

**KNOWLEDGE HIDING BEHAVIOR AMONG FACULTY  
MEMBERS AT PUBLIC UNIVERSITIES IN PAKISTAN: AN  
AFFECTIVE EVENTS THEORY PERSPECTIVE**



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# Thesis Acceptance Certificate

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# **Knowledge Hiding Behavior Among Faculty Members at Public Universities in Pakistan: An Affective Events Theory Perspective**

## **Abstract**

This study aims to explore the effect of negative reciprocity on negative affective reactions and subