.000	-5.03	-1.81	.59
MIS	13.62	5.02	15.51	5.06	-2.64	.009	-3.29	-.47	.37
SI	12.64	5.86	14.76	5.33	-2.65	.009	-3.69	-.54	.38
ISC	13.50	5.81	15.39	5.11	-2.42	.016	-3.42	-.35	.35
AS	13.16	5.34	15.18	5.23	-2.68	.008	-3.49	-.53	.38
MAT	16.18	16.20	18.35	7.41	-1.16	.245	-5.84	1.49	-
PUV	22.64	5.96	22.02	5.58	.74	.457	-1.01	2.25	-
EA	16.02	6.23	19.34	6.74	-3.58	.000	-5.14	-1.48	.51

Note: SI-R=Saving Inventory Revised, COH= Cohesion, FLEX= Flexibility, DIS= FC= Family Communication, FS= Family Satisfaction, SA= Secure Attachment, AV-A= Avoidant Attachment, ANX-A= Anxious Attachment, DEP=Depression, ANX=Anxiety, OCI-NH = Non-hoarding obsessive compulsive inventory, ED= Emotional Deprivation, MIS= Mistrust, SI= Social Isolation, AS= Admiration Seeking, ISC= Insufficient Self Control, MAT=Materialism, PUV=Perceived Utility Value, EA=Emotional Associations

Table 46 indicates mean differences for marital status on all study variables. Values show that score on family cohesion was significantly higher in married group whereas emotional association, hoarding (as measured by saving inventory), psychological distress (depression, anxiety, obsessive compulsive symptoms), and

maladaptive cognitive schemas (emotional deprivation, mistrust, social, insufficient self-control, admiration seeking) were found to be significantly higher in un-married group. Group differences for other variables were non-significant.

Table 47

Mean differences on variables of the study across family systems (N = 200)

	Nuclear (n =128)		Joint (n =72)				95% CI		
Variables	*M*	*SD*	*M*	*SD*	*t*	*p*	*LL*	*UL*	*Cohen's d*
SI-R	20.91	11.14	25.31	12.09	-2.60	.010	-7.74	-1.06	.38
COH	34.72	8.46	36.14	8.58	-1.12	.261	-3.88	1.05	-
FLEX	36.08	6.93	37.04	8.52	-.86	.387	-3.15	1.22	-
COM	35.10	10.97	36.50	9.90	-.89	.372	-4.47	1.68	-
SAT	32.81	7.94	35.48	8.35	-2.24	.026	-5.02	-.32	.33
SA	17.32	4.15	17.45	3.84	-.21	.827	-1.30	1.04	-
AV.A	17.68	4.16	17.23	3.99	.74	.456	-.74	1.64	-
ANX.A	16.82	4.52	17.68	4.51	-1.29	.198	-2.17	.45	-
DEP	7.10	4.55	6.56	5.35	.74	.458	-.87	1.94	-
ANX	6.64	4.55	6.13	4.74	.74	.455	-.83	1.85	-
OCI-NH	26.25	13.86	26.29	13.72	-.01	.987	-4.04	3.97	-
ED	13.45	6.24	12.41	5.48	1.17	.241	-.70	2.77	-
MIS	14.40	4.99	14.68	5.36	-.36	.717	-1.76	1.21	-
SI	13.37	5.45	14.08	6.16	-.84	.401	-2.36	.95	-
ISC	14.12	5.16	14.84	6.22	-.88	.380	-2.33	.89	-
AS	13.89	5.29	14.47	5.54	-.72	.470	-2.13	.99	-
MAT	17.46	15.43	16.66	7.11	.41	.678	-3.003	4.60	-
PUV	22.36	5.58	22.34	6.16	.01	.985	-1.68	1.71	-
EA	17.06	6.34	18.37	7.15	-1.33	.185	-3.25	.63	-

Note: SI-R=Saving Inventory Revised, , COH= Cohesion, FLEX= Flexibility, DIS= FC= Family Communication, FS= Family Satisfaction, SA= Secure Attachment, AV-A= Avoidant Attachment, ANX-A= Anxious Attachment, DEP=Depression, ANX=Anxiety, OCI-NH = Non-hoarding obsessive compulsive inventory, ED= Emotional Deprivation, MIS= Mistrust, SI= Social Isolation, AS= Admiration Seeking, ISC= Insufficient Self Control, MAT=Materialism, PUV=Perceived Utility Value, EA=Emotional Associations

Table 47 indicates mean differences for nuclear and joint family systems on all study variables. Values show that family satisfaction and hoarding as measured by saving inventory were found to be higher in joint family system. Group differences for other variables were found to be non-significant.

Table 48

Post Hoc Analyses for Mean Differences on study variables across different Age Groups (N = 200)

				95% CI	
Variables	*i-j*	*D(i-j)*	*p*	*LL*	*UL*
COH	1<2	-3.21	.03	-6.18	-.24
	1<3	-1.82	.65	-6.71	3.06
	2>3	1.39	.78	-3.55	6.33
COM	1<2	-4.05	.02	-7.74	-.36
	1<3	-1.13	.89	-7.21	4.95
	2>3	2.92	.50	-3.22	9.06
SAT	1<2	-3.08	.03	-5.92	-3.03
	1>3	.29	.98	-4.39	.29
	2>3	3.37	.21	-1.35	3.37
DEP	1>2	2.22	.006	.54	3.90
	1>3	1.33	.48	-1.42	4.10
	2<3	-.88	.73	-3.67	1.90
ANX	1>2	2.39	.001	.81	3.97
	1>3	1.70	.27	-.91	4.31
	2<3	-.69	.81	-3.33	1.94
OCI-NH	1>2	5.93	.01	1.15	10.71
	1>3	1.54	.88	-6.32	9.41
	2<3	-4.38	.39	-12.34	3.56
ED	1>2	2.99	.002	.93	5.04
	1>3	3.33	.05	-.04	6.71
	2>3	.34	.96	-3.07	3.75
SI	1>2	1.76	.08	-.20	3.73
	1>3	4.20	.007	.95	7.44
	2<3	2.43	.18	-.84	5.71

Note. CI = Confidence Interval, LL = Lower Limit, UL = Upper Limit, S.E. = Standard Error, COH = Cohesion, COM = Communication, SAT = Satisfaction, DEP = Depression, ANX = Anxiety, OCI-NH = Non-hoarding obsessive compulsive inventory, ED = Emotional deprivation, SI = Social isolation

Table 48 shows the results of Post Hoc analysis for mean differences between different age categories. Findings indicate that there were statistically significant differences between young and middle adulthood on family cohesion, family communication, family satisfaction, depression, anxiety, ocd symptom dimensions, and emotional depression but not between young and late and middle and late adulthood. Similarly, for social isolation schema differences were found significant between young and late adulthood and not between young and middle and middle and late adulthood.

Table 49

Post Hoc Analyses for Mean Differences on study variables across different Diagnostic Groups (N = 100)

Variables	*i-j*	*D(i-j)*	*p*	*95% CI*	
				LL	*UL*
SIR	1<2	-2.61	.66	-9.82	4.60
	1<3	-6.41	.04	-12.70	-.11
	2<3	-3.79	.47	-11.54	3.95
COH	1<2	-2.57	.44	-7.62	2.47
	1>3	4.69	.03	.29	9.10
	2>3	7.27	.005	1.85	12.69
AVO	1<2	-.85	.67	-3.24	1.54
	1<3	-2.17	.03	-4.26	-.08
	2<3	-1.32	.44	-3.90	1.24
PUV	1<2	-2.11	.32	-5.60	1.37
	1>3	1.92	.28	-1.06	4.92
	2>3	4.04	.03	.30	7.78

Note: CI = Confidence Interval, LL = Lower Limit, UL = Upper Limit, S.E. = Standard Error, SIR = Saving inventory revised, COH = Cohesion, AVO = Avoidant attachment, PUV = Perceived utility value

Table 49 depicts the findings of Post Hoc test for mean differences across different diagnostic groups. Results indicate that there are significant differences

between anxiety and ocd groups on perceived utility value and not between depression and anxiety and depression and ocd. On saving inventory revised significant differences were found between depression and ocd and not between other two groups. Similarly, on family cohesion significant differences were found between depression and ocd and anxiety and ocd groups while differences were non-significant between depression and anxiety. Also, results indicate significant differences on avoidant attachment between depression and ocd groups whereas the group differences were found to be non-significant between depression and anxiety and anxiety and OCD groups.

Discussion

Main study intended to assess the role of family functioning (cohesion, flexibility, communication, satisfaction) and attachment styles (secure, avoidant, anxious) with hoarding behavior. The study also examined the mediating role of maladaptive cognitive schemas (mistrust, emotional deprivation, social isolation, insufficient self-control, and admiration seeking), psychological distress (depression, anxiety, obsessive compulsive symptoms) and associated factors (materialism, perceived utility value, and emotional associations) in explaining the relationship between family functioning, attachment styles, and hoarding behavior. Exploring the role of demographic variables was also proposed as an objective of the study.

Factor Structure of Saving Inventory Revised (SI-R). As described in previous section, the factor structure of SI-R was recomputed (Table 19) in main study to assess the model fit of modified uni-factor structure. Results of the study

supported the uni-factor structure of saving inventory with the values of RMSEA (.05) and other fit indices (>.90) in acceptable range after allowing few covariances. Incongruities in factor structure of Saving Inventory has been noticed in literature across different regional adaptations pointing to potential cultural deviation in the understanding and expression of the phenomenon (Nordsletten et al., 2018). As suggested by earlier investigations (Frost et al., 2011, Meyer & Frost, 2013) the symptom dimensions of hoarding appear to be less attributable to separate factors and more meaningful as a unified whole in present study. The fundamental reasons for acquiring different possessions could be the same that make them retain these objects and hence could be less distinguishable from each other. This directs the assumption of evaluating the construct as a whole instead of parting it into different separate dimensions of acquiring, difficulty discarding, and clutter.

Predictive role of the study variables for hoarding behavior. To meet the study objective, multiple regression analysis was done in order to examine the impact of different study variables including family functioning domains, attachment styles, maladaptive cognitive schemas, and related psychological conditions on hoarding behavior.

Role of emotional attachment with possessions and perceived utility value in hoarding is well documented. Sentimental and instrumental value of hoarded objects perceived by the individuals are most common reason for hoarding of a number of possessions (Frost & Hartl, 1996). They are a source of emotional comfort and belongingness. In extreme cases, it gets difficult for a person to differentiate between the emotion and the related object (Hartl et al., 2005). In line with the existing research emotional association and perceived utility value of the object significantly

predicted hoarding in present study. Also, in Pakistani cultural context saving is considered a virtue and things with little perceived usefulness are considered important to be saved till fully consumed. Similarly in line with previous research (Richins, 2004) materialism, where belongings are used as a way of self-enhancement, was found to be predictive of hoarding behavior in present study.

Several research studies indicate a positive association between depressed mood and hoarding behavior. It is considered the most associated disorder with hoarding behavior (Frost & Hartl, 1996; Frost et al., 2007; Rios & Johnson 2011). Also hoarding can occur in context of obsessions and compulsions accompanying OCD. Fear of contamination, or something bad will happen, and many other reasons in OCD can lead to acquiring and difficulty discarding of items (Samuels et al., 2008). Findings of the present study also reveal the significant association between depression, obsessive compulsive symptoms and hoarding behavior suggesting the relatedness or comorbidity among the conditions.

Role of maladaptive cognitive schemas in hoarding behavior has been explored in previous researches. Social isolation and mistrust/abuse has been found to be linked to hoarding symptoms (Sameuls et al., 2008). The present study also confirms the role of admiration seeking schema in predicting hoarding behavior. It could be indicative of a cognitive pattern where people acquire and save things to emphasize social status and achievement resulting in hoarding behavior. This finding also goes in accordance with the role of materialism in hoarding of stuff. However, none of the other schemas show predictive role in hoarding in this study.

Further, non-significant results have been found with respect to predictive role of family functioning domains and attachment styles in hoarding behavior though

previous studies in the field suggested significant impact of various aspects of family environment as a protective factor against mental health problems including hoarding disorder. However, results have been inconsistent in reference to role of different attachment styles in hoarding behavior (Cohen & Wills, 1985; Flannery, 1987, Sampson, 2013).

Mediating role of study variables. Mediation analyses were conducted using Process Macro (Hayes, 2013) in order to examine the role of psychological distress (depression, anxiety, and obsessive compulsive symptoms), maladaptive cognitive schemas (mistrust, emotional deprivation, social isolation, insufficient self-control, admiration seeking), and other determinants of hoarding (materialism, perceived utility value, and emotional associations) in relationship between family functioning (cohesion, flexibility, communication, and satisfaction) and attachment styles (secure, avoidant, anxious) and hoarding behavior.

Hoarding has been found linked to higher rates and with a number of psychiatric comorbidities including major depressive disorder (Stekettee, Frost, & Kim, 2001), personality disorders (Mataix-Cols, Pertusa, & Snowdon, 2011), obsessive compulsive disorder (Christensen & Griest, 2001), and dementia (Hwang, Tsai, Yang, Liu, & Lirng, 1998). A study has shown that 57% of hoarding participants met criteria for major depression while 28% full filled the diagnostic criteria for generalized anxiety disorder (Frost et al., 2006). Similarly patients suffering OCD with hoarding subtype show higher rates of depression and anxiety as compared to non-hoarding OCD subtypes (Samuels et al., 2007). Since hoarding has been found so thoroughly interconnected to mental health issues, present study also analyzed the role of psychological distress in hoarding behavior.

Results of the study revealed that all three related conditions that is depression, anxiety, non-hoarding obsessive compulsive symptoms significantly positively mediated relationship between cohesion, flexibility, communication, and satisfaction dimensions of family functioning suggesting that lower levels of positive family functioning leads to higher levels of psychological distress in form of depression, anxiety, and/or obsessions and compulsions which in turn result in higher levels of hoarding behavior. Results were identical when observed in clinical and non-clinical groups separately. These findings are in line with existing literature suggesting psychological distress as a link between vulnerability factors and hoarding behavior (Claes, Muller, & Luyckx, 2016; Sampson, 2013).

Similarly, maladaptive cognitive schemas have shown a significant role in development and exacerbation of different psychopathologies. They are found associated with personality disorders (Sempértegui, Karreman, Arntz, & Bekker, 2013), major depressive disorder (Shorey, Anderson, & Stuart, 2013), anxiety (Hawke & Provencher, 2011) and many other mental health conditions (Rania et al., 2019). Role of cognitive schemas has also been explored in hoarding and emotional deprivation and emotional inhibition schemas have been found associated in the condition (Grisham et al., 2008). Present research also hypothesized to assess the mediating role of cognitive schemas. Results revealed that schemas of emotional deprivation, insufficient self-control, social isolation, and mistrust significantly mediated relationship between family cohesion and family satisfaction suggesting that lower levels of cohesion and satisfaction among family result in development of these maladaptive schemas which then result in hoarding behavior. Similarly emotional deprivation, insufficient self-control, and social isolation significantly mediated the

relationship between family communication and hoarding behavior. Similarly, maladaptive cognitive schemas significantly mediated the relationship between family functioning domains and hoarding behavior among non-clinical group but results have been found to be non-significant for clinical group when the analysis have been done by separating the two groups. This discrepancy in results could be because of small sample size with the later group comprising of further three different diagnostic entities. The results therefore need further research and evaluation.

While investigating the mediating role of indigenous factors associated with hoarding, significant mediation was found by materialism and emotional associations for relationship between family cohesion, flexibility, communication and hoarding. However, perceived utility value does not mediated the relationship between different family functioning domains and hoarding behavior. Also, findings have been non-significant with respect to family satisfaction domain. Findings are suggestive of materialism as an important factor in this realm in cultural context of Pakistan. This could be attributed to mental state of economic uncertainty (Ahuvia & Wong, 2002) that is making people more materialistic and inculcating a sense of achievement and success through excessive acquiring and display of material objects (Ali et al., 2012). Also, materialism proved to be the strongest mediator between different family functioning domains and hoarding behavior notably for cohesion and flexibility dimensions of family functioning in both the clinical and non-clinical groups when analyzed separately.

Likewise, significant mediation has been observed for the role of depressive symptoms and maladaptive cognitive schemas in relationship between avoidant and anxious adult attachment patterns and hoarding behavior. However, results remained

non-significant when observed for secure adult attachment and for all the three attachment patterns between clinical and non-clinical groups when analyzed separately.

Though individual's susceptibility to the emergence of maladaptive behavioral and mental health issues is thought to be significantly influenced by the nature of their attachment relationships (Sampson, 2013) and attachment representations have shown predictive relationships with a variety of pathological behaviors, including substance misuse, personality disorders, mood instability, and psychopathology (Caspers, Yucuis, Troutman, & Spinks, 2006; Dozier, Stovall, & Albus, 1999). Results of the present study does not support these findings. However, it has also been noted that distinct attachment patterns did not significantly differ between the hoarding and non-hoarding groups (Nedelisky & Steele, 2009), which is consistent with the present study's findings. Yet, given the study's small sample size, more investigation and validation of the findings are required.

Moderating role of demographic variables. Moderating role of different demographic variables was investigated in relationship between family functioning domains, attachment styles and hoarding behavior. Results revealed that only marital status significantly moderated relationship between family cohesion and hoarding behavior while education moderated the relationship between family flexibility and hoarding behavior. Results are supported by the previous research indicating lower levels of education (Landau et al., 2011) and most of the hoarding patients to be unmarried (Kim et al., 2001) and with more severe levels of hoarding (Tolin et al., 2008).

Mean differences on demographic variables. Mean differences across gender, age, family system, clinical and non-clinical group on study variables were also explored. Findings indicate that positive family dimensions (cohesion and satisfaction) were more of the characteristic of non-clinical and non-hoarding groups while materialism, emotional association, psychological distress and maladaptive cognitive schemas were significantly higher in clinical and hoarding groups and between un-married people. The results are in line with previous researches showing higher levels of hoarding among un-married people (Tolin et al., 2003), increased levels of comorbidity between Axis I and Axis II psychopathology (Wheaton & Mecer, 2014), and role of cognitive schemas in depression and anxiety (Camara & Calvete, 2012).

Similarly, results of the present study suggested higher levels of psychological distress in young adulthood whereas family cohesion, family communication, and family satisfaction were found to be higher in middle adulthood. Previous research also show a substantial inverse relationship between age and psychological distress (Laatsch & Shahani, 1996) and an increased importance of family relationships with passing age (Milkie, Bierman, & Schieman, 2008). Also, the findings of the present study are suggestive that patients suffering OCD show higher levels of hoarding and avoidant attachment as compare to patients suffering depression and anxiety. Previous investigations also validate that avoidant and ambivalent attachment styles make people more susceptible to various psychopathologies including ocd and anxiety (Lenzenweger & Clarkin, 2005; Kobak, Cassidy, Lyons-Ruth, & Ziv, 2006). While current investigation also show higher levels of perceived utility concerns for objects among patients suffering anxiety. This could be due to the reason that excessive worry

is the essential feature of anxiety and people suffering anxiety face persistent stimulation in brain areas that are related to mental activity and reflective thinking (Paulesu et al., 2010).

Conclusion

Present study revealed impact of family functioning and adult attachment styles on hoarding behavior both directly and through the psychological distress and maladaptive cognitive schemas. Moreover, along with emotional associations and perceived utility value, materialism proved to be a strong correlate of hoarding behavior raising an assumption that the economic uncertainty and status consciousness could be resulting in an increased buying and saving behavior.

Salient Contributions of the Present Research

Chapter VII

Salient Contributions of the Present Research

The present study intended to examine the phenomenon of hoarding in cultural context of Pakistan. For the purpose, a mix-method approach was utilized and the construct was explored qualitatively before assessing the variables of interest quantitatively. Results suggested considerable similarities with the existing literature along with some context specific findings discussed further.

First, it explored the phenomenon using grounded method design revealing four underlying aspects (cognitive, affective, personality, and socio-cultural) of the behavior. This qualitative exploration lead to the development of an indigenous scale labelling hoarding related factors (materialism, emotional associations, and perceived utility value) in cultural context of Pakistan. Second, the study involved the translation process for adaptation of instruments not available in local language for their convenient use in target population. It also assessed the psychometric properties of different instruments selected to examine the variables of interest. Finally, it tested the set hypothesis for the relationship between different study variables and discussed them in light of similarities and differences with existing scientific literature.

Hoarding behavior has got considerable attention in last few decades and an exponential increase in research on the condition has been seen in recent years. However these studies have primarily came from Western world. There has been scarcity of literature on the topic concerning its presentation across different ethnic groups and cultural contexts. Few reports available from different Asian countries point towards the methodological and phenomenological differences across regional backgrounds indicating a need to further exploration of the phenomenon (de la Cruz

et al., 2016). Therefore present study intended to explore the hoarding behavior and its correlates in cultural context of Pakistan where it is understudied with even once most associated conditions like OCD. For the purpose phenomenon was analyzed qualitatively first in order to get basic understanding regarding its existence and presentation in present cultural context.

Grounded theory that constitutes systematic method with considerable flexibility for collection and analysis of qualitative data and help to generate the concepts grounded in data (Charmaz, 2006) was utilized to analyze the data collected through focus group discussions with adults from general population. Results of this qualitative inquiry revealed that there have been several aspects of hoarding behavior that are common like emotional attachment with objects, ascribing with them an inflated sense of instrumental value, sense of responsibility towards their appropriate use, realizing their potential for future use, and avoiding them go wasted along with certain personality characteristics, making saving and difficulty discarding of items a universal phenomenon (Frost & Steketee, 2014). Also it has shown to be influenced by present cultural dynamics like rapid industrialization, economic uncertainty and efforts for status transition to gain a better social standing, materialistic life style, and glamorous portrayal of stuff and its accomplishment by media. As people spent lot of time and efforts for attainment of such material possessions, they somehow become part of their identity and provide them with sense of who they are, making discarding a difficult endeavor and resulting in steady accumulation of material objects. Similarly, material deprivation is found to be an equally important factor resulting in compensatory saving of things though literature is not clear regarding this association. However, a general perception regarding excessive accumulation of material

possessions is considered lack of faith in God and undermining of Islamic lifestyle as a result of modernization. And is not much appreciated yet largely prevalent. Also gender role attitudes appeared to play an essential part in prevalence of behavior.

Parallel to this, themes were also generated on the basis of data collected through semi-structured interviews from psychiatrists and psychologist to get better understanding of the condition in context of clinical settings of Pakistan. Results supported the literature for existence of hoarding as an associated symptom and as a comorbid condition in many psychopathologies (Sorensen, 2011). However, lack of awareness among people and dearth of clinical investigation by health professionals makes the condition under-recognized as a distinct disorder. Prevalence is therefore challenging to estimate. Qualitative exploration of the condition thus indicated that hoarding does exist in cultural context of Pakistan but might show some socio-cultural diversity in expression and understanding of condition with reference to its phenomenology.

To assess the cultural influence on understanding of hoarding and to quantify the findings from qualitative data, a scale (Determinants of Hoarding Scale) was constructed measuring factors associated with hoarding in present cultural context. Structural analysis of data revealed three main factors namely materialism, emotional associations, and perceived utility value. Among these factors role of emotional associations (Grisham et al., 2009) and perceived utility value (Frost & Steketee, 2010) is well defined in existing literature. Though role of materialism in hoarding behavior is not well established in available literature. While this study provides evidence for association of materialism in hoarding as an important factor. However, evidence for the relationship also comes from the study by Muller et al., 2011

indicating a positive relationship between materialistic value endorsement and compulsive buying. Also, as posed by self-completion theory, people use to make sense of their perceived shortcomings by acquiring and using material symbols as compensation strategies (Dittmar & Drury, 2000).

Similarly, adaptation of Saving Inventory Revised, a gold standard instrument for measuring hoarding, revealed certain differences in present cultural context. A uni-dimensional model appeared to be more comprehensive in present setting indicating that in Pakistan acquiring, difficulty discarding, and clutter are not perceived distinctly. Rather saving and difficulty discarding are perceived as one thing where by acquiring and avoiding discarding serve the same purpose. Also, we assume that in present cultural context having a large amount of stuff might not be considered clutter however associated distress and impairment as a result of lack of or over occupied space might be the problem. Because like China (Wang et al., 2016) saving of things with minimal utility value is a norm and culturally acceptable behavior. However, these results need further exploration.

The present study also contribute towards the extant literature by studying impact of family environment on hoarding behavior along with other contributing factors. Results revealed significant buffering effect of different positive family functioning domains against associated conditions like depression, anxiety, and ocd along with hoarding behavior. Furthermore, present research elucidates the impact of adult attachment styles in hoarding behavior and suggests the mediating role of depression in relationship between insecure attachment (avoidant and anxious) and hoarding behavior. Role of maladaptive cognitive schemas as a mediator between insecure attachment styles and hoarding has also shown to be significant. Though

results have been insignificant for their mediating role between secure attachment and hoarding behavior. Previous research (Sampson, 2013) also support these results. Studies indicate a positive relationship between insecure (Danet & Secouet, 2018) and anxious (Crone, Kwok, Chau, & Norberg, 2019) attachment and hoarding behavior. The differences in findings of the present study point to the assumption that vulnerability and protective factors can be influenced by characteristics of a particular culture (Dragons & Matsumi, 2003). Also, the results direct the attention towards adaptation and differential understanding of the constructs under study while applying western based instruments in Asian samples.

Implications of the Present Study

The present research has potential implications of both theoretical and practical nature. On theoretical ground the current study contributes to;

- The understanding of contextual and personal factors like family functioning, attachment styles, and maladaptive cognitive schemas. Given the findings of the study that family dynamics significantly influence hoarding behavior it is assumed helpful to consider this important factor while doing further research and practice on the behavior.
- The study also contributes to the theory by offering possible societal and health inequalities as likely explanation of the phenomenon. Socio-environmental and cultural factors need to be considered integral and intersecting conditions for understanding of the problem along with other contributing factors.

- Also, the present study adds to the indigenous literature by developing a scale on the factors that were found associated with hoarding in cultural context of Pakistan.
- Further, the adaptation of standard instruments like Saving Inventory, Hoarding Rating Scale, and Family Adaptability and Cohesion Evaluation Scale in Urdu language will facilitate clinicians and researchers in assessment of hoarding behavior and to study the impact of different family dimensions in other areas of interest as well.

On practical grounds, the present study has implication on therapeutic basis as;

- To date primary treatment approaches for hoarding are based on cognitive behavioral therapies, the present study suggest supplementing the individual based treatment methods with contextual factors that appear to predict hoarding behavior.
- Moreover, as suggested by the findings of present study, the buffering effect of family functioning against psychological distress and hoarding behavior is an essential practice inference that the present study offers. The family members and their support and a positive family environment can be beneficial and crucial to facilitate the treatment process. Prospective studies should be taken to identify the effectiveness of integrating family therapy with other treatment options for hoarding behavior.
- Similarly, the present study also supports the consideration of contextual factors to inform policy making for prevention of such psychological issues to arise as hoarding poses substantial economic burden and is reflected to be a

community health problem in many other regions of the world. As the study highlights that psychological distress is associated with hoarding, public policies aimed to reduce economic uncertainty and better mental health provisions should be introduced to minimize the mental suffering faced by public in their daily routines and consequently to reduce the chances of psychopathology.

- Professionals need to be equipped with thorough and time efficient tools to identify under reported mental health concerns like hoarding and campaigns on local and national level need to be geared to create awareness among general public for early identification and remedy of public health concerns like hoarding that can prove to be disastrous if not addressed timely and efficiently.

Limitations and Suggestions

While assessing the generalizability and usefulness of the present research, certain limitations need to be considered.

- First and foremost, the study was conducted for most part on general public and not on people suffering from hoarding disorder. Even the sample that was taken from clinical population comprised of related disorders and not specifically of people diagnosed with hoarding disorder. It is therefore suggested to run future studies specifically on people with hoarding disorder diagnosis in order to reveal the accurate representation of the behavior within the context of clinical nature of the problem.

- Secondly, the instruments used were mostly self-report measures that can be limited in scope because of nature of problem. As people could differ on their perception on what is considered clutter with some having intolerance for few extra things in the room while some can tolerate an amount of stuff and disorganization around them. Therefore, it could have been more beneficial to have home visits and/or use of some instrument like Clutter Image Rating Scale to get a clear picture of the hoarded stuff and the resultant clutter. Considering the use of such criteria could be more beneficial for future studies in discriminating the true state of the hoarding behavior with in the present cultural context where people can have comparatively larger spaces and different tolerance levels because of cultural norms.
- Also, the present study is cross-sectional in nature whereas a longitudinal design could prove to be more beneficial to understand course of hoarding disorder. Specially to identify the cases where psychological distress was led by hoarding tendencies and vice versa. Future studies could benefit by employing longitudinal design to better comprehend the intricacies of the behavior.
- Similarly, for present study data was taken from few cities only and a more diverse, stratified and country wide sample could help explain the differences with respect to several demographic and ethnic features.
- Moreover, the study only explored the existence and nature of the problem and didn't provide any further guidance on behavior focused and/or culture specific management plan. Consequently, studies of therapeutic nature with

focused and cost effective management strategies are required for early intervention and prevention of this growing concern.

Conclusion

To conclude, present study provides preliminary exploratory evidence regarding existence and phenomenology of hoarding in cultural context of Pakistan. It reveals certain cultural influences on expression of hoarding in present context including significant role of materialism in acquiring and saving behaviors. At the same time it confirms the role of emotional associations, buffering effect of positive family dimensions, and impact of associated comorbid conditions on hoarding as universal factors in presentation of hoarding as described in existing literature. However, results of the present study needs to be interpreted carefully and direct further confirmation through research using different methods and on more diverse samples.

REFERENCES

Reference

Abela, J. R. Z., Sarin, S., Ngo, S., Lakdawalla, Z., & Murad, Z. (2009). Beck's cognitive theory of depression: An examination of the schematic content in the life stories of university students. *Cognitive Therapy and Research*, *33*, 50-58.

Ahuvia, A. C., & Wong, N. Y. (2002). Personality and values based materialism: Their relationship and origins. *Journal of consumer psychology*, *12*(4), 389-402.

Ali, S. A., Ramzan, M., Razi, A., Khan, H., & Fatima, I. (2012). Materialistic thoughts among people. *Global Journal of Management and Business Research,* 12(8).

Alonso, P., Menchón, J. M., Mataix-Cols, D., Pifarré, J., Urretavizcaya, M., Crespo, J. M., ...Vallejo, J. (2004). Perceived parental rearing style in obsessive–compulsive disorder: relation to symptom dimensions. *Psychiatry research*, *127*(3), 267-278.

Ambuehl, B., Inauen, J. (2022). Contextualized Measurement Scale Adaptation: A 4-step tutorial for health psychology research. *Int. J. Environ. Res. Public Health 19*, 12775. https://doi.org/10.3390/ ijerph191912775

American Psychiatric Association. (2013). Diagnostic and Statistical Manual of Mental Disorders. In (5th ed.). Washington, DC.

An, S. K., Mataix-Cols, D., Lawrence, N. S., Wooderson, S., Giampietro, V., Speckens, A., ... & Phillips, M. L. (2009). To discard or not to discard: the

neural basis of hoarding symptoms in obsessive-compulsive disorder. *Molecular psychiatry*, *14*(3), 318-331.

Anderson, S. W., Damasio, H., & Damasio, A. R. (2005). A neural basis for collecting behaviour in humans. *Brain*, *128*(1), 201-212.

Andrews, D. W. K. (2005). “Cross-Section Regression with Common Shocks”. *Econometrica*, 73 (5): 1551. doi:10.1111/j.1468-0262.2005.00629.x

Archer, C. A., Moran, K., Garza, K., Zakrzewski, J. J., Martin, A., Chou, C. Y., ... & Mathews, C. A. (2019). Relationship between symptom severity, psychiatric comorbidity, social/occupational impairment, and suicidality in hoarding disorder. *Journal of Obsessive-Compulsive and Related Disorders*, *21*, 158-164.

Aslam, N. (2007). *Psychological disorders and resilience among earthquake affected individuals* (Unpublished MPhil Dissertation). National Institute of Psychology, QAU, Islamabad, Pakistan.

Ayers, C. R., Castriotta, N., Dozier, M. E., Espejo, E. P., & Porter, B. (2014). Behavioral and experiential avoidance in patients with hoarding disorder. *Journal of Behavior Therapy and Experimental Psychiatry*, *45*(3), 408-414.

Ayers, C. R., Saxena, S., Golshan, S., & Wetherell, J. L. (2010). Age at onset and clinical features of late life compulsive hoarding. *International Journal of Geriatric Psychiatry: A journal of the psychiatry of late life and allied sciences*, *25*(2), 142-149.

Bahremand, M., Rai, A., Alikhani, M., Mohammadi, S., Shahebrahimi, K., & Janjani, P. (2015). Relationship between family functioning and mental health

considering the mediating role of resiliency in type 2 diabetes mellitus patients. *Glob. J. Health Sci., 7*, 254–259.

Beck, A. T. (1976). *Cognitive therapy and the emotional disorders.* New York: Meridian.

Beck, A. T., Emery, G., & Greenberg, R. L. (1985). *Anxiety disorders and phobias: A cognitive perspective.* New York: Basic Books.

Beck, J. S. (1995). *Cognitive Therapy: Basics and beyond.* New York: The Guilford Press.

Behere, P. B., Das, A., Yadav, R., & Behere, A. P. (2013). Religion and mental health. *Indian journal of psychiatry*, *55*(6), 187.

Bifulco, A., Moran, P. M., Ball, C., & Lillie, A. (2002). Adult attachment style. II: Its relationship to psychosocial depressive-vulnerability. *Social Psychiatry and Psychiatric Epidemiology*, *37*(2), 60-67.

Bindra, D. (1948). What makes rats hoard? *Journal of Comparative and Physiological Psychology, 41*(6), 397-402. doi:10.1037/h0054521

Blaszczyk, R. L. (2009). *American Consumer Society, 1865-2005: From Hearth to HDTV*. Wheeling (IL): Harlan Davidson, Inc.

Blom, R. M., Samuels, J. F., Grados, M. A., Chen, Y., Bienvenu, O. J., Riddle, M. A., ... & Nestadt, G. (2011). Cognitive functioning in compulsive hoarding. *Journal of anxiety disorders*, *25*(8), 1139-1144.

Bolman, William M. and Alan S. Katz. 1966. “Hamburger Hoarding: A Case of Symbolic Cannibalism Resembling Whitico Psychosis.” *The Journal of Nervous and Mental Disease* 142: 424-428.

Bowlby J. (1980). Attachment and Loss. II. New York: Basic; Separation.

Bratiotis, C., Muroff, J., & Lin, N. X. (2021). Hoarding disorder: Development in conceptualization, intervention, and evaluation. *Focus*, *19*(4), 392-404.

Bronner, S. J. (1989). *"Reading Consumer Culture," in Consuming Visions*. Simon J. Bronner, ed. New York (NY): W.W. Norton & Company. Pgs. 13-53.

Brotchie, J., Meyer, C., Copello, A., Kidney, R., & Waller, G. (2004). Cognitive representations in alcohol and opiate abuse: The role of core beliefs. *British Journal of Clinical Psychology*, *43*(3), 337-342.

Bulli, F., Melli, G., Carraresi, C., Stopani, E., Pertusa, A., & Frost, R. O. (2014). Hoarding behaviour in an Italian non-clinical sample. *Behavioural and cognitive psychotherapy*, *42*(3), 297.

Büscher, T. P., Dyson, J., & Cowdell, F. (2013). The effects of hoarding disorder on families: an integrative review. *Journal of psychiatric and mental health nursing*, *21*(6), 491-498.

Camara, M., & Calvete, E. (2012). P-122-Cognitive schemas predicting anxiety and depressive symptoms: the role of dysfunctional coping strategies. *European Psychiatry*, *27*(S1), 1-1.

Campbell, J. L., Quincy, C., Osserman, J., & Pedersen, O. K. (2013). Coding in-depth semistructured interviews: Problems of unitization and intercoder reliability and agreement. *Sociological methods & research*, *42*(3), 294-320.

Caspers, K. M., Yucuis, R., Troutman, B., & Spinks, R. (2006). Attachment as an organizer of behavior: Implications for substance abuse problems and willingness to seek treatment. Substance Abuse Treatment, Prevention, and Policy, 1(32), 32- 42.

Cassidy, J. (2008). *The nature of the child's ties.*

Charmaz, K. (2005). Grounded theory: Methods for the 21st century. *Handbook of Qualitative Research. Third Edition. London, Sage*.

Charmaz, K. (2006). Constructing grounded theory: A practical guide through qualitative research. *Sage Publications Ltd, London*.

Chou, C. Y., Mackin, R. S., Delucchi, K. L., & Mathews, C. A. (2018). Detail-oriented visual processing style: its role in the relationships between early life adversity and hoarding-related dysfunctions. *Psychiatry Res., 267*, 30–6. doi: 10.1016/j.psychres.2018.05.053

Christensen, D. D., & Greist, J. H. (2001). The challenge of obsessive-compulsive disorder hoarding. *Primary Psychiatry*, *8*(2), 79-79.

Claes, L., Müller, A., & Luyckx, K. (2016). Compulsive buying and hoarding as identity substitutes: The role of materialistic value endorsement and depression. *Comprehensive Psychiatry*, *68*, 65-71.

Cohen, S., & Wills, T. A. (1985). Stress, social support and the buffering hypothesis. Psychological Bulletin, 98 (2), 310-357. doi:10.1037/0033-2909.98.2.310

Costa-Ball, C., & Cracco, C. (2021). Psychometric properties of the Family Satisfaction Scale to Uruguayan families. *Annals of Psychology, 37*, 161-167.

Creswell, J.W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.): Sage Publications, Inc.

Cromer, K. R., Schmidt, N. B., & Murphy, D. L. (2007). Do traumatic events influence the clinical expression of compulsive hoarding?. *Behaviour research and therapy*, *45*(11), 2581-2592.

Crone, C., Kwok, C., Chau, V., & Norberg, M. M. (2019). Applying attachment theory to indecisiveness in hoarding disorder. *Psychiatry research*, *273*, 318-324.

Danet, M., & Secouet, D. (2018). Insecure attachment as a factor in hoarding behaviors in a non-clinical sample of women. *Psychiatry research*, *270*, 286-292.

Dittmar H, Drury J. Self-image – is it in the bag? A qualitative comparison between "ordinary" and "excessive" consumers. J Econ Psychol 2000; 21:109-42. doi: 10.2174/1573400512666160316004521

Dozier, M., Stovall, K. C., & Albus, K. E. (1999). Attachment and psychopathology in adulthood. In J. Cassidy, P. Shaver [Eds.], Handbook of attachment (pp.63-86). Hove: Brunner-Routledge.

Draguns, J. G. (1997). Abnormal behavior patterns across cultures: Implications for counseling and psychotherapy. *International Journal of Intercultural Relations*, *21*(2), 213-248.

Draguns, J. G., & Tanaka-Matsumi, J. (2003). Assessment of psychopathology across and within cultures: issues and findings. *Behaviour research and therapy*, *41*(7), 755-776.

Drury, H., Ajmi, S., de la Cruz, L. F., Nordsletten, A. E., & Mataix-Cols, D. (2014). Caregiver burden, family accommodation, health, and well-being in relatives of individuals with hoarding disorder. *Journal of affective disorders*, *159*, 7-14.

Eckfield, M. B. (2012). *The influence of aging on the process of accumulation: A qualitative study of older adults with hoarding and cluttering behaviors.* (73), ProQuest Information & Learning.

Eisler, R. M., & Hersen, M. (Eds.). (2000). *Handbook of gender, culture and health*. Mahwah, NJ: Lawrence Erlbaum Associates.

Faraci, P., Perdighe, C., Del Monte, C., & Saliani, A. M. (2019). Hoarding rating scale-interview: reliability and construct validity in a nonclinical sample. *Int J Psychol Psychol Ther., 19*(3), 345–52.

Fernández de la Cruz., Nordsletten, A. E., & Mataix-Cols, D. (2016). Ethnocultural aspects of Hoarding Disorder. *Current Psychiatry Reviews*, *12(2)*, 115-123.

Fitch, K. E., & Cougle, J. R. (2013). Perceived and actual information processing deficits in nonclinical hoarding. *Journal of Obsessive-Compulsive and Related Disorders*, *2*(2), 192-199.

Flannery, R. B. (1987). Towards stress-resistant persons: A stress management approach to the treatment of anxiety. American Journal of Preventative Medicine, 3, 25-30.

Fromm, E. (1947). *Man for himself: An inquiry into the psychology of ethics*. Holt.

Frost, R. O., & Gross, R. C. (1993). The hoarding of possessions. *Behaviour research and therapy*, *31*(4), 367-381.

Frost, R. O., & Hartl, T. L. (1996). A cognitive-behavioral model of compulsive hoarding. *Behaviour research and therapy*, *34*(4), 341-350.

Frost, R. O., & Steketee, G. (1997). Perfectionism in obsessive-compulsive disorder patients. *Behaviour research and therapy*, *35*(4), 291-296.

Frost, R. O., & Steketee, G. (1998). Hoarding: Clinical aspects and treatment strategies. *Obsessive compulsive disorders: Practical management*, 533-554.

Frost, R. O., & Steketee, G. (2007). Compulsive hoarding. In *Obsessive-Compulsive Disorder* (pp. 76-93). Elsevier Science Ltd.

Frost, R. O., & Steketee, G. (Eds.). (2014). *The Oxford handbook of hoarding and acquiring*. Oxford University Press (UK).

Frost, R. O., Hartl, T. L., Christian, R., & Williams, N. (1995). The value of possessions in compulsive hoarding: Patterns of use and attachment. *Behaviour research and therapy*, *33*(8), 897-902.

Frost, R. O., Hristova, V., Steketee, G., & Tolin, D. F. (2013). Activities of daily living scale in hoarding disorder. *Journal of obsessive-compulsive and related disorders*, *2*(2), 85-90.

Frost, R. O., Kim, H. J., Morris, C., Bloss, C., Murray-Close, M., & Steketee, G. (1998). Hoarding, compulsive buying and reasons for saving. *Behaviour Research and Therapy*, *36*(7-8), 657-664.

Frost, R. O., Krause, M. S., & Steketee, G. (1996). Hoarding and obsessive-compulsive symptoms. *Behavior Modification, 20*(1), 116-132. doi:10.1177/01454455960201006

Frost, R. O., Ong, C., Steketee, G., & Tolin, D. F. (2016). Behavioral and emotional consequences of thought listing versus cognitive restructuring during discarding decisions in hoarding disorder. *Behaviour Research and Therapy*, *85*, 13-22.

Frost, R. O., Pekareva-Kochergina, A., & Maxner, S. (2011). The effectiveness of a biblio-based support group for hoarding disorder. *Behaviour Research and Therapy*, *49*(10), 628-634.

Frost, R. O., Steketee, G., & Grisham, J. (2004). Measurement of compulsive hoarding: saving inventory-revised. *Behaviour research and therapy*, *42*(10), 1163-1182.

Frost, R. O., Steketee, G., & Tolin, D. F. (2011). Comorbidity in hoarding disorder. *Depression and anxiety*, *28*(10), 876-884.

Frost, R. O., Steketee, G., & Tolin, D. F. (2012). Diagnosis and assessment of hoarding disorder. *Annual review of clinical psychology*, *8*, 219-242.

Frost, R. O., Steketee, G., Tolin, D. F., & Renaud, S. (2008). Development and validation of the clutter image rating. *Journal of Psychopathology and Behavioral Assessment*, *30*, 193-203.

Frost, R. O., Steketee, G., Williams, L. F., & Warren, R. (2000). Mood, personality disorder symptoms and disability in obsessive people who compulsively hoard: A comparison with clinical and nonclinical controls. *Behaviour Research and Therapy, 38*(11), 1071-1081. doi:10.1016/S0005-7967(99)00137-0

Frost, R.O., & Steketee, G. (2010). *Stuff: Compulsive hoarding and the meaning of things*. New York, NY: Houghton Mifflin Harcourt.

Fullana, M. A., Vilagut, G., Mataix-Cols, D., Adroher, N. D., Bruffaerts, R., Bunting, B., ... & Alonso, J. (2013). Is ADHD in childhood associated with lifetime hoarding symptoms? An epidemiological study. *Depression and Anxiety*, *30*(8), 741-748.

Gilliam, C. M., & Tolin, D. F. (2010). Compulsive hoarding. *Bulletin of the Menninger Clinic, 74*(2), 93-121. doi:10.1521/bumc.2010.74.2.93

Gjersing, L., Caplehorn, J. R., & Clausen, T. (2010). Cross-cultural adaptation of research instruments: Language, setting, time and statistical considerations. *BMC Med Res Methodol, 10*, 13.

Gladding, S. T. (2011). *Family therapy: History, theory and practice* (5th ed.). Upper Saddle River, New Jersey: Pearson Education.

Gordon, O. M., Salkovskis, P. M., & Oldfield, V. B. (2013). Beliefs and experiences in hoarding. *Journal of Anxiety Disorders*, *27*(3), 328-339.

Grisham, J. R., & Baldwin, P. A. (2015). Neuropsychological and neurophysiological insights into hoarding disorder. *Neuropsychiatric disease and treatment*, *11*, 951.

Grisham, J. R., & Barlow, D. H. (2005). Compulsive hoarding: Current research and theory. *Journal of Psychopathology and Behavioral Assessment*, *27*(1), 45-52.

Grisham, J. R., Frost, R. O., Steketee, G., Kim, H. J., & Hood, S. (2006). Age of onset of compulsive hoarding. *Journal of anxiety disorders*, *20*(5), 675-686.

Grisham, J. R., Frost, R. O., Steketee, G., Kim, H., Tarkoff, A., & Hood, S. (2009). Formation of attachment to possessions in compulsive hoarding. *Journal of Anxiety Disorders, 23*(3), 357-361. doi:10.1016/j.janxdis.2008.12.006

Grisham, J. R., Norberg, M. M., Williams, A. D., Certoma, S. P., & Kadib, R. (2010). Categorization and cognitive deficits in compulsive hoarding. *Behaviour Research and Therapy, 48*(9), 866-872. doi:10.1016/j.brat.2010.05.011

Grisham, J. R., Steketee, G., & Frost, R. O. (2008). Interpersonal problems and emotional intelligence in compulsive hoarding. *Depression and Anxiety, 25*(9), E63-E71. doi:10.1002/da.20327

Hall, B. J., Tolin, D. F., Frost, R. O., & Steketee, G. (2013). An exploration of comorbid symptoms and clinical correlates of clinically significant hoarding symptoms. *Depression and Anxiety*, *30*(1), 67-76.

Hamilton, E., & Carr, A. (2016). Systematic review of self-report family assessment measures. *Family Process*, *55*(1), 16-30.

Hartl, T. L., Duffany, S. R., Allen, G. J., Steketee, G., & Frost, R. O. (2005). Relationships among compulsive hoarding, trauma, and attention-deficit/hyperactivity disorder. *Behavior Research and Therapy, 43*(2), 269-276. doi:10.1016/j.brat.2004.02.002

Hartl, T. L., Frost, R. O., Allen, G. J., Deckersbach, T., Steketee, G., Duffany, S. R., & Savage, C. R. (2004). Actual and perceived memory deficits in individuals with compulsive hoarding. *Depression and Anxiety, 20*(2), 59-69. doi:10.1002/da.20010

Hawke, L. D., & Provencher, M. D. (2011). Schema theory and schema therapy in mood and anxiety disorders: A review. *Journal of Cognitive Psychotherapy, 25*(4), 257–276. https://doi.org/10.1891/0889-8391.25.4.257

Hruschka, D. J., Schwartz, D., St. John, D. C., Picone-Decaro, E., Jenkins, R. A., & Carey, J. W. (2004). Reliability in coding open-ended data: Lessons learned from HIV behavioral research. *Field methods*, *16*(3), 307-331.

Hunt, J. (1941). The effects of infant feeding-frustration upon adult hoarding in the albino rat. *The Journal of Abnormal and Social Psychology*, *36*(3), 338.

Hwang, J., Tsai, S., Yang, C., Liu, K., & Lirng, J. (1998). Hoarding behavior in dementia: A preliminary report. *The American Journal of Geriatric Psychiatry, 6*(4), 285-289.

Iervolino, A. C., Perroud, N., Fullana, M. A., Guipponi, M., Cherkas, L., Collier, D. A., & Mataix-Cols, D. (2009). Prevalence and heritability of compulsive hoarding: A twin study. *The American Journal of Psychiatry, 166*(10), 1156-1161. doi:10.1176/appi.ajp.2009.08121789

James, W. (1913). *The principles of psychology*: New York : Henry Holt and Co., 1913, c1890.; New York : Henry Holt and Co., 1913, c1890.

Jokhio, I., Robinson, I., Phulpoto, N. H., Mirani, S. H., Soomro, Z., Memon, S. A., & Butto, Z. (2019). The Historical, Geographical and Cultural Context of Pakistan and Its Impact on Organisations and Human Resource Practice. *International Journal of Computer Science and Network Security*, *19*(9), 202-209.

Jovev, M., & Jackson, H. J. (2004). Early maladaptive schemas in personality disordered individuals. *Journal of personality disorders*, *18*(5), 467-478.

Khilji, S. E. (2001). Management in Pakistan. *Human Resource Management in Developing Countries*, 102–120.

Kim, H. J., Steketee, G., & Frost, R. O. (2001). Hoarding by elderly people. *Health & Social Work*, *26*(3), 176-184.

Kobak, R., Cassidy, J., Lyons-Ruth, K., & Ziv, Y. (2006). Attachment and developmental psychopathology. *Developmental psychopathology*, *2*, 333-369.

Kouneski, E. (2002). *Circumplex model and FACES: Review of literature*. Twin Cities, MN: University of Minnesota.

Laatsch, L., & Shahani, B. T. (1996). The relationship between age, gender and psychological distress in rehabilitation inpatients. *Disability and rehabilitation*, *18*(12), 604–608. https://doi.org/10.3109/09638289609166321

Lahera, G., Saiz González, D., Martín-Ballesteros, E., Pérez-Rodríguez, M. M., & Baca-García, E. (2006). Differential diagnosis of hoarding behaviors. *Actas Espanolas de Psiquiatria, 34*(6), 403-407.

Landau, D., Iervolino, A. C., Pertusa, A., Santo, S., Singh, S., & Mataix-Cols, D. (2011). Stressful life events and material deprivation in hoarding disorder. *Journal of anxiety disorders*, *25*(2), 192-202.

Lenzenweger, M. F., & Clarkin, J. F. (Eds.). (2005). *Major theories of personality disorder*. Guilford Press.

Leung, N., Waller, G., & Thomas, G. (1999). Core beliefs in anorexic and bulimic women. *The Journal of nervous and mental disease*, *187*(12), 736-741.

López-Solà, C., Fontenelle, L. F., Alonso, P., Cuadras, D., Foley, D. L., Pantelis, C., ... & Harrison, B. J. (2014). Prevalence and heritability of obsessive-compulsive spectrum and anxiety disorder symptoms: A survey of the Australian Twin Registry. *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics*, *165*(4), 314-325.

Lund, C., Breen, A., Flisher, A. J., Kakuma, R., Corrigall, J., Joska, J. A , et al. (2010). Poverty and common mental disorders in low and middle income countries: A systematic review. *Soc Sci Med.* 71:517–28. doi: 10.1016/j.socscimed.2010.04.027

Maddux, J. E., Gosselin, J. T., & Winstead, B. A. (2005). Conceptions of psychopathology: A social constructionist perspective. In J. E. Maddux & B. A. Winstead (Eds.), *Psychopathology: Foundations for a contemporary understanding* (pp.3-18). Mahwah, NJ: Lawrence Erlbaum Associates.

Mataix-Cols, D., & de la Cruz, L. F. (2018). Hoarding disorder has finally arrived, but many challenges lie ahead. *World Psychiatry*, *17*(2), 224.

Mataix-Cols, D., Frost, R. O., Pertusa, A., Clark, L. A., Saxena, S., Leckman, J. F., . . . Wilhelm, S. (2010). Hoarding disorder: A new diagnosis for DSM-V? *Depression and Anxiety, 27*(6), 556-572. doi:10.1002/da.20693

Mataix-Cols, D., Pertusa, A., & Snowdon, J. (2011). Neuropsychological and neural correlates of hoarding: A practice-friendly review. *Journal of clinical psychology*, *67*(5), 467-476.

Mathews, C. (2020). *Recognizing and Treating Hoarding Disorder: How Much Is Too Much?*. WW Norton & Company.

McKinnon, G., Smith, M. E., & Hunt, H. K. (1985). Hoarding behavior among consumers: Conceptualization and marketing implications. *Journal of the Academy of Marketing Science*, *13*(2), 340-351.

Medard, E., & Kellett, S. (2014). The role of adult attachment and social support in hoarding disorder. *Behavioural and cognitive psychotherapy*, *42*(5), 629-633.

Meneses, J., Barrios, M., Bonillo, A., Cosculluela, A., Lozano, L. M., Turbany, J., & Valero, S. (2014). *Psicometría*. Barcelona: Editorial UOC.

Meyer, J. F., Frost, R. O., Brown, T. A., Steketee, G., & Tolin, D. F. (2013). A multitrait-multimethod matrix investigation of hoarding. *Journal of obsessive-compulsive and related disorders*, *2*(3), 273-280.

Mills, H. L. (2013). The role of trauma in hoarding: a project investigating the role of trauma in the expression of hoarding disease as well as features associated with hoarding. Unpublished Dissertation.

Mohammadzadeh, A. (2009). Validation of Saving Inventory-Revised (SI-R): compulsive hoarding measure. *Iranian Journal of Psychiatry and Clinical Psychology*, *15*(1), 33-41.

Moleiro, C. (2018). Culture and psychopathology: New perspectives on research, practice, and clinical training in a globalized world. *Frontiers in psychiatry*, *9*, 366.

Mueller, A., Mitchell, J. E., Crosby, R. D., Glaesmer, H., & de Zwaan, M. (2009). The prevalence of compulsive hoarding and its association with compulsive buying in a German population-based sample. *Behaviour Research and Therapy*, *47*(8), 705-709.

Müller A, Mitchell JE, Peterson LA, Faber RJ, Steffen KJ, Crosby RD, Claes L. Depression, materialism, and excessive internet use in relation to compulsive buying. Compr Psychiat 2011; 52:420-4.

Naz, M. A., & Ijaz, T. (2015). The Development of an Indigenous Identity Pattern Scale (IPS) for University Students. *Pakistan Journal of Social and Clinical Psychology*, *13*(2), 30-36.

Neave, N., Tyson, H., McInnes, L., & Hamilton, C. (2016). The role of attachment style and anthropomorphism in predicting hoarding behaviours in a non-clinical sample. *Personality and Individual Differences*, *99*, 33-37.

Nedelisky, A., & Steele, M. (2009). Attachment to people and to objects in obsessive-compulsive disorder: An exploratory comparison of hoarders and non-hoarders. *Attachment & human development*, *11*(4), 365-383.

Nicolini, H., Salin-Pascual, R., Cabrera, B., & Lanzagorta, N. (2017). Influence of culture in obsessive-compulsive disorder and its treatment. *Current Psychiatry Reviews*, *13*(4), 285-292.

Nordsletten, A. E., de la Cruz, L. F., Pertusa, A., Reichenberg, A., Hatch, S. L., & Mataix-Cols, D. (2013). The Structured Interview for Hoarding Disorder (SIHD): development, usage and further validation. *Journal of Obsessive-Compulsive and Related Disorders*, *2*(3), 346-350.

Nordsletten, A. E., Ferna´ndez de la Cruz, L., Aluco, E., Alonso, P., Lo´pez-Sola`, C., et al. (2018). *Transcultural Psychiatry, 55(2)*, 261-285. doi: 10.1177/1363461518759203

Nordsletten, A. E., Reichenberg, A., Hatch, S. L., de la Cruz, L. F., Pertusa, A., Hotopf, M., & Mataix-Cols, D. (2013). Epidemiology of hoarding disorder. *The British Journal of Psychiatry*, *203*(6), 445-452.

Norris, J. I., Lambert, N. M., DeWall, C. N., & Fincham, F. D. (2012). Can't buy me love?: Anxious attachment and materialistic values. *Personality and Individual Differences*, *53*(5), 666-669.

Novara, C., Bottesi, G., Dorz, S., & Pastore, M. (2013). Il Saving Inventory-Revised (SI-R): contributo alla verifica della struttura trifattoriale nella popolazione generale italiana. *Psicoterapia Cognitiva e Comportamentale*, *19*(3), 309-322.

Nozick, K. J. (2016). *An attachment-based model of compulsive hoarding* (Unpublished Master's thesis). Department of Psychology, University of Manitoba Winnipeg, Canada. Retrieved from https://mspace.lib.umanitoba.ca/bitstream/handle/1993/31684/Nozick_Kimberly.pdf?sequence=1

Olson, D.H., Russell, C.S., & Sprenkle, D.H. (1983). Circumplex model of marital and family systems: Vl. Theoretical update. *Fam. Process, 22*, 69–83.

Paulesu, E., Sambugaro, E., Torti, T., Danelli, L., Ferri, F., Scialfa, G., ... & Sassaroli, S. (2010). Neural correlates of worry in generalized anxiety disorder and in normal controls: a functional MRI study. *Psychological medicine*, *40*(1), 117.

Pertusa, A., Fullana, M. A., Singh, S., Alonso, P., Menchón, J. M., & Mataix-Cols, D. (2008). Compulsive hoarding: OCD symptom, distinct clinical syndrome, or both?. *American Journal of Psychiatry*, *165*(10), 1289-1298.

Petrocelli, J. V., Glaser, B. A., Calhoun, G. B., & Campbell, L. F. (2001). Early maladaptive schemas of personality disorder subtypes. *Journal of Personality Disorders*, *15*(6), 546-559.

Phung, P. J., Moulding, R., Taylor, J. K., & Nedeljkovic, M. (2015). Emotional regulation, attachment to possessions and hoarding symptoms. *Scandinavian journal of psychology*, *56*(5), 573-581.

Pomerance, M.H., & Converse, P.D. (2014). Investigating context specificity, self-schema characteristics, and personality test validity. Personal. *Individ. Differ*., 58, 54–59.

Postlethwaite, A., Kellett, S., & Mataix-Cols, D. (2019). Prevalence of hoarding disorder: A systematic review and meta-analysis. *Journal of affective disorders*, *256*, 309-316.

Przeworski, A., Cain, N., & Dunbeck, K. (2014). Traumatic life events in individuals with hoarding symptoms, obsessive-compulsive symptoms, and comorbid obsessive-compulsive and hoarding symptoms. *Journal of Obsessive-Compulsive and Related Disorders*, *3*(1), 52-59.

Qadir F., Zafar P., Khalid A., Essau C.(2014). Feasibility of Obsessive Compulsive Inventory-Revised in Pakistan: Pilot study. *Journal of Behavioral sciences in Asia*., *7*, 50-62

Rajkumar, R. P. (2021) A biopsychosocial approach to understanding panic buying: Integrating neurobiological, attachment-based, and social-anthropological perspectives. *Front. Psychiatry, 12*, 652353. doi: 10.3389/fpsyt.2021.652353

Rania, M., Aloi, M., Caroleo, M., Carbone, E. A., Fazia, G., Calabrò, G., et al. (2019). 'Impaired Autonomy and Performance' predicts binge eating disorder among obese patients. *Eat. Weight Disord.* doi: 10.1007/s40519-019-00747-z

Richins, M. (2004)."Special Session Summary the Positive and Negative Consequences of Materialism: What Are Theyand When Do They Occur?" in NA - Advances in Consumer Research Volume 31, eds. Barbara E. Kahn and Mary Frances Luce, Valdosta, GA: Association for Consumer Research, Pages: 232-235.

Riso, L. P., & McBride, C. (2007). Introduction: A return to a focus on cognitive schemas. In L. P. Riso, P. L. du Toit, D. J. Stein, & J. E. Young (Eds.), *Cognitive schemas and core beliefs in psychological problems: A scientist-practitioner guide*. pp. 3-9.

Rodriguez, C. I., Simpson, H. B., Liu, S. M., Levinson, A., & Blanco, C. (2013). Prevalence and correlates of difficulty discarding: results from a national sample of the US population. *The Journal of nervous and mental disease*, *201*(9).

Salcuni, S. (2015). New frontiers and applications of attachment theory. *Front Psychol., 6,* 273. doi: 10.3389/fpsyg.2015.00273

Salzman, L. (1973). Developments in psychoanalysis. *Journal of the Bronx State Hospital*.

Sam, M. S. (2013). Behavior determinant. Retrieved from https://psychologydictionary.org/behavior-determinant/.

Sampson, J. M. (2013). The influences of unresolved trauma and family experiences on hoarding behavior.

Samuels, J. F., Bienvenu, O. J., Grados, M. A., Cullen, B., Riddle, M. A., Liang, K. Y.,...Nestadt, G. (2008). Prevalence and correlates of hoarding behavior in a community-based sample. *Behaviour Research and Therapy*, *46*(7), 836-844.

Samuels, J. F., Bienvenu, O. J., Pinto, A., Murphy, D. L., Piacentini, J., Rauch, S. L., ... & McCracken, J. T. (2008). Sex-specific clinical correlates of hoarding in obsessive-compulsive disorder. *Behavior research and therapy*, *46*(9), 1040-1046.

Samuels, J., Bienvenu III, O. J., Riddle, M. A., Cullen, B. A. M., Grados, M. A., Liang, K. Y., ... & Nestadt, G. (2002). Hoarding in obsessive compulsive disorder: results from a case-control study. *Behaviour research and therapy*, *40*(5), 517-528.

Samuels, J., Shugart, Y. Y., Grados, M. A., Willour, V. L., Bienvenu, O. J., Greenberg, B. D., . . . Nestadt, G. (2007). Significant linkage to compulsive hoarding on chromosome 14 in families with obsessive-compulsive disorder: Results from the OCD Collaborative Genetics Study. *The American Journal of Psychiatry, 164*(3), 493-499. doi:10.1176/appi.ajp.164.3.493

Sarin, S., & Abela, J. R. (2003). The relationship between core beliefs and a history of eating disorders: An examination of the life stories of university students. *Journal of Cognitive Psychotherapy*, *17*(4), 359-374.

Saxena, S., & Maidment, K. M. (2004). Treatment of compulsive hoarding. *Journal of clinical Psychology*, *60*(11), 1143-1154.

Saxena, S., Brody, A. L., Maidment, K. M., & Baxter Jr, L. R. (2007). Paroxetine treatment of compulsive hoarding. *Journal of Psychiatric Research*, *41*(6), 481-487.

Schmidt, N. B., Joiner, T. E., Young, J. E., & Telch, M. J. (1995). The schema questionnaire: Investigation of psychometric properties and the hierarchical structure of a measure of maladaptive schemas. *Cognitive therapy and research*, *19*(3), 295-321.

Schneider, A. F., Storch, E. A., Geffken, G. R., Lack, C. W., & Shytle, R. D. (2008). Psychometric properties of the Hoarding Assessment Scale in college students. *Illness, Crisis & Loss*, *16*(3), 227-236.

Sempértegui, G. A., Karreman, A., Arntz, A., and Bekker, M. H. J. (2013). Schema therapy for borderline personality disorder: a comprehensive review of its empirical foundations, effectiveness and implementation possibilities. *Clin. Psychol. Rev.* 33, 426–447. doi: 10.1016/j.cpr.2012.11.006

Shah, R., & Waller, G. (2000). Parental style and vulnerability to depression: The role of core beliefs. *The Journal of Nervous and Mental Disease*, *188*(1), 19-25.

Shorey, R. C., Anderson, S., and Stuart, G. L. (2013). Early maladaptive schemas of substance abusers and their intimate partners. *J. Psychoactive Drugs* 45, 266–275. doi: 10.1080/02791072.2013.805982

Sorensen, R. J. (2011). Hoarding Disorder (Compulsive Hoarding): A Comprehensive Literature Review and Professional Training to Prepare Clinicians to Treat Problematic Hoarding.

Spittlehouse, J. K., Vierck, E., Pearson, J. F., & Joyce, P. R. (2016). Personality, mental health and demographic correlates of hoarding behaviours in a midlife sample. *PeerJ*, *4*, e2826.

Steketee, G., & Frost, R. (2003). Compulsive hoarding: current status of the research. *Clinical psychology review*, *23*(7), 905-927.

Tayeb, M. (2001). Conducting research across cultures: Overcoming drawbacks and obstacles. *International Journal of Cross Cultural Management*, *1*(1), 91–108.

Thorndike, E. L. (1913). *Educational psychology. Vol. 2, The psychology of learning*: New York: Teachers College, Columbia University.

Timpano, K. R., Çek, D., Fu, Z. F., Tang, T., Wang, J. P., & Chasson, G. S. (2015). A consideration of hoarding disorder symptoms in China. *Comprehensive psychiatry*, *57*, 36-45.

Timpano, K. R., Exner, C., Glaesmer, H., Rief, W., Keshaviah, A., Brähler, E., & Wilhelm, S. (2011). The Epidemiology of the Proposed DSM-5 Hoarding Disorder: Exploration of the Acquisition Specifier, Associated Features, and Distress. *The Journal of clinical psychiatry*, *72*(6), 780-786.

Tolin, D. F. (2011). Challenges and advances in treating hoarding. *Journal of clinical psychology*, *67*(5), 451-455.

Tolin, D. F., Fitch, K. E., Frost, R. O., & Steketee, G. (2010). Family informants' perceptions of insight in compulsive hoarding. *Cognitive Therapy and Research, 34*(1), 69-81. doi:10.1007/s10608-008-9217-7

Tolin, D. F., Frost, R. O., Steketee, G., Gray, K. D., & Fitch, K. E. (2008). The economic and social burden of compulsive hoarding. *Psychiatry research*, *160*(2), 200-211.

Tolin, D. F., Hallion, L. S., Wootton, B. M., Levy, H. C., Billingsley, A. L., Das, A., ... & Stevens, M. C. (2018). Subjective cognitive function in hoarding disorder. *Psychiatry Research*, *265*, 215-220.

Tolin, D. F., Stevens, M. C., Nave, A., Villavicencio, A. L., & Morrison, S. (2012). Neural mechanisms of cognitive behavioral therapy response in hoarding disorder: a pilot study. *Journal of Obsessive-Compulsive and Related Disorders*, *1*(3), 180-188.

Tolin, D. F., Witt, S. T., & Stevens, M. C. (2014). Hoarding disorder and obsessive–compulsive disorder show different patterns of neural activity during response inhibition. *Psychiatry Research: Neuroimaging*, *221*(2), 142-148.

Tortella-Feliu, M., Fullana, M. A., Caseras, X., Andión, Ó., Torrubia, R., & Mataix-Cols, D. (2006). Spanish version of the Savings Inventory–Revised: adaptation, psychometric properties, and relationship to personality variables. *Behavior Modification*, *30*(5), 693-712.

Tsuchiyagaito, A., Horiuchi, S., Igarashi, T., Kawanori, Y., Hirano, Y., Yabe, H., & Nakagawa, A. (2017). Factor structure, reliability, and validity of the Japanese version of the Hoarding Rating Scale-Self-Report. *Neuropsychiatr Dis Treat, 13*, 1235.

Uher, J. (2022). Rating scales institutionalize a network of logical errors and conceptual problems in research practices: A rigorous analysis showing ways to tackle psychology's crises. *Frontiers in Psychology*, *13*, 1009893.

Unoka, Z., Tölgyes, T., & Czobor, P. (2007). Early maladaptive schemas and body mass index in subgroups of eating disorders: A differential association. *Comprehensive Psychiatry*, *48*(2), 199-204.

Vygotsky, L. S. (1962). *Thought and Language*. Cambridge, MA: MIT Press.

Waller, G., Ohanian, V., Meyer, C., & Osman, S. (2000). Cognitive content among bulimic women: The role of core beliefs. *International Journal of Eating Disorders*, *28*(2), 235-241.

Wang, Z., Wang, Y., Zhao, Q., & Jiang, K. (2016). Is the DSM-5 hoarding disorder diagnosis valid in China? *Shanghai Archives of Psychiatry, 28(2),* 103-105. doi: http://dx.doi.org/10.11919/j.issn.1002-0829.215054

Waters, E., & Cummings, E. M. (2000). A secure base from which to explore close relationships. *Child development*, *71*(1), 164-172.

Wheaton, M. G., Abramowitz, J. S., Franklin, J. C., Berman, N. C., & Fabricant, L. E. (2011). Experiential avoidance and saving cognitions in the prediction of hoarding symptoms. *Cognitive Therapy and Research*, *35*(6), 511-516.

Wheaton, M., Timpano, K. R., LaSalle-Ricci, V. H., & Murphy, D. (2008). Characterizing the hoarding phenotype in individuals with OCD: associations with comorbidity, severity and gender. *Journal of Anxiety Disorders*, *22*(2), 243-252.

Whitehead, A. N. (2010). *Process and reality*. Simon and Schuster.

Williams, B., Onsman, A., & Brown, T. (2010). Exploratory factor analysis: A five-step guide for novices. *Australasian Journal of Paramedicine*, *8*(3), 45-55.

Williams, J. M. G., Watts, F. N., MacLeod, C., & Mathews, A. (1997). *Cognitive psychology and emotional disorders.* Chichester: Wiley.

Wincze, J. P., Steketee, G., & Frost, R. O. (2007). Categorization in compulsive hoarding. *Behaviour research and therapy*, *45*(1), 63-72.

Woody, S. R., Kellman-McFarlane, K., & Welsted, A. (2014). Review of cognitive performance in hoarding disorder. *Clinical psychology review*, *34*(4), 324-336.

Yorulmaz, O., & Dermihan, N. (2015). Cognitive correlates of hoarding symptoms: An exploratory study with a non-Western community sample. *Journal of Obsessive Compulsive and Related Disorders, 7,* 16-23.

Zhao, Y., Yu, Y., Zhao, R., Cai, Y., Gao, S., Liu, Y.,...Shi, H. (2022). Association between fear of COVID-19 and hoarding behavior during the outbreak of the COVID-19 pandemic: The mediating role of mental health status. *Frontiers in Psychology*, *13*.

APPENDICES

Appendix-A

Focus Group Guide

Collecting different things and saving them is a general behavior that we all do. People buy or collect many things and sometimes people find it difficult to give away or discard their possessions. Because of this behavior, at times the space in house gets over-occupied and accumulation of excessive amount of stuff creates difficulties in living…

1. What is your opinion about it?
2. Do you know someone around who keeps this type of behavior?
3. What do you think what type of things people use to gather/collect?
4. In your opinion what are the reasons behind this saving behavior?
5. What types of people do this?
6. How do people keep excessive things in less space?
7. What parts of home are usually used for this purpose?
8. What do you think people who show excessive saving behavior have to face what sort of attitudes from others?
9. How this behavior affects others around?
10. In your opinion, why people feel it difficult to give away or discard their things?

Modification Points/ Reminders

1. In your opinion, people of which age are more involved in this behavior?
2. What kind of circumstances can lead to this behavior?
3. How our buying behavior can impacts this?
4. How our mind states can influence it?
5. How our rearing practices can influence this saving behavior?
6. How the unavailability and/or uncertainty can impact this behavior?

Appendix-B

Interview Guide

1. Can you please tell me something about phenomenon of hoarding?
2. What do you think are the different motivations for acquiring in our culture generally?
3. What do you think can be the common reasons to save in our culture?
4. How do you think most of the people relate to their possessions in Pakistan?
5. How it gets difficult for most of the people to discard things?
6. In your point of view how prevalent is this in our culture?
7. What does your experience suggest of the phenomenon in clinical population here in Pakistan?
8. Can you please name the disorders where you came across such phenomenon, may be as a symptom of some other condition?
9. Do you think the appropriate questions been put up by the practitioners to specify the conditions like obsessions/compulsions while examining the OCD patients?
10. In your opinion, how much of patients actually report this sort of behavior?
11. What do you think are the reasons behind this?
12. How does it affect the individual and the family?
13. In your opinion, what measures could be taken to make sure that the phenomenon doesn’t go unnoticed/ un-reported?
14. What do think is the status of hoarding as a disorder here in Pakistan?
15. What do you think is the existing scenario in Pakistan with reference to hoarding orientation?
16. What can be the contributing or minimizing factors regarding this behavior in our culture?

Appendix C

Initial Item Pool

Cognitive Component

سے مرادوہ "خیالات" ہیں جن کی بنیاد پر انسان کسی چیز کی اہمیت کا تعین کرتا ہے مثلاً کسی چیز کی افادیت، خوبصورتی، چیزوں کا انسان کی پہچان/ شناخت کا باعث ہونا، حافظے کی کمزوری یا مذہبی اقدار کے حوالے سے ان کی توجیہہ بیان کرنا وغیرہ۔

Affective Component

اس سے مراد کسی بھی قسم کی وہ "جذباتی" وابستگی یا درعمل ہے جس کا اظہار کوئی شخص مادی چیز کے حوالے سے کر سکتا ہے۔ مثلاً کسی چیز سے وابستہ یادیں، کسی چیز سے حاصل ہونے والی خوشی یا اس کو ترک کر دینے کے خیال سے جڑا احساسِ شرمندگی، دکھ یا کمی کا احساس وغیرہ۔

Personality dynamics

سے مراد کسی رویے کے پسِ منظر میں موجود وہ "انفرادی یا معاشرتی طور پر سیکھی گئی خصوصیات" ہیں جو چیزیں جمع کرنے کا باعث بن سکتی ہیں مثلاً کنجوسی، لالچ، جیلسی، بچپن میں کی گئی تربیت یا ماحول سے سیکھی گئی پختہ عادات وغیرہ۔

Socio-Cultural Aspect

اس سے مرادوہ "رجحانات" ہیں جو انسان اپنے معاشرے میں موجود روایات اور اقدار سے حاصل کرتا ہے اور چیزیں اکٹھی کرنے کا سبب بن سکتے ہیں۔ جیسا کہ سماجی حیثیت، مادیت پرستی یا دوسروں سے موازنہ وغیرہ۔

- ☆ میں چیزیں اس لئے سنبھال کر رکھتی/ رکھتا ہوں کہ وہ میری ذات کی عکاسی کرتی ہیں۔
- ☆ میں چونکہ لوگوں سے الگ تھلگ رہتی/ رہتا ہوں اسلئے اپنے اردگرد چیزیں اکھٹی کئے رکھتی/ رکھتا ہوں۔
- ☆ میں محسوس کرتی/ کرتا ہوں کہ اگر کوئی چیز اندر خانے رکھ دی جائے تو وہ میرے حافظے سے بھی محو ہو جائیگی۔
- ☆ کسی کو چیز دیتے ہوئے مجھے یہ خوف رہتا ہے کہ یہ ضائع نہ ہو جائے۔
- ☆ میرے پاس زیادہ چیزیں اسلئے اکھٹی ہو جاتی ہیں کہ وہ رعایتاً مل رہی ہوتی ہیں۔
- ☆ میرے لئے کچھ چیزوں کو خود سے الگ کرنے کا مطلب ہے کہ زندگی کا کوئی حصہ خود سے الگ کر دیا جائے۔
- ☆ میں چاہتی ہوں کہ ہر نئی آنے والی چیز کسی دوسرے سے پہلے لے لوں
- ☆ میں چیزیں دینے میں اسلئے مشکل محسوس کرتی/ کرتا ہوں کہ میں دوبارہ خریدنے کی استطاعت نہیں رکھتی/ رکھتا۔
- ☆ میں معاشرے میں اپنا مقام بنانے کیلئے چیزیں زیادہ اکھٹی کرتی/ کرتا ہوں۔
- ☆ میرے لئے چیزوں کو خود سے الگ کرنا ایسا ہی ہے جیسے اپنے جسم کا کوئی حصہ خود سے الگ کر دیا جائے۔
- ☆ اپنی چیزیں سنبھال کر رکھنا میرا فرض ہے۔
- ☆ چیزوں کو سنبھال کر رکھنا میری تربیت کا حصہ ہے۔
- ☆ میرے لئے کسی چیز کا نہ ہونا باعث شرمندگی ہے۔
- ☆ میں زیادہ تر چیزیں اس بے یقینی کے باعث جمع کر لیتی/ لیتا ہوں کہ پھر ملیں یا نہ ملیں۔
- ☆ مجھے کئی چیزیں دیتے ہوئے ایسا محسوس ہوتا ہے کہ جیسے انہیں حاصل کرنے کیلئے کی گئی محنت ضائع کر دی جائے۔
- ☆ میں اپنے اندر کے خلا کو پر کرنے کیلئے بھی چیزیں اکھٹی کرتی رہتی/ اکھٹا کرتا رہتا ہوں۔
- ☆ میرے نزدیک زیادہ چیزیں اکھٹی کرنے کی وجہ مذہب سے دوری ہے۔
- ☆ مجھے انسانوں کی نسبت چیزوں کیساتھ وقت گزارنا آسان محسوس ہوتا ہے۔
- ☆ میں زیادہ تر چیزیں دوسروں پر اچھا تاثر ڈالنے کیلئے جمع کرتی/ کرتا ہوں۔

Cognitive Component

سے مراد وہ "خیالات" ہیں جن کی بنیاد پر انسان کسی چیز کی اہمیت کا تعین کرتا ہے مثلاً کسی چیز کی افادیت، خوبصورتی، چیزوں کا انسان کی پہچان/ شناخت کا باعث ہونا، حافظے کی کمزوری یا مذہبی اقدار کے حوالے سے ان کی توجیہہ بیان کرنا وغیرہ۔

Affective Component

اس سے مراد کسی بھی قسم کی وہ "جذباتی "وابستگی یا درعمل ہے جس کا اظہار کوئی شخص مادی چیز کے حوالے سے کرسکتا ہے۔ مثلاً کسی چیز سے وابستہ یادیں، کسی چیز سے حاصل ہونے والی خوشی یا اس کو ترک کردینے کے خیال سے جڑا احساسِ شرمندگی، دکھ یا کمی کا احساس وغیرہ۔

Personality dynamics

سے مراد کسی رویے کے پسِ منظر میں موجود وہ "انفرادی یا معاشرتی طور پر سیکھی گئی خصوصیات" ہیں جو چیزیں جمع کرنے کا باعث بن سکتی ہیں مثلاً کنجوسی، لالچ، جیلسی، بچپن میں کی گئی تربیت یا ماحول سے سیکھی گئی پختہ عادات وغیرہ۔

Socio-Cultural Aspect

اس سے مراد وہ "رجحانات" ہیں جو انسان اپنے معاشرے میں موجود روایات اور اقدار سے حاصل کرتا ہے اور چیزیں اکھٹی کرنے کا سبب بن سکتے ہیں۔ جیسا کہ سماجی حیثیت، مادیت پرستی یا دوسروں سے موازنہ وغیرہ۔

☆ میں چیزیں اس خیال سے سنبھال کر رکھتی/ رکھتا ہوں کہ وہ کبھی نہ کبھی کام آ ہی جاتی ہیں۔
☆ میں کئی چیزیں صرف اسلئے خرید لیتی/ لیتا ہوں کہ میرے پاس نہیں ہوتیں حالانکہ مجھے ان کی ضرورت بھی نہیں ہوتی۔
☆ کئی مرتبہ مجھے چیز رکھ کر یاد نہیں رہتا تو میں نئی چیز لے آتی / آتا ہوں اسلئے بھی چیزیں اکھٹی ہوتی رہتی ہیں۔
☆ مجھے اپنے اردگرد پھیلاوا رکھنے کی عادت ہے۔
☆ میری چیزیں میرے لئے ذہنی سکون کا باعث ہیں۔
☆ میں چیزیں اس لئے جمع کرتی / کرتا ہوں کہ خود کو معاشی طور پر مضبوط ثابت کرسکوں۔
☆ میں چیزیں اس لئے اکھٹی کرتی / کرتا ہوں کہ بہتر زندگی گزارنے کیلئے بہت زیادہ چیزوں کا ہونا بہت ضروری ہے۔
☆ میری کوشش ہوتی ہے کہ میں اپنی چیز ایسے شخص کو دوں کہ وہ مجھے نظر آتی رہے۔
☆ میں چیز دینے میں اس لئے مشکل محسوس کرتی / کرتا ہوں کہ بچپن سے دماغ میں یہ بات بٹھادی گئی ہے کہ چیز مشکل سے ملتی ہے اسے سنبھال کر رکھنا چاہیئے۔
☆ کسی چیز کو خود سے الگ کرنے کا مطلب ہے جیسے میری شناخت کا کوئی حصہ مجھ سے کھو جائے۔
☆ مجھے اپنی چیز دیتے ہوئے ایسا محسوس ہوتا ہے جیسے اس کے ساتھ گزرا وقت ہاتھ سے نکلا جارہا ہو۔
☆ یاداشت کی کمزوری کے باعث مجھے چیزیں ڈھونڈنے میں مشکل پیش آتی ہے اس لئے میں چیزیں اردگرد پھیلائے رکھتی/ رکھتا ہو۔
☆ میں زیادہ تر چیزیں اسلئے خریدتی /خریدتا ہوں کہ وہ دستیاب ہوتی ہیں۔
☆ میرے لئے چیزوں کو دینا ایسے ہے جیسے دینے والے کی محبت کو۔
☆ میں کئی چیزیں آنے والے وقت کی منصوبہ بندی کرتے ہوئے اکھٹی کرتی /کرتا ہوں۔
☆ میری چیزیں میری انفرادیت کا تعین کرتی ہیں۔
☆ میری چیزیں میری تنہائی دور کرنے کا سبب بنتی ہیں۔
☆ میں زیادہ تر چیزیں اسلئے اکھٹی کر لیتی/ لیتا ہوں کہ کسی چیز کی کمی کے باعث شرمندگی نہ اٹھانی پڑے۔
☆ میں کئی چیزیں اسلئے خرید لیتی/ لیتا ہوں کہ بعد میں وسائل ہوں نہ ہوں۔

Cognitive Component

سے مرادوہ "خیالات" ہیں جن کی بنیاد پر انسان کسی چیز کی اہمیت کا تعین کرتا ہے مثلاً کسی چیز کی افادیت، خوبصورتی، چیزوں کا انسان کی پہچان/ شناخت کا باعث ہونا، حافظے کی کمزوری یا مذہبی اقدار کے حوالے سے ان کی توجیہہ بیان کرنا وغیرہ۔

Affective Component

اس سے مراد کسی بھی قسم کی وہ "جذباتی" وابستگی یا درعمل ہے جس کا اظہار کوئی شخص مادی چیز کے حوالے سے کرسکتا ہے۔ مثلاً کسی چیز سے وابستہ یادیں، کسی چیز سے حاصل ہونے والی خوشی یا اس کو ترک کردینے کے خیال سے جڑا احساسِ شرمندگی، دکھ یا کمی کا احساس وغیرہ۔

Personality dynamics

سے مراد کسی رویے کے پسِ منظر میں موجود وہ "انفرادی یا معاشرتی طور پر سیکھی گئی خصوصیات" ہیں جو چیزیں جمع کرنے کا باعث بن سکتی ہیں مثلاً کنجوسی، لالچ، جیلسی، بچپن میں کی گئی تربیت یا ماحول سے سیکھی گئی پختہ عادات وغیرہ۔

Socio-Cultural Aspect

اس سے مرادوہ "رجحانات" ہیں جو انسان اپنے معاشرے میں موجود روایات اور اقدار سے حاصل کرتا ہے اور چیزیں اکھٹی کرنے کا سبب بن سکتے ہیں۔ جیسا کہ سماجی حیثیت، مادیت پرستی یا دوسروں سے موازنہ وغیرہ۔

☆ میں زیادہ تر چیزیں اس لئے سنبھال کر رکھتی/ رکھتا ہوں کہ مستقبل میں ان کی ضرورت پیش آسکتی ہے۔

☆ مجھے چیز دیتے ہوئے یہ خوف رہتا ہے کہ اس کا صحیح طور پر استعمال نہیں کیا جائے گا۔

☆ مزاجاً تنگ دل ہونے کے باعث میرے پاس چیزیں اکھٹی ہوتی چلی جاتی ہیں۔

☆ میں چیزیں اسلئے اکھٹی کرتی /کرتا ہوں کہ چیزیں انسان کی سماجی حیثیت کا تعین کرتی ہیں۔

☆ میں چیزیں اس لئے سنبھال کر رکھتی/ رکھتا ہوں کہ وہ مجھے احساس ملکیت دیتی ہیں۔

☆ میں پسند نہیں کرتی /کرتا کہ کوئی مجھ سے پوچھے بغیر میری چیزوں کو ہاتھ لگائے۔

☆ میں کئی چیزیں برے وقت کے خوف سے اکھٹی کئے رکھتی/ رکھتا ہوں۔

☆ میں کئی چیزیں بچپن کی محرومیوں کا ازالہ کرنے کیلئے خریدتی /خریدتا ہوں۔

☆ میری چیزیں میرے لئے فخر کا باعث ہیں۔

☆ میں کئی چیزیں اس لئے لیتی/ لیتا ہوں کہ ہمارے معاشرے میں لوگوں کی قدر ان کے معاشی وسائل کی بنیاد پر کی جاتی ہے۔

☆ میں چیزیں اس لئے اکھٹی کرتی /کرتا ہوں کہ وہ مستقبل میں میرے یا میرے گھر والوں کے کام آسکتی ہیں۔

☆ میں کئی چیزوں کی کمی ایسے ہی محسوس کرتی /کرتا ہوں جیسے اپنے رشتوں کی۔

☆ میں زیادہ تر چیزیں اسلئے سنبھال کر رکھتی/ رکھتا ہوں کہ دوسرے سے مانگنے کی ضرورت نہ پڑے۔

☆ میرے پاس جتنی بھی چیزیں ہوں، مجھے مزید کی خواہش رہتی ہے۔

☆ میں زیادہ تر چیزیں دوسروں سے معاشی برتری حاصل کرنے کیلئے جمع کرتی /کرتا ہوں۔

☆ میں اپنے اردگرد چیزیں اس لئے پھیلائے رکھتا/ رکھتی ہوں کہ وہ میرے ذہن سے نہ نکل جائیں

☆ جو چیزیں مجھے پسند ہوتی ہیں میں انھیں سنبھال کر رکھتی/ رکھتا ہوں، چاہے وہ میرے استعمال میں آئیں یا نہ آئیں۔

☆ میرے لئے کچھ چیزیں اتنی ہی بامعنی ہوتی ہیں جتنا ان سے وابستہ لمحے یا لوگ۔

Cognitive Component

سے مرادوہ "خیالات" ہیں جن کی بنیاد پر انسان کسی چیز کی اہمیت کا تعین کرتا ہے مثلاً کسی چیز کی افادیت، خوبصورتی، چیزوں کا انسان کی پہچان/ شناخت کا باعث ہونا، حافظے کی کمزوری یا مذہبی اقدار کے حوالے سے ان کی توجیہہ بیان کرنا وغیرہ۔

Affective Component

اس سے مراد کسی بھی قسم کی وہ "جذباتی" وابستگی یا ردعمل ہے جس کا اظہار کوئی شخص مادی چیز کے حوالے سے کرسکتا ہے۔ مثلاً کسی چیز سے وابستہ یادیں، کسی چیز سے حاصل ہونے والی خوشی یا اس کو ترک کردینے کے خیال سے جڑا احساسِ شرمندگی، دکھ یا کمی کا احساس وغیرہ۔

Personality dynamics

سے مراد کسی رویے کے پسِ منظر میں موجود وہ "انفرادی یا معاشرتی طور پر سیکھی گئی خصوصیات" ہیں جو چیزیں جمع کرنے کا باعث بن سکتی ہیں مثلاً کنجوسی، لالچ، جیلسی، بچپن میں کی گئی تربیت یا ماحول سے سیکھی گئی پختہ عادات وغیرہ۔

Socio-Cultural Aspect

اس سے مرادوہ "رجحانات" ہیں جو انسان اپنے معاشرے میں موجود روایات اور اقدار سے حاصل کرتا ہے اور چیزیں اکھٹی کرنے کا سبب بن سکتے ہیں۔ جیسا کہ سماجی حیثیت، مادیت پرستی یا دوسروں سے موازنہ وغیرہ۔

- ☆ میں چیزیں اسلئے نہیں دے پاتی / پاتا ہوں کہ میرے والدین نے مجھے بچپن سے چیزیں سنبھال کر رکھنے کی عادت ڈالی ہے۔
- ☆ ہم چیزیں اسلئے اکھٹی کرتے ہیں کہ ہم میں قناعت نہیں رہی۔
- ☆ میں اپنی چیز دیتے ہوئے اس بات کی یقین دہانی کرتی / کرتا ہوں کہ اس کا مناسب استعمال ہو۔
- ☆ مجھے یہ خوف رہتا ہے کہ اگر کوئی چیز آگے پیچھے ہوجائے تو میں اسے یاد نہیں رکھ پاؤں گی/گا۔
- ☆ میں زیادہ تر چیزیں اسلئے اکھٹی کرتی / کرتا ہوں کہ اب ایک دوسرے کے دکھ درد میں شریک ہونے کا رواج نہیں رہا۔
- ☆ میں چیزیں اسلئے اکھٹی کرتی / کرتا ہوں کہ وہ لوگوں کو میری پہچان کراتی ہیں۔
- ☆ میری چیزیں مجھے تحفظ کا احساس دیتی ہیں۔
- ☆ میرے پاس چیزیں اسلئے اکھٹی ہوتی رہتی ہیں کہ میں اپنی چیز کسی دوسرے کو دینے کا حوصلہ نہیں رکھتی/ رکھتا۔
- ☆ میں چیزیں اسلئے اکھٹی کرتی / کرتا ہوں کہ معاشرے میں اپنا مقام بنا سکوں۔
- ☆ مجھے چیز دینے میں اسلئے مشکل محسوس ہوتی ہے کہ مجھے وہ بنانے میں بہت وقت لگا۔
- ☆ میں چیزیں ان کے متبادل استعمال کے خیال سے ضائع نہیں کرتی۔
- ☆ میری سستی کے باعث میرے پاس چیزیں اکھٹی ہوتی چلی جاتی ہیں۔
- ☆ میں چیزوں کی بدولت اپنے تعلقات کو محسوس کرتی / کرتا ہوں۔
- ☆ کسی چیز کو محفوظ کرنے کا مطلب ہے کہ مجھے اپنی یاداشت پر انحصار نہیں کرنا پڑے گا۔
- ☆ میں چیزیں اسلئے سنبھال کر رکھتی/ رکھتا ہوں کہ وہ مشکل وقت میں کام آسکتی ہیں۔
- ☆ میں زیادہ تر چیزیں اسلئے اکھٹی کرتی / کرتا ہوں کہ ضرورت پڑنے پر دوسرے لوگ اپنی چیز دینے سے انکار کردیتے ہیں۔
- ☆ چونکہ میرے والدین چیزیں سنبھال کر رکھتے ہیں اس لئے مجھے بھی چیزیں اکھٹی کرنے کی عادت ہے۔
- ☆ چونکہ ہم دین پر عمل نہیں کرتے اسلئے مادی چیزیں زیادہ اکھٹی کرتے ہیں۔
- ☆ چیزوں کا حصول مجھے کامیابی کا احساس دلاتا ہے۔
- ☆ میں اپنے اندر کے احساس محرومی کو چھپانے کیلئے بھی چیزوں کا سہارا لیتی/ لیتا ہوں۔

Cognitive Component

سے مراد وہ "خیالات" ہیں جن کی بنیاد پر انسان کسی چیز کی اہمیت کا تعین کرتا ہے مثلاً کسی چیز کی افادیت، خوبصورتی، چیزوں کا انسان کی پہچان/شناخت کا باعث ہونا، حافظے کی کمزوری یا مذہبی اقدار کے حوالے سے ان کی توجیہہ بیان کرنا وغیرہ۔

Affective Component

اس سے مراد کسی بھی قسم کی وہ "جذباتی" وابستگی یا درعمل ہے جس کا اظہار کوئی شخص مادی چیز کے حوالے سے کر سکتا ہے۔ مثلاً کسی چیز سے وابستہ یادیں، کسی چیز سے حاصل ہونے والی خوشی یا اس کو ترک کر دینے کے خیال سے جڑا احساسِ شرمندگی، دکھ یا کمی کا احساس وغیرہ۔

Personality dynamics

سے مراد کسی رویے کے پسِ منظر میں موجود وہ "انفرادی یا معاشرتی طور پر سیکھی گئی خصوصیات" ہیں جو چیزیں جمع کرنے کا باعث بن سکتی ہیں مثلاً کنجوسی، لالچ، جیلسی، بچپن میں کی گئی تربیت یا ماحول سے سیکھی گئی پختہ عادات وغیرہ۔

Socio-Cultural Aspect

اس سے مراد وہ "رجحانات" ہیں جو انسان اپنے معاشرے میں موجود روایات اور اقدار سے حاصل کرتا ہے اور چیزیں اکھٹی کرنے کا سبب بن سکتے ہیں۔ جیسا کہ سماجی حیثیت، مادیت پرستی یا دوسروں سے موازنہ وغیرہ۔

- ☆ میں چیزیں اس لیے سنبھال کر رکھتی/رکھتا ہوں کہ وہ مجھے میرے ہونے کا احساس دلاتی ہیں۔
- ☆ میری چیزیں قابل استعمال نہ ہوں پھر بھی میرے لئے بہت اہم ہوتی ہیں۔
- ☆ مجھے کچھ چیزوں کے بارے میں ضرور یاد رکھنا چاہئے اور میں نہیں رکھ پاؤں گی/گا اگر میں وہ دے دوں۔
- ☆ میں زیادہ چیزیں اسلئے اکھٹی کرتی/کرتا ہوں کہ دوسروں کا مقابلہ کر سکوں۔
- ☆ میرے لئے کوئی چیز دے دینے کا مطلب ہے کہ کوئی موقع گنوا دیا جائے۔
- ☆ چیزیں اکھٹی کرنا میرے مزاج کا حصہ ہے
- ☆ میں کئی چیزیں اس لئے اکھٹی کر لیتی/لیتا ہوں کہ مہنگی نہ ہو جائیں۔
- ☆ مجھے اپنی چیزوں کی اسقدر عادت ہو جاتی ہے کہ دینے میں مشکل محسوس کرتی/کرتا ہوں۔
- ☆ میں نے چونکہ معاشی تنگدستی دیکھ رکھی ہے، اسلئے چیزیں زیادہ سنبھال کر رکھتی/رکھتا ہوں۔
- ☆ میرے نزدیک چیز دے دینا اس کی بے قدری ہے۔
- ☆ میں زیادہ تر چیزیں دوسروں سے آگے نکلنے کی خواہش میں خریدتی/خریدتا ہوں۔
- ☆ میرے لئے کئی دفعہ چیز اور اس سے وابستہ احساسات میں فرق کرنا مشکل ہوتا ہے۔
- ☆ میں زیادہ تر چیزیں دوسروں کی دیکھا دیکھی اکھٹی کر لیتی/لیتا ہوں۔
- ☆ میرے گھر میں کئی چیزیں صرف بزرگوں کے احترام میں پڑی رہتی ہیں۔
- ☆ معاشرے میں بے حسی زیادہ ہونے کے باعث میں چیزوں پر زیادہ بھروسہ کرتی/کرتا ہوں۔
- ☆ میں چیز دینے میں اس لئے مشکل محسوس کرتی/کرتا ہوں کہ میں نے انہیں بہت مشکل سے حاصل کیا ہے
- ☆ اگر کوئی چیز نظر سے اوجھل ہو جائے تو مجھے یہ خدشہ رہتا ہے کہ میں اس کو مکمل طور پر بھول جاؤں گی/گا۔
- ☆ میرے نزدیک چیزیں اکھٹی کرنے کی وجہ یہ ہے کہ ہم میں جائز ناجائز کا تصور ختم ہو گیا ہے۔
- ☆ میرے پاس اسلئے بھی زیادہ چیزیں اکھٹی ہو جاتی ہیں کہ میں انہیں دے دینے کا فیصلہ کرنے میں مشکل محسوس کرتی/کرتا ہوں۔
- ☆ میں چیزیں اسلئے جمع کرتی رہتی/کرتا رہتا ہوں کہ ہمارے معاشرے میں مادی چیزوں کی اہمیت بڑھتی جا رہی ہے۔

Cognitive Component

سے مرادوہ "خیالات" ہیں جن کی بنیاد پر انسان کسی چیز کی اہمیت کا تعین کرتا ہے مثلاً کسی چیز کی افادیت، خوبصورتی، چیزوں کا انسان کی پہچان/ شناخت کا باعث ہونا، حافظے کی کمزوری یا مذہبی اقدار کے حوالے سے ان کی توجیہہ بیان کرنا وغیرہ۔

Affective Component

اس سے مراد کسی بھی قسم کی وہ "جذباتی" وابستگی یا درعمل ہے جس کا اظہار کوئی شخص مادی چیز کے حوالے سے کر سکتا ہے۔ مثلاً کسی چیز سے وابستہ یادیں، کسی چیز سے حاصل ہونے والی خوشی یا اس کو ترک کر دینے کے خیال سے جڑا احساسِ شرمندگی، دکھ یا کمی کا احساس وغیرہ۔

Personality dynamics

سے مراد کسی رویے کے پسِ منظر میں موجود وہ "انفرادی یا معاشرتی طور پر سیکھی گئی خصوصیات" ہیں جو چیزیں جمع کرنے کا باعث بن سکتی ہیں مثلاً کنجوسی، لالچ، جیلسی، بچپن میں کی گئی تربیت یا ماحول سے سیکھی گئی پختہ عادات وغیرہ۔

Socio-Cultural Aspect

اس سے مراد وہ "رجحانات" ہیں جو انسان اپنے معاشرے میں موجود روایات اور اقدار سے حاصل کرتا ہے اور چیزیں اکھٹی کرنے کا سبب بن سکتے ہیں۔ جیسا کہ سماجی حیثیت، مادیت پرستی یا دوسروں سے موازنہ وغیرہ۔

☆ میرے لئے کئی دفعہ چیز اور اس سے وابستہ احساسات میں فرق کرنا مشکل ہوتا ہے۔

☆ میں زیادہ تر چیزیں دکھاوے کیلئے خریدتی / خریدتا ہوں۔

☆ میرا حافظہ کمزور ہے جس کی وجہ سے میں چیزیں نظر کے سامنے رکھتی/ رکھتا ہوں ورنہ میں انہیں بھول جاؤں گی/ گا۔

☆ میں چیزیں اسلئے جمع کرتی / کرتا ہوں کہ وہ میری اہمیت میں اضافہ کرتی ہیں۔

☆ میں چیزیں اپنی (یا بچوں، بہن بھائیوں کی) زندگی آسان بنانے کیلئے اکھٹی کرتی / کرتا ہوں۔

Appendix-D

Instructions for Expert Review

Thanks for agreeing to participate in our expert review of the items on the Hoarding Related Scale that we are developing.

Please begin by familiarizing yourself with the background information and the construct definitions, and then review the specific instructions for completing the content validation.

Background Information

The scale to be developed is intended to explore the underlying dimensions of Hoarding Behavior that involves acquiring and persistent difficulty discarding or parting with material possessions, regardless of their actual value because of a perceived need to save them. The phenomenon has been qualitatively explored and appears to emerge out of four dimensions namely cognitive component, affective component, personality dynamics, and socio-cultural aspects. The working definitions of each dimension and the items generated are given on subsequent pages. Please read the definitions for different dimensions carefully and scrutinize the items based on their suitability for the dimension.

Instructions

We would like you to assess each potential item on construct relevance, clarity and conciseness, language complexity and comprehensibility of the expression. Please point out the redundant and double barreled items and we'll highly acknowledge if you suggest the alternative wording for confusing or awkwardly inclined items.

We will be grateful if you write-in additional comments about individual items; and identify any important indicators that you perceive to be under-represented or absent for the construct under study.

Once again thank you so much for your time and contribution.

Appendix-E

Item Pool of 80 Items

ذیل میں دیئے گئے بیانات چیزیں خریدنے یا جمع کرنے اور اپنی ملکیت میں موجود چیزوں سے وابستہ آپ کے احساسات اور جذبات سے متعلق ہیں۔ برائے مہربانی ہر بیان کو غور سے پڑھیں اور دیئے گئے نمبروں میں سے اس کے گرد دائرہ لگائیں جو آپ کے تجربے سے قریب ترین مماثلت رکھتا ہے۔

5 ہمیشہ	4 اکثر اوقات	3 زیادہ تر	2 کبھی کبھار	1 بالکل نہیں		
					میں چیزیں اس لئے سنبھال کر رکھتی/رکھتا ہوں کہ وہ میری ذات کی عکاسی کرتی ہیں۔	1
					میں محسوس کرتی/کرتا ہوں کہ اگر کوئی چیز اندر خانے رکھ دی جائے تو وہ میرے حافظے سے بھی محو ہو جائیگی۔	2
					کسی کو چیز دیتے ہوئے مجھے یہ خوف رہتا ہے کہ یہ ضائع نہ ہو جائے۔	3
					میرے پاس زیادہ چیزیں اسلئے اکھٹی ہو جاتی ہیں کہ وہ رعایتاً مل رہی ہوتی ہیں۔	4
					میں چاہتی ہوں کہ مارکیٹ میں ہر نئی آنے والی چیز کسی دوسرے سے پہلے لے لوں۔	5
					میں چیزیں دینے میں اسلئے مشکل محسوس کرتی/کرتا ہوں کہ میں دوبارہ خریدنے کی استطاعت نہیں رکھتی/رکھتا۔	6
					میں معاشرے میں اپنا مقام بنانے کیلئے چیزیں زیادہ اکھٹی کرتی/کرتا ہوں۔	7
					میرے لئے چیزوں کو خود سے الگ کرنا ایسا ہی ہے جیسے اپنے جسم کا کوئی حصہ خود سے الگ کر دیا جائے۔	8
					چیزوں کو سنبھال کر رکھنا میری تربیت کا حصہ ہے۔	9
					میں زیادہ تر چیزیں اس بے یقینی کے باعث جمع کر لیتی/لیتا ہوں کہ شاید پھر مارکیٹ میں نہ ملیں۔	10
					میں اپنے اندر کے خلا کو پر کرنے کیلئے بھی چیزیں اکھٹی کرتی رہتی/اکھٹا کرتا رہتا ہوں۔	11
					میرے نزدیک زیادہ چیزیں اکھٹی کرنے کی وجہ مذہب سے دوری ہے۔	12
					مجھے انسانوں کی نسبت چیزوں کیساتھ وقت گزارنا آسان محسوس ہوتا ہے۔	13
					میں چیزیں اس خیال سے سنبھال کر رکھتی/رکھتا ہوں کہ وہ کبھی نہ کبھی کام آ ہی جاتی ہیں۔	14
					میں کئی چیزیں صرف اسلئے خرید لیتی/لیتا ہوں کہ میرے پاس نہیں ہوتیں حالانکہ مجھے ان کی ضرورت بھی نہیں ہوتی۔	15
					کئی مرتبہ مجھے چیز رکھ کر یاد نہیں رہتا تو میں نئی چیز لے آتی/آتا ہوں اسلئے بھی چیزیں اکھٹی ہوتی رہتی ہیں۔	16
					مجھے اپنے اردگرد پھیلاوا رکھنے کی عادت ہے۔	17
					میری چیزیں میرے لئے ذہنی سکون کا باعث ہیں۔	18
					میں چیزیں اس لئے اکھٹی کرتی/کرتا ہوں کہ بہتر زندگی گزارنے کیلئے بہت زیادہ چیزوں کا ہونا بہت ضروری ہے۔	19

20	کسی چیز کوخود سے الگ کرنے کا مطلب ہے جیسے میری شناخت کا کوئی حصہ مجھ سے کھو جائے۔					

		1 بالکل نہیں	2 کبھی کبھار	3 زیادہ تر	4 اکثر اوقات	5 ہمیشہ
21	مجھے اپنی چیز دیتے ہوئے ایسا محسوس ہوتا ہے جیسے اس کے ساتھ گزرا وقت ہاتھ سے نکلا جا رہا ہو۔					
22	میں زیادہ تر چیزیں اسلئے خریدتی /خریدتا ہوں کہ وہ دستیاب ہوتی ہیں۔					
23	میں زیادہ تر چیزیں اسلئے اکھٹی کر لیتی/ لیتا ہوں کہ کسی چیز کی کمی کے باعث شرمندگی نہ اٹھانی پڑے۔					
24	میں کئی چیزیں آنے والے وقت کی منصوبہ بندی کرتے ہوئے اکھٹی کرتی /کرتا ہوں۔					
25	میری چیزیں میری انفرادیت کا تعین کرتی ہیں۔					
26	میری چیزیں میری تنہائی دور کرنے کا سبب بنتی ہیں۔					
27	میں کئی چیزیں اسلئے خرید لیتی/ لیتا ہوں کہ بعد میں وسائل ہوں نہ ہوں۔					
28	میں زیادہ تر چیزیں اس لئے سنبھال کر رکھتی/ رکھتا ہوں کہ مستقبل میں ان کی ضرورت پیش آ سکتی ہے۔					
29	مزاجاً تنگ دل ہونے کے باعث میرے پاس چیزیں اکھٹی ہوتی چلی جاتی ہیں۔					
30	میں چیزیں اسلئے اکھٹی کرتی /کرتا ہوں کہ چیزیں انسان کی سماجی حیثیت کا تعین کرتی ہیں۔					
31	میں چیزیں اس لئے سنبھال کر رکھتی/ رکھتا ہوں کہ وہ مجھے احساس ملکیت دیتی ہیں۔					
32	میں پسند نہیں کرتی /کرتا کہ کوئی مجھ سے پوچھے بغیر میری چیزوں کو ہاتھ لگائے۔					
33	میں کئی چیزیں بچپن کی محرومیوں کا ازالہ کرنے کیلئے جمع کرتی رہتی/کرتا رہتا ہوں۔					
34	میری چیزیں میرے لئے فخر کا باعث ہیں۔					
35	میں کئی چیزیں اس لئے لیتی/ لیتا ہوں کہ ہمارے معاشرے میں لوگوں کی قدر ان کے معاشی وسائل کی بنیاد پر کی جاتی ہے۔					
36	میں چیزیں اس لئے اکھٹی کرتی /کرتا ہوں کہ وہ مستقبل میں میرے یا میرے گھر والوں کے کام آ سکتی ہیں۔					
37	میں زیادہ تر چیزیں اسلئے سنبھال کر رکھتی/ رکھتا ہوں کہ دوسرے سے مانگنے کی ضرورت نہ پڑے۔					
38	میرے پاس جتنی بھی چیزیں ہوں، مجھے مزید کی خواہش رہتی ہے۔					
39	میں زیادہ تر چیزیں دوسروں سے معاشی برتری حاصل کرنے کیلئے جمع کرتی /کرتا ہوں۔					
40	میں اپنے اردگرد چیزیں اس لئے پھیلائے رکھتا/ رکھتی ہوں کہ وہ میرے ذہن سے نہ نکل جائیں۔					
41	جو چیزیں مجھے پسند ہوتی ہیں میں انھیں سنبھال کر رکھتی/ رکھتا ہوں، چاہے وہ میرے استعمال میں آئیں یا نہ آئیں۔					
42	میرے لئے کچھ چیزیں اتنی ہی بامعنی ہوتی ہیں جتنا ان سے وابستہ لمحے یا لوگ۔					

43	میں چیزیں اسلئے نہیں دے پاتی / پاتا ہوں کہ میرے والدین نے مجھے بچپن سے چیزیں سنبھال کر رکھنے کی عادت ڈالی ہے۔					

		1 بالکل نہیں	2 کبھی کبھار	3 زیادہ تر	4 اکثر اوقات	5 ہمیشہ
44	میں چیزیں اسلئے اکھٹی کرتی / کرتا ہوں کہ مجھ میں قناعت نہیں رہی۔					
45	میں چیزیں اسلئے اکھٹی کرتی / کرتا ہوں کہ وہ لوگوں کو میری پہچان کراتی ہیں۔					
46	میری چیزیں مجھے تحفظ کا احساس دیتی ہیں۔					
47	میرے پاس چیزیں اسلئے اکھٹی ہوتی رہتی ہیں کہ میں اپنی چیز کسی دوسرے کو دینے کا حوصلہ نہیں رکھتی/ رکھتا۔					
48	مجھے چیز دینے میں اسلئے مشکل محسوس ہوتی ہے کہ مجھے وہ حاصل کرنے میں بہت وقت لگا۔					
49	میں چیزیں ان کے متبادل استعمال کے خیال سے ضائع نہیں کرتی۔					
50	میری سستی کے باعث میرے پاس چیزیں اکھٹی ہوتی چلی جاتی ہیں۔					
51	میں چیزوں کی بدولت اپنے تعلقات کو محسوس کرتی / کرتا ہوں۔					
52	کسی چیز کو محفوظ کرنے کا مطلب ہے کہ مجھے اپنی یاداشت پر انحصار نہیں کرنا پڑے گا۔					
53	میں چیزیں اسلئے سنبھال کر رکھتی/ رکھتا ہوں کہ وہ مشکل وقت میں کام آسکتی ہیں۔					
54	میں زیادہ تر چیزیں اسلئے اکھٹی کرتی / کرتا ہوں کہ ضرورت پڑنے پر دوسرے لوگ اپنی چیز دینے سے انکار کر دیتے ہیں۔					
55	چونکہ میرے والدین چیزیں سنبھال کر رکھتے ہیں اس لئے مجھے بھی چیزیں اکھٹی کرنے کی عادت ہے۔					
56	چونکہ میں دین پر عمل نہیں کرتی / کرتا اسلئے مادی چیزیں زیادہ اکھٹی کرتی / کرتا ہوں۔					
57	چیزوں کا حصول مجھے کامیابی کا احساس دلاتا ہے۔					
58	میں اپنے اندر کے احساس محرومی کو چھپانے کیلئے بھی چیزوں کا سہارا لیتی/ لیتا ہوں۔					
59	میں چیزیں اس لیے سنبھال کر رکھتی/ رکھتا ہوں کہ وہ مجھے میرے ہونے کا احساس دلاتی ہیں۔					
60	چاہے میری چیزیں قابل استعمال نہ بھی ہوں تو پھر بھی میرے لئے بہت اہم ہوتی ہیں۔					
61	مجھے کچھ چیزوں کے بارے میں ضرور یاد رکھنا چاہئے اور میں نہیں رکھ پاؤں گی/ گا اگر میں وہ دے دوں۔					
62	میں زیادہ چیزیں اسلئے اکھٹی کرتی / کرتا ہوں کہ دوسروں کا مقابلہ کر سکوں۔					
63	چیزیں اکھٹی کرنا میرے مزاج کا حصہ ہے۔					
64	میں کئی چیزیں اس لئے اکھٹی کر لیتی/ لیتا ہوں کہ مہنگی نہ ہو جائیں۔					
65	مجھے اپنی چیزوں کی اسقدر عادت ہو جاتی ہے کہ دینے میں مشکل محسوس کرتی / کرتا ہوں۔					
66	اگر میں نے معاشی تنگدستی دیکھی ہوتی تو میں چیزیں زیادہ سنبھال کر رکھتی/ رکھتا۔					

		1	2	3	4	5
67	میرے نزدیک چیز دے دینا اس کی بے قدری ہے۔					
68	میرے لئے کئی دفعہ چیز اور اس سے وابستہ احساسات میں فرق کرنا مشکل ہوتا ہے۔					
		بالکل نہیں	کبھی کبھار	زیادہ تر	اکثر اوقات	ہمیشہ
69	میں زیادہ تر چیزیں دوسروں کی دیکھا دیکھی اکھٹی کر لیتی/ لیتا ہوں۔					
70	میرے پاس چیزیں اسلئے اکھٹی ہوتی چلی جاتی ہیں کہ میں مزاجاً کنجوس ہوں۔					
71	میرے گھر میں کئی چیزیں صرف بزرگوں کے احترام میں پڑی رہتی ہیں۔					
72	معاشرے میں بے حسی زیادہ ہونے کے باعث میں چیزوں پر زیادہ بھروسہ کرتی /کرتا ہوں۔					
73	میں چیز دینے میں اس لئے مشکل محسوس کرتی /کرتا ہوں کہ میں نے انہیں بہت مشکل سے حاصل کیا ہے۔					
74	میرے نزیک چیزیں اکھٹی کرنے کی وجہ یہ ہے کہ ہم میں جائز ناجائز کا تصور ختم ہو گیا ہے۔					
75	میرے پاس اسلئے بھی زیادہ چیزیں اکھٹی ہو جاتی ہیں کہ میں انہیں دوسروں کو دے دینے کا فیصلہ کرنے میں مشکل محسوس کرتی /کرتا ہوں۔					
76	میں چیزیں اسلئے جمع کرتی رہتی/کرتا رہتا ہوں کہ ہمارے معاشرے میں مادی چیزوں کی اہمیت بڑھتی جا رہی ہے۔					
77	میں زیادہ تر چیزیں دکھاوے کیلئے خریدتی /خریدتا ہوں۔					
78	میں چیزیں اپنی یا بچوں/ بہن بھائیوں وغیرہ کی زندگی آسان بنانے کیلئے اکھٹی کرتی /کرتا ہوں۔					
79	میں چیزیں اسلئے جمع کرتی /کرتا ہوں کہ وہ میری ذاتی اہمیت میں اضافہ کرتی ہیں۔					
80	میں کئی چیزیں صرف جہیز/ بری بنانے کی غرض سے جمع کرتی رہتی/کرتا رہتا ہوں۔					

Appendix -F

Determinants of Hoarding Scale

ذیل میں دیئے گئے بیانات چیزیں خریدنے یا جمع کرنے اور اپنی ملکیت میں موجود چیزوں سے وابستہ آپ کے احساسات اور جذبات سے متعلق ہیں۔ برائے مہربانی ہر بیان کو غور سے پڑھیں اور دیئے گئے نمبروں میں سے اس کے گرد دائرہ لگائیں جو آپ کے تجربے سے قریب ترین مماثلت رکھتا ہے۔

		1 بالکل نہیں	2 کبھی کبھار	3 زیادہ تر	4 اکثر اوقات	5 ہمیشہ
1	مجھے انسانوں کی نسبت چیزوں کیساتھ وقت گزارنا آسان محسوس ہوتا ہے۔					
2	میں چیزیں اس خیال سے سنبھال کر رکھتی/رکھتا ہوں کہ وہ کبھی نہ کبھی کام آ ہی جاتی ہیں۔					
3	میں زیادہ تر چیزیں اسلئے اکھٹی کر لیتی/لیتا ہوں کہ کسی چیز کی کمی کے باعث شرمندگی نہ اٹھانی پڑے۔					
4	میں کئی چیزیں آنے والے وقت کی منصوبہ بندی کرتے ہوئے اکھٹی کرتی/کرتا ہوں۔					
5	میری چیزیں میری انفرادیت کا تعین کرتی ہیں۔					
6	میری چیزیں میری تنہائی دور کرنے کا سبب بنتی ہیں۔					
7	میں زیادہ تر چیزیں اس لئے سنبھال کر رکھتی/رکھتا ہوں کہ مستقبل میں ان کی ضرورت پیش آ سکتی ہے۔					
8	میں چیزیں اس لئے سنبھال کر رکھتی/رکھتا ہوں کہ وہ مجھے احساس ملکیت دیتی ہیں۔					
9	میری چیزیں میرے لئے فخر کا باعث ہیں۔					
10	میں زیادہ تر چیزیں اسلئے سنبھال کر رکھتی/رکھتا ہوں کہ دوسرے سے مانگنے کی ضرورت نہ پڑے۔					
11	میں زیادہ تر چیزیں دوسروں سے معاشی برتری حاصل کرنے کیلئے جمع کرتی/کرتا ہوں۔					
12	میں چیزیں اسلئے اکھٹی کرتی/کرتا ہوں کہ وہ لوگوں کو میری پہچان کراتی ہیں۔					
13	میری چیزیں مجھے تحفظ کا احساس دیتی ہیں۔					
14	میرے پاس چیزیں اسلئے اکھٹی ہوتی رہتی ہیں کہ میں اپنی چیز کسی دوسرے کو دینے کا حوصلہ نہیں رکھتی/رکھتا۔					
15	مجھے چیز دینے میں اسلئے مشکل محسوس ہوتی ہے کہ مجھے وہ حاصل کرنے میں بہت وقت لگا۔					
16	میں چیزیں اسلئے سنبھال کر رکھتی/رکھتا ہوں کہ وہ مشکل وقت میں کام آ سکتی ہیں۔					
17	چیزوں کا حصول مجھے کامیابی کا احساس دلاتا ہے۔					
18	میں زیادہ چیزیں اسلئے اکھٹی کرتی/کرتا ہوں کہ دوسروں کا مقابلہ کر سکوں۔					
19	میں کئی چیزیں اس لئے اکھٹی کر لیتی/لیتا ہوں کہ مہنگی نہ ہو جائیں۔					
20	میں زیادہ تر چیزیں دوسروں کی دیکھا دیکھی اکھٹی کر لیتی/لیتا ہوں۔					
21	میں چیزیں اسلئے جمع کرتی رہتی/کرتا رہتا ہوں کہ ہمارے معاشرے میں مادی چیزوں کی اہمیت بڑھتی جا رہی ہے۔					
22	میں چیزیں اپنی یا بچوں/بہن بھائیوں وغیرہ کی زندگی آسان بنانے کیلئے اکھٹی کرتی/کرتا ہوں۔					

Date: ______________

For each question below, circle the number that corresponds most closely to your experience DURING THE PAST WEEK.

0 ------------- 1 ------------------ 2 ---------------- 3 ---------------- 4

0	1	2	3	4
None	A little	A moderate amount	Most/Much	Almost All/ Complete

Question					
1. How much of the living area in your home is cluttered with possessions? (Consider the amount of clutter in your kitchen, living room, dining room, hallways, bedrooms, bathrooms, or other rooms).	0	1	2	3	4
2. How much control do you have over your urges to acquire possessions?	0	1	2	3	4
3. How much of your home does clutter prevent you from using?	0	1	2	3	4
4. How much control do you have over your urges to save possessions?	0	1	2	3	4
5. How much of your home is difficult to walk through because of clutter?	0	1	2	3	4

For each question below, circle the number that corresponds most closely to your experience DURING THE PAST WEEK.

0 -------------------- 1 ------------------ 2 ------------------ 3 ------------------ 4

0	1	2	3	4
Not at all	Mild	Moderate	Considerable/ Severe	Extreme

Question					
6. To what extent do you have difficulty throwing things away?	0	1	2	3	4
7. How distressing do you find the task of throwing things away?	0	1	2	3	4
8. To what extent do you have so many things that your room(s) are cluttered?	0	1	2	3	4
9. How distressed or uncomfortable would you feel if you could not acquire something you wanted?	0	1	2	3	4
10. How much does clutter in your home interfere with your social, work or everyday functioning? Think about things that you don't do because of clutter.	0	1	2	3	4
11. How strong is your urge to buy or acquire free things for which you have no immediate use?	0	1	2	3	4

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Saving Inventory – Revised

For each question below, circle the number that corresponds most closely to your experience DURING THE PAST WEEK:

0	1	2	3	4
Not at all	Mild	Moderate	Considerable/ Severe	Extreme

12. To what extent does clutter in your home cause you distress?	0	1	2	3	4
13. How strong is your urge to save something you know you may never use?	0	1	2	3	4
14. How upset or distressed do you feel about your acquiring habits?	0	1	2	3	4
15. To what extent do you feel unable to control the clutter in your home?	0	1	2	3	4
16. To what extent has your saving or compulsive buying resulted in financial difficulties for you?	0	1	2	3	4

For each question below, circle the number that corresponds most closely to your experience DURING THE PAST WEEK.

0	1	2	3	4
Never	Rarely	Sometimes/ Occasionally	Frequently/ Often	Very Often

17. How often do you avoid trying to discard possessions because it is too stressful or time consuming?	0	1	2	3	4
18. How often do you feel compelled to acquire something you see? e.g., when shopping or offered free things?	0	1	2	3	4
19. How often do you decide to keep things you do not need and have little space for?	0	1	2	3	4
20. How frequently does clutter in your home prevent you from inviting people to visit?	0	1	2	3	4
21. How often do you actually buy (or acquire for free) things for which you have no immediate use or need?	0	1	2	3	4
22. To what extent does the clutter in your home prevent you from using parts of your home for their intended purpose? For example, cooking, using furniture, washing dishes, cleaning, etc.	0	1	2	3	4
23. How often are you unable to discard a possession you would like to get rid of?	0	1	2	3	4

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Hoarding Rating Scale

Please use the following scale when answering items below:

0 = no problem
2 = mild problem, occasionally (less than weekly) acquires items not needed, or acquires a few unneeded items
4 = moderate, regularly (once or twice weekly) acquires items not needed, or acquires some unneeded items
6 = severe, frequently (several times per week) acquires items not needed, or acquires many unneeded items
8 = extreme, very often (daily) acquires items not needed, or acquires large numbers of unneeded items

1. Because of the clutter or number of possessions, how difficult is it for you to use the rooms in your home?

0	1	2	3	4	5	6	7	8
Not at all Difficult		Mild		Moderate		Severe		Extremely Difficult

2. To what extent do you have difficulty discarding (or recycling, selling, giving away) ordinary things that other people would get rid of?

0	1	2	3	4	5	6	7	8
No difficulty		Mild		Moderate		Severe		Extreme Difficulty

3. To what extent do you currently have a problem with collecting free things or buying more things than you need or can use or can afford?

0	1	2	3	4	5	6	7	8
None		Mild		Moderate		Severe		Extreme

4. To what extent do you experience emotional distress because of clutter, difficulty discarding or problems with buying or acquiring things?

0	1	2	3	4	5	6	7	8
None/ Not at all		Mild		Moderate		Severe		Extreme

5. To what extent do you experience impairment in your life (daily routine, job / school, social activities, family activities, financial difficulties) because of clutter, difficulty discarding, or problems with buying or acquiring things?

0	1	2	3	4	5	6	7	8
None/ Not at all		Mild		Moderate		Severe		Extreme

Appendix-I

FACES IV: Questionnaire

Directions to Family Members

1. *All family members over the age of 12 can complete FACES IV.*
2. *Family members should complete the instrument independently, not consulting or discussing their responses until they have been completed.*
3. *Fill in the corresponding* ***number*** *in the space provided answer sheet.*

Using the 5-point Likert scale provide below, please indicate the degree to which you agree or disagree with each statement about yourself.

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

Items	Rating				
1. Family members are involved in each other's lives.	1	2	3	4	5
2. Our family tries new ways of dealing with problems.	1	2	3	4	5
3. We get along better with people outside our family than inside.	1	2	3	4	5
4. We spend too much time together.	1	2	3	4	5
5. There are strict consequences for breaking the rules in our family.	1	2	3	4	5
6. We never seem to get organized in our family.	1	2	3	4	5
7. Family members feel very close to each other.	1	2	3	4	5
8. Parents equally share leadership in our family.	1	2	3	4	5
9. Family members seem to avoid contact with each other when at home.	1	2	3	4	5
10. Family members feel pressured to spend most free time together.	1	2	3	4	5
11. There are clear consequences when a family member does something wrong.	1	2	3	4	5
12. It is hard to know who the leader is in our family.	1	2	3	4	5
13. Family members are supportive of each other during difficult times.	1	2	3	4	5
14. Discipline is fair in our family.	1	2	3	4	5
15. Family members know very little about the friends of other family members.	1	2	3	4	5
16. Family members are too dependent on each other.	1	2	3	4	5
17. Our family has a rule for almost every possible situation.	1	2	3	4	5
18. Things do not get done in our family.	1	2	3	4	5

1	2	3	4	5
Strongly Disagree	**Generally Disagree**	**Undecided**	**Generally Agree**	**Strongly Agree**

Items	**Rating**				
19. Family members consult other family members on important decisions.	**1**	**2**	**3**	**4**	**5**
20. My family is able to adjust to change when necessary.	**1**	**2**	**3**	**4**	**5**
21. Family members are on their own when there is a problem to be solved.	**1**	**2**	**3**	**4**	**5**
22. Family members have little need for friends outside the family.	**1**	**2**	**3**	**4**	**5**
23. Our family is highly organized.	**1**	**2**	**3**	**4**	**5**
24. It is unclear who is responsible for things (chores, activities) in our family.	**1**	**2**	**3**	**4**	**5**
25. Family members like to spend some of their free time with each other.	**1**	**2**	**3**	**4**	**5**
26. We shift household responsibilities from person to person.	**1**	**2**	**3**	**4**	**5**
27. Our family seldom does things together.	**1**	**2**	**3**	**4**	**5**
28. We feel too connected to each other.	**1**	**2**	**3**	**4**	**5**
29. Our family becomes frustrated when there is a change in plans or routines.	**1**	**2**	**3**	**4**	**5**
30. There is no leadership in our family.	**1**	**2**	**3**	**4**	**5**
31. Although family members have individual interests, they still participate in family activities.	**1**	**2**	**3**	**4**	**5**
32. We have clear rules and roles in our family.	**1**	**2**	**3**	**4**	**5**
33. Family members seldom depend on each other.	**1**	**2**	**3**	**4**	**5**
34. We resent family members doing things outside the family.	**1**	**2**	**3**	**4**	**5**
35. It is important to follow the rules in our family.	**1**	**2**	**3**	**4**	**5**
36. Our family has a hard time keeping track of who does various household tasks.	**1**	**2**	**3**	**4**	**5**
37. Our family has a good balance of separateness and closeness.	**1**	**2**	**3**	**4**	**5**
38. When family problems arise, we compromise.	**1**	**2**	**3**	**4**	**5**
39. Family members mainly operate independently.	**1**	**2**	**3**	**4**	**5**
40. Family members feel guilty if they want to spend time away from the family.	**1**	**2**	**3**	**4**	**5**
41. Once a decision is made, it is very difficult to modify that decision.	**1**	**2**	**3**	**4**	**5**
42. Our family feels hectic and disorganized.	**1**	**2**	**3**	**4**	**5**
43. Family members are satisfied with how they communicate with each other.	**1**	**2**	**3**	**4**	**5**
44. Family members are very good listeners.	**1**	**2**	**3**	**4**	**5**

1	2	3	4	5
Strongly Disagree	**Generally Disagree**	**Undecided**	**Generally Agree**	**Strongly Agree**

Items	Rating				
45. Family members express affection to each other.	1	2	3	4	5
46. Family members are able to ask each other for what they want.	1	2	3	4	5
47. Family members can calmly discuss problems with each other.	1	2	3	4	5
48. Family members discuss their ideas and beliefs with each other.	1	2	3	4	5
49. When family members ask questions of each other, they get honest answers.	1	2	3	4	5
50. Family members try to understand each other's feelings.	1	2	3	4	5
51. When angry, family members seldom say negative things about each other.	1	2	3	4	5
52. Family members express their true feelings to each other.	1	2	3	4	5

1	2	3	4	5
Very Dissatisfied	**Somewhat Dissatisfied**	**Generally Satisfied**	**Very Satisfied**	**Extremely Satisfied**

Items	Rating				
53. The degree of closeness between family members.	1	2	3	4	5
54. Your family's ability to cope with stress.	1	2	3	4	5
55. Your family's ability to be flexible.	1	2	3	4	5
56. Your family's ability to share positive experiences.	1	2	3	4	5
57. The quality of communication between family members.	1	2	3	4	5
58. Your family's ability to solve conflicts	1	2	3	4	5
59. The amount of time you spend together as a family.	1	2	3	4	5
60. The way problems are discussed.	1	2	3	4	5
61. The fairness of criticism in your family.	1	2	3	4	5
62. Family member's concern for each other.	1	2	3	4	5

Thank you for Your Cooperation!

Depression Anxiety Stress Scale (Urdu)

نوٹ: مندرجہ ذیل بیانات میں سے جوپچھلے ایک ہفتے کے دوران آپ پر صحیح ثابت ہوئے ان کے سامنے 3,2,1,0 میں سے کسی ایک ہندسے پر نشان لگائیں۔ واضح رہے کہ آپ کے جوابات کو صحیح یا غلط تصور نہیں کیا جائے گا۔ کسی بھی بیان پر زیادہ وقت ضائع نہ کریں۔

نمبر شمار	بیانات	کبھی نہیں	کبھی کبھار	زیادہ تر وقت	ہر وقت
		0	1	2	3
1	میرے لیے پُرسکون ہونا مشکل ہو جاتا ہے۔				
2	مجھے یہ احساس ہوتا رہا ہے جیسے میرا منہ خشک ہو رہا ہے۔				
3	مجھے کسی قسم کے مثبت جذبات محسوس نہیں ہوئے۔				
4	مجھے سانس لینے میں دشواری محسوس ہوتی رہی ہے (بغیر کسی جسمانی مشقت والے کام کے)۔				
5	مجھے کسی کام کے کرنے کے لیے آغاز کرنا مشکل محسوس ہوتا رہا ہے۔				
6	میں نے بعض حالات میں غیر ضروری ردعمل کا اظہار کیا۔				
7	مجھے کپکپاہٹ محسوس ہوتی رہی ہے (مثلاً ہاتھوں میں)۔				
8	میں نے محسوس کیا ہے کہ میں بہت زیادہ ذہنی توانائی استعمال کر رہی/ رہا ہوں۔				
9	میں ایسے حالاے سے گھبراتی /گھبراتا رہا جن مین میرے احمق بننے اور میری بے چینی بڑھنے کا خدشا تھا۔				
10	میں اپنا مستقبل تاریک محسوس کرتی /کرتا رہا۔				
11	مجھے اپنے آپ پر چڑ چڑاپن محسوس ہوتا رہا۔				
12	میں ذہنی طور پر بے سکونی محسوس کرتی /کرتا ہوں۔				
13	میں اُداسی محسوس کرتی /کرتا رہا۔				
14	میرے لیے اس چیز یا شخص کو برداشت کرنا مشکل رہا ہے جو میرے کام میں رکاوٹ پیدا کرے۔				
15	مجھے محسوس ہوتا رہا ہے جیسے مجھے دورہ پڑنے لگا ہے۔				
16	مجھے کسی بھی کام میں دلچسپی نہیں رہی۔				
17	مجھے محسوس ہوتا رہا کہ میں کسی قابل نہیں ہوں۔				
18	مجھے محسوس ہوتا رہا کہ میں بہت جذباتی ہو جاتا/ جاتی ہوں۔				
19	مجھے بلاوجہ بغیر کسی جسمانی مشقت کے دل کی دھڑکن تیز محسوس ہوتی رہی۔				
20	میں بغیر کسی وجہ کے خوفزدہ ہو جاتی / جاتا رہا۔				
21	مجھے یہ احساس ہوتا رہا کہ زندگی بے معنی ہے۔				

Appendix-K

Obsessive Compulsive Inventory-Revised (Urdu)

مندرجہ ذیل عبارات بہت سے لوگوں کے اس تجربے سےمتعلق ہیں جو کہ روز مرہ زندگی میں ہوتے ہیں۔ اس ہندسے کو دائرہ لگائیں جوآپکے پچھلے ایک مہینے کی پریشانی یا تکلیف کے تجربے کو بہترین بیان کریں۔

حد سے زیادہ 4	بہت زیادہ 3	درمیانہ 2	تھوڑا بہت 1	بلکل نہیں 0	
					1۔میں نے بہت سی چیزیں سنبھال رکھی ہیں جو میرے رستے میں آتی ہیں۔
4	3	2	1	0	2۔ میں اکثر ضرورت سے زیادہ چیزوں کی جانچ پڑتال کرتا/ کرتی ہوں۔
4	3	2	1	0	3۔ اگر اشیا صحیح طریقے سے ترتیب میں نہ ہو تو میں پریشان ہو جاتا/جاتی ہوں۔
4	3	2	1	0	4۔ جب میں کوئی کام کر رہا/رہی ہوتی ہو تو گننے کے لئے مجبور محسوس کرتا/ کرتی ہوں۔
4	3	2	1	0	5۔ مجھے ایسی چیزکو چھونامشکل لگتا ہے جب مجھےمعلوم ہوکہ اسے اجنبی یا کچھ لوگوں نے ہاتھ لگایا ہے۔
4	3	2	1	0	6۔ مجھے اپنے خیالات پر قابو پانا مشکل لگتا ہے۔
4	3	2	1	0	7۔ میں چیزوں کو جمع کرتا/ کرتی ہوجن کی مجھے ضرورت نہیں ہوتی۔
4	3	2	1	0	8۔میں بار بار دروازوں کھڑکیوں اور درازوں کی جانچ پڑتال کرتا/ کرتی ہوں۔
4	3	2	1	0	9۔ میں پریشان ہوجاتا/جاتی ہوں اگر دوسرے میری ترتیب کردہ چیزوں کو تبدیل کر دیں
4	3	2	1	0	10۔ میں محسوس کرتا/ کرتی ہوں کہ مجھے مخصوص نمبروں کو دوھرانا پڑتا ہے۔
4	3	2	1	0	11۔ مجھے اکثر اوقات اپنے آپ کو نہانا یا صاف کرنا پڑتا ہے کیونکہ میں خود کو آلودہ محسوس کرتا/ کرتی ہوں۔
4	3	2	1	0	12۔ میں ان ناخشگوار سوچوں سے پریشان ہو جاتا/جاتی ہوں جو میری مرضی کے خلاف میرے ذہن میں آتی ہیں۔
4	3	2	1	0	13۔ میں چیزوں کو پھینکنے سے گریز کرتا / کرتی ہوں کیونکہ میں ڈرتا / ڈرتی ہوں کہ مجھے بعد میں انکی ضرورت پڑ سکتی ہے۔
4	3	2	1	0	14۔ میں گیس ، پانی کے نلکوں اور بجلی کے سوئچوں کو بند کر دینے کے بعد بار بار جانچ پڑتال کرتا / کرتی ہوں۔
4	3	2	1	0	15۔ مجھے چیزوں کو ایک خاص ترتیب سے رکھنے کی ضرورت پڑتی ہے ۔
4	3	2	1	0	16۔ میں محسوس کرتا / کرتی ہوں کہ اچھے اور برے نمبر ہوتے ہیں۔
4	3	2	1	0	17۔ میں اکثر و بیشتر اپنے ہاتھ ضرورت سے زیادہ دھوتا / دھوتی ہوں ۔
4	3	2	1	0	18۔ مجھے اکثر اوقات برے خیالات آتے ہیں جن سے چھٹکارا پانا مشکل ہوتا ہے۔

Appendix-L

Adult Attachment Scale (Urdu)

	سوالات	بالکل متفق	متفق	معلوم نہیں	غیر متفق	بالکل غیر متفق
1	میرے لیے دوسروں پر بھروسہ کرنا مشکل ہو جاتا ہے۔					
2	لوگ اُس وقت کبھی نہیں ہوتے جب آپ کو اُن کی ضرورت ہوتی ہے۔					
3	میں دوسروں پر انحصار کر کے مُطمئن رہتا/ رہتی ہوں۔					
4	میں جانتا/ جانتی ہوں کہ دوسرے وہاں ہوں گے جب مجھے اُن کی ضرورت ہوگی۔					
5	مجھے دوسروں پر مکمل بھروسہ کرنا مشکل لگتا ہے۔					
6	مجھے یقین نہیں کہ میں بوقت ضرورت ہمیشہ دوسروں پر بھروسہ کر سکتا/ سکتی ہوں۔					
7	میں اکثر اکیلا/ اکیلی چھوڑ دینے کے بارے میں پریشان نہیں ہوتا/ ہوتی۔					
8	میں اکثر پریشان رہتا/ رہتی ہوں کہ دوسرے مجھ سے حقیقی محبت نہیں کرتے۔					
9	مجھے ایسا لگتا ہے کہ دوسرے میرے اتنا قریب آنے سے ہچکچاتے ہیں جتنا میں چاہتا/ چاہتی ہوں۔					
10	میں اکثر پریشان رہتا/ رہتی ہوں کہ دوسرے میرے ساتھ رہنا نہیں چاہیں گے۔					
11	میں مکمل طور پر کسی دوسرے شخص کے ساتھ گھل مل جانا چاہتی/ چاہتا ہوں۔					
12	میری دوسروں کے ساتھ گھل مل جانے کی خواہش بعض اوقات لوگوں کو ڈرا کر مجھ سے دُور کر دیتی ہے۔					
13	میرے لیے کسی حد تک دوسروں سے قریب ہونا آسان ہے۔					
14	مجھے اکثر اس بارے میں پریشانی نہیں ہوتی کہ کوئی میرے قریب ہو رہا ہے۔					
15	میں کسی حد تک دوسروں سے قریب ہونے میں بے چین ہوتا/ ہوتی ہوں۔					
16	جب کوئی میرے بہت قریب ہو جائے تو میں گھبرا جاتا/ جاتی ہوں۔					
17	میں پُرسکون ہوتا/ ہوتی ہوں جب دوسرے مجھ پر انحصار کریں۔					
18	میں بے چینی محسوس کرتا/ کرتی ہوں جب دوسرے چاہتے ہیں کہ میں بہت قریب ہو جاؤں۔					

Appendix-M

Young Schema Questionnaire (Urdu)

ذیل میں دیے گئے پیمانے میں سے 1 سے 6 تک اس ہندسے کا انتخاب کریں جو آپ کی بہترین وضاحت کرتا ہے اور اپنا جواب ہر بیان کے سامنے دی گئی سطر پر لکھیں۔

بالکل غلط = 1 | درمیانی حد تک درست = 4

زیادہ تر غلط = 2 | زیادہ تر درست = 5

کسی حد تک درست = 3 | بالکل درست = 6

1- میرے پاس کبھی کوئی ایسا نہیں رہا جو میرے ساتھ پیش آنے والی ہر بات کا دل کی گہرائی سے خیال رکھے۔ ______

2 میں محسوس کرتا ہوں کہ لوگ مجھ سے فائدہ اٹھائیں گے۔ ______

3- میں موزوں نہیں ہوں۔ ______

4- میں اپنے آپ کو معمول کے اور غیر دلچسپ کاموں کے مکمل کرنے کے لیے منظم نہیں کر سکتا۔ ______

5- اہم لوگوں سے جان پہچان اور پیسہ ہو تو میں اپنے آپ کو اہم سمجھتا ہوں۔ ______

6- میرے پاس کوئی ایسا نہیں ہے جو مجھے شفقت، سہارا اور محبت دے۔ ______

7- میں محسوس کرتا ہوں کہ میں دوسروں کی موجودگی میں محتاط رہوں ورنہ لوگ ارادتاً مجھے تکلیف پہنچائیں گے۔ ______

8- میں بنیادی طور پر دوسروں سے مختلف ہوں۔ ______

9- اگر میں مقصد تک نہ پہنچ سکوں تو آسانی سے مایوس ہو جاتا ہوں اور ہمت ہار دیتا ہوں۔ ______

10- کامیابی میرے لیے بہت بامعنی ہوتی ہے اگر لوگ اس پر دھیان دیں۔ ______

11- میں نے کبھی محسوس نہیں کیا کہ میں کسی کے لیے خاص ہوں۔ ______

12- لوگ کسی بھی وقت مجھے دھوکہ دے سکتے ہیں۔ ______

13- میرا کسی سے تعلق نہیں، میں تنہا ہوں۔ ______

14- دور رس مقاصد حاصل کرنے کے لیے اپنی وقتی خواہشات کو قربان کرنا میرے لیے مشکل وقت ہوتا ہے۔ ______

15- جب تک مجھے دوسروں کی طرف سے بہت زیادہ توجہ نہ ملے میں اپنے آپ کو کم اہم سمجھتا ہوں۔ ______

16- میرے پاس کبھی کوئی ایسا نہیں رہا جو حقیقتاً مجھے سنے، سمجھے اور میری تمام ضروریات اور احساسات کا خیال رکھے۔ ______

17- میں دوسرے لوگوں کے عزائم کے بارے میں کافی حد تک مشکوک رہتا ہوں۔ ______

18- میں اپنے آپ کو دوسروں سے الگ تھلگ اور لاتعلق محسوس کرتا ہوں۔ ______

19- میں وہ کام کرنے پر خود کو مجبور نہیں کر سکتا جس میں میری خوشی نہ ہو اگرچہ وہ میرے فائدے کے لیے ہے۔ ______

20- اگر کسی محفل میں مجھے اپنی رائے کا اظہار کرنا پڑے یا کسی سے تعارف کروانا پڑے تو میرے لیے یہ ضروری ہے کہ مجھے اہمیت دی جائے اور میری تعریف کی جائے ______

21- میرے پاس کبھی کوئی ایسا عقلمند شخص نہیں رہا جو مجھے نصیحت کرے جب میں پُر یقین نہیں ہوتا کہ کیا کروں۔ ______

22- میں عام طور پر لوگوں کے مذموم ارادوں کی تلاش میں رہتا ہوں۔ ______

23 میں ہمیشہ خود کو گروہ کے لوگوں سے الگ محسوس کرتا ہوں۔ ______

24- میں بہت کم اپنے ارادوں پر قائم رہ سکا ہوں۔ ______

25- بہت زیادہ تعریفیں اور ستائش مجھے قابل قدر شخص ہونے کا احساس دلاتی ہیں۔ ______

Appendix-N

Exploratory Factor Solutions of Saving Inventory Revised

4 Factor Solution					3 Factor Solution				2 Factor Solution			Single Factor Solution	
Item no.	**F1**	**F2**	**F3**	**F4**	**Item no.**	**F1**	**F2**	**F3**	**Item no.**	**F1**	**F2**	**Item no.**	**F1**
SI5	.79	.009	-.12	-.04	***SI5***	.84	-.18	-.09	***SI5***	.73	-.15	***SI20***	.66
SI3	.71	-.09	-.11	-.01	***SI3***	.68	-.17	-.07	***SI20***	.61	.08	***SI5***	.60
SI15	.59	-.05	.06	-.03	***SI8***	.61	-.11	.01	***SI15***	.60	-.09	***SI23***	.59
SI1	.52	.03	-.17	.17	***SI15***	.58	.007	-.09	***SI3***	.59	-.14	***SI18***	.59
SI11	.44	-.11	.38	-.02	***SI20***	.58	.09	.04	***SI11***	.57	.04	***SI11***	.58
SI8	.43	.24	-.11	-.002	***SI1***	.57	-.22	.14	***SI8***	.53	-.02	***SI22***	.55
SI16	.25	.17	.14	-.13	***SI22***	.50	.02	.06	***SI10***	.50	.02	***SI15***	.51
SI23	.24	.24	.14	.13	***SI10***	.43	.13	-.04	***SI22***	.49	.10	***SI8***	.51
SI22	.14	.62	-.08	-.06	***SI23***	.40	.15	.14	***SI16***	.46	-.06	***SI10***	.50
SI21	-.003	.46	.13	-.009	***SI11***	.40	.31	-.08	***SI23***	.44	.24	***SI19***	.48
SI20	.31	.43	.04	-.03	***SI16***	.35	.16	-.11	***SI18***	.43	.24	***SI3***	.48

SI19	.09	.41	-.005	.13	***SI19***	.34	.05	.21	***SI1***	.42	.07	***SI21***	.47
SI17	-.24	.40	.05	.19	***SI21***	.27	.19	.08	***SI21***	.34	.19	***SI1***	.46
SI18	.08	.35	.27	.04	***SI9***	-.07	.62	-.01	***SI19***	.31	.26	***SI7***	.44
SI10	.23	.32	.09	-.08	***SI13***	-.06	.57	.03	***SI14***	.29	.21	***SI14***	.43
SI13	.02	-.16	.68	.07	***SI12***	-.08	.37	-.001	***SI9***	.28	.19	***SI16***	.41
SI9	-.06	.06	.58	-.03	***SI14***	.11	.36	.06	***SI13***	.25	.22	***SI13***	.40
SI14	.02	.17	.34	.05	***SI18***	.28	.32	.11	***SI12***	.13	.11	***SI9***	.40
SI12	-.15	.17	.31	-.06	***SI4***	-.07	.23	-.07	***SI2***	.07	.07	***SI6***	.26
SI2	-.04	.07	.19	-.01	***SI2***	-.05	.22	-.009	***SI4***	.06	.02	***SI17***	.25
SI4	-.09	.07	.18	-.08	***SI6***	-.13	-.11	.88	***SI6***	-.24	.75	***SI12***	.21
SI7	.18	-.07	.02	.73	***SI7***	.13	-.01	.59	***SI7***	.03	.61	***SI2***	.12
SI6	-.14	.15	-.08	.71	***SI17***	-.03	.14	.30	***SI17***	-.02	.38	***SI4***	.07

Saving Inventory Revised (Urdu)

نیچے دیئے گئے ہر سوال کے لئے اس نمبر کے گرد دائرہ لگائیں جو آپ کے تجربے سے قریب ترین مماثلت/مطابقت رکھتا ہے۔

پچھلے ہفتے کے دوران

		0 بالکل نہیں	1 تھوڑا سا	2 درمیانی حد تک	3 کافی حد تک	4 مکمل طور پر
1	آپ کے گھر کا کتنا رہائشی حصہ آپ کی ملکیت میں موجود اشیاء کی وجہ سے بے ترتیب ہے؟ اُس تمام اشیاء					
2	آپ چیزیں حاصل کرنے کی شدید خواہش پر کتنا اختیار رکھتے ہیں؟					
3	اشیاء کے انبار کی بے ترتیبی آپ کو گھر کا کتنا حصہ استعمال کرنے سے روکتی ہے؟					
4	آپ اپنی ملکیت میں موجود چیزوں کو جمع کیے رکھنے کی شدید خواہش پر کتنا اختیار رکھتے ہیں؟					
5	آپ کے گھر کے کتنے حصے میں اشیاء کے انبار کی بے ترتیبی کے باعث چلنے پھرنے میں مشکل پیش آتی ہے؟					

		0 بالکل نہیں	1 معمولی حد تک	2 درمیانی حد تک	3 شدید	4 انتہائی شدید
6	آپ کو چیزیں پھینکنے/چھٹکارا حاصل کرنے میں کس حد تک مشکل پیش آتی ہے؟					
7	آپ کو چیزیں پھینکنے/چھٹکارا حاصل کرنے کا کام کس حد تک پریشان کن لگتا ہے؟					
8	کس حد تک آپ کے پاس اتنی زیادہ اشیاء ہیں کہ آپ کے کمرے بے ترتیب نظر آتے ہیں؟					
9	آپ کتنی پریشانی یا بے چینی محسوس کریں گے اگر آپ کوئی ایسی چیز نہ لے سکیں جو آپ لینا چاہتے ہوں؟					
10	آپ کے گھر میں موجود اشیاء کا انبار/ڈھیر آپ کی سماجی، پیشہ ورانہ یا روزمرہ کی کارکردگی میں کتنا دخل انداز ہوتا ہے؟ اُن کاموں کے بارے میں سوچئے جو آپ اشیاء کے انبار کی بے ترتیبی کی وجہ سے نہیں کرتے۔					
11	آپ کی کتنی شدید خواہش ہے کہ آپ وہ چیزیں خریدیں یا مفت حاصل کریں جن کے استعمال کی آپ کو فوری ضرورت نہیں ہے؟					
12	گھر میں اشیاء کے انبار کی بے ترتیبی آپ کو کس حد تک پریشان کرتی ہے؟					
13	آپ کی کتنی شدید خواہش ہوتی ہے کہ آپ کسی چیز کو سنبھال کر رکھیں جو آپ جانتے ہیں کہ شاید آپ کبھی استعمال نہ کریں؟					
14	آپ اپنی چیزیں اکٹھی کرنے کی عادت کے بارے میں کتنی پریشانی یا تکلیف محسوس کرتے ہیں؟					

						آپ کس حد تک گھر میں اشیاء کے انبار کی بے ترتیبی پر قابو پانے سے قاصر محسوس کرتے ہیں؟	15
						کس حد تک آپ کا چیزیں محفوظ کرنا یا بغیر سوچے سمجھے خریداری آپ کے لئے مالی مشکلات کا باعث بنتی ہے؟	16

4 کئی مرتبہ	3 اکثر	2 کبھی کبھار	1 شاذ و نادر	0 کبھی نہیں		
					کتنی بار آپ نے چیزوں کو مسترد کرنے کی کوشش سے گریز کیا کیونکہ یہ بہت ذہنی دباؤ کا باعث اور وقت طلب ہے؟	17
					آپ کتنی دفعہ کسی بھی دیکھی گئی چیز کو حاصل کرنے کے لئے مجبور محسوس کرتے ہیں؟ جیسے خریداری کرتے ہوئے یا مفت چیزوں کی پیشکش پر۔	18
					کتنی دفعہ آپ ان چیزوں کو رکھنے کا فیصلہ کر لیتے ہیں جن کی آپ کو ضرورت نہیں ہوتی اور رکھنے کے لئے جگہ بھی نہیں ہوتی؟	19
					کتنی مرتبہ آپ کے گھر میں موجود اشیاء کا انبار آپ کو دوسرے لوگوں کو دعوت دینے سے روکتا ہے؟	20
					کتنی دفعہ آپ واقعی وہ چیزیں خرید لیتے ہیں (یا مفت لے لیتے ہیں) جن کا فوری طور پر کوئی مصرف یا ضرورت نہیں ہوتی؟	21
					کس حد تک آپ کے گھر میں موجود اشیاء کا انبار آپ کو گھر کے مختلف حصوں کے صحیح مصرف سے روکتا ہے؟ مثال کے طور پر کھانا بنانے، فرنیچر استعمال کرنے، برتن دھونے صفائی کرنے وغیرہ سے۔	22
					آپ کتنی دفعہ اپنی ملکیت میں موجود چیز کو پھینک نہیں سکتے جس سے آپ چھٹکارا حاصل کرنا چاہتے ہیں؟	23

Appendix-P

Family Adaptability and Cohesion Evaluation Scales (Urdu)

ہدایات- جوابی شیٹ پر موجود جگہ میں وہ نمبر لکھیں جو آپ کے جواب سے مطابقت رکھتا ہے۔

نمبر شمار	بیانات	1- انتہائی غیر متفق	2- عام طور پر غیر متفق	3- غیر جانبدار	4- عام طور پر متفق	5- انتہائی متفق
1-	گھر کے افراد ایک دوسرے کی زندگیوں میں شامل رہتے ہیں۔					
2-	ہمارے گھر والے مسائل سے نپٹنے کے لیے نئے طریقے آزماتے ہیں۔					
3-	ہمارے اپنے گھر کی نسبت باہر کے لوگوں کیساتھ بہتر مراسم ہیں۔					
4-	ہم بہت زیادہ وقت اکٹھے گزارتے ہیں۔					
5-	ہمارے گھر میں اُصول توڑنے کے نتائج سخت ہوتے ہیں۔					
6-	ہم خاندان کے طور پر کبھی منظّم نظر نہیں آتے۔					
7-	گھر کے افراد ایک دوسرے سے بہت قرب محسوس کرتے ہیں۔					
8-	ہمارے گھر میں والدین برابر کے اختیارات/سربراہی رکھتے ہیں۔					
9-	گھر کے افراد جب گھر ہوں تو ایک دوسرے سے رابطے سے گریز کرتے نظر آتے ہیں۔					
10-	گھر کے افراد دباؤ محسوس کرتے ہیں کہ وہ اپنا زیادہ تر فارغ وقت اکٹھے گزاریں۔					
11-	جب خاندان کا کوئی فرد کچھ غلط کرتا ہے تو اس کے واضح نتائج ہوتے ہیں۔					
12-	یہ جاننا مشکل ہے کہ ہمارے خاندان میں سربراہ کون ہے۔					
13-	گھر کے افراد مشکل اوقات میں ایک دوسرے کا سہارا ہوتے ہیں۔					
14-	ہمارے خاندان میں منصفانہ نظم وضبط ہے۔					
15-	گھر کے افراد گھر کے دوسرے افراد کے دوستوں کے متعلق بہت کم جانتے ہیں۔					
16-	خاندان کے افراد ایک دوسرے پر بہت زیادہ انحصار کرتے ہیں۔					
17-	ہمارے خاندان میں تقریباً ہر ممکنہ صورت حال کے لیے اُصول موجود ہے۔					
18-	ہمارے خاندان میں چیزیں/کام مکمل نہیں ہو پاتے۔					
19-	گھر کے افراد اہم فیصلوں پر گھر کے دوسرے افراد سے مشورہ کرتے ہیں۔					
20-	جب ضروری ہو، میرا خاندان تبدیلی کے مطابق ڈھل جانے کے قابل ہے۔					
21-	جب کسی مسئلے کو حل کرنا ہو تو گھر کے افراد کو اپنے بل بوتے پر کرنا پڑتا ہے۔					
22-	خاندان کے افراد کو خاندان سے باہر دوستوں کی ضرورت بہت کم ہے۔					
23-	ہمارا خاندان بہت منظّم ہے۔					

-24	یہ غیر واضح ہے کہ ہمارے خاندان میں چیزوں (کاموں، سرگرمیوں) کی ذمہ داری کس کی ہے۔					
-25	گھر کے افراد اپنا کچھ فارغ وقت ایک دوسرے کے ساتھ گزارنا پسند کرتے ہیں۔					
-26	ہم گھریلو ذمہ داریاں ایک سے دوسرے فرد پر منتقل کرتے ہیں۔					
-27	ہمارا خاندان شاذونادر ہی کچھ اکٹھے کرتا ہے۔					
-28	ہم ایک دوسرے سے بہت جڑا ہوا محسوس کرتے ہیں۔					
-29	جب ہمارے ارادوں یا معمول میں کوئی تبدیلی آئے تو ہمارا خاندان برہم ہو جاتا ہے۔					
-30	ہمارے خاندان میں کوئی قیادت نہیں ہے۔					
-31	اگرچہ گھر کے افراد کی انفرادی دلچسپیاں ہیں لیکن پھر بھی وہ گھر کی سرگرمیوں میں حصہ لیتے ہیں۔					
-32	ہمارے خاندان میں ہمارے واضح اُصول اور فرائض منصبی ہیں۔					
-33	خاندان کے افراد شاذونادر ہی ایک دوسرے پر انحصار کرتے ہیں۔					
-34	ہم گھر کے افراد کا گھر سے باہر چیزیں (سرگرمیاں) کرنے پر غصہ کرتے ہیں۔					
-35	ہمارے خاندان میں اُصولوں کی پیروی کرنا اہم ہے۔					
-36	ہمارے خاندان کیلئے اس کا حساب رکھنا مشکل ہوتا ہے کہ مختلف گھریلو کام کون کرتا ہے۔					
-37	ہمارے خاندان میں انفرادیت اور قربت کا اچھا توازن ہے۔					
-38	جب مسائل کھڑے ہوتے ہیں تو ہم سمجھوتہ کر لیتے ہیں۔					
-39	گھر کے افراد زیادہ تر انفرادی طور پر کام کرتے ہیں۔					
-40	گھر کے افراد اگر خاندان سے دور وقت گزارنا چاہیں تو پچھتاوا محسوس کرتے ہیں۔					
-41	ایک دفعہ ایک فیصلہ کر لیا جائے تو اس فیصلے میں ترمیم کرنا بہت مشکل ہوتا ہے۔					
-42	ہمارا خاندان بے چینی اور بد نظمی محسوس کرتا ہے۔					
-43	گھر کے افراد اس سے مطمئن ہیں جسطرح وہ ایک دوسرے سے گفت وشنید کرتے ہیں۔					
-44	خاندان کے افراد بہت اچھے سننے والے (سامع) ہیں۔					
-45	گھر کے افراد ایک دوسرے سے محبت کا اظہار کرتے ہیں۔					
-46	گھر کے افراد ایک دوسرے سے وہ مانگنے کے قابل ہیں جو وہ چاہتے ہیں۔					
-47	گھر کے افراد سکون سے ایک دوسرے سے مسائل پر تبادلہ خیال کر سکتے ہیں۔					
-48	گھر کے افراد ایک دوسرے سے اپنے خیالات وعقائد پر تبادلہ خیال کر سکتے ہیں۔					

49-	جب گھر کے افراد ایک دوسرے سے سوال کرتے ہیں تو انہیں ایماندرانہ جواب ملتا ہے۔					
50-	گھر کے افراد ایک دوسرے کے احساسات سمجھنے کی کوشش کرتے ہیں۔					
51-	جب غصے میں ہوں تو گھر کے افراد شاذ رنادر ہی ایک دوسرے کے بارے میں منفی چیزیں کہتے ہیں۔					
52-	گھر کے افراد ایک دوسرے سے اپنے حقیقی جذبات کا اظہار کرتے ہیں۔					

☆ آپ کس حد تک درج ذیل سے مطمئن ہیں۔

		1- بہت غیر مطمئن	2- کسی حد تک غیر مطمئن	3- عام طور پر مطمئن	4- بہت مطمئن	5- انتہائی مطمئن
53-	خاندان کے افراد کے مابین قربت کے درجہ سے۔					
54-	اپنے خاندان کی ذہنی دباؤ سے نپٹنے کی صلاحیت سے۔					
55-	اپنے خاندان کی لچک (حالات کے مطابق ڈھل جانے) کی صلاحیت سے۔					
56-	اپنے خاندان کی مثبت تجربات بتانے کی صلاحیت سے۔					
57-	گھر کے افراد کے مابین بات چیت کے معیار سے۔					
58-	اپنے خاندان کی اختلافات حل کرنے کی صلاحیت سے۔					
59-	وقت کی مقدار سے جو آپ ایک خاندان کے طور پر اکٹھا گزارتے ہیں۔					
60-	مسائل پر تبادلہ خیال کرنے کے طریقے سے۔					
61-	اپنے خاندان میں تنقید کی ایمانداری سے۔					
62-	گھر کے افراد کی ایک دوسرے کے بارے میں فکرمندی سے۔					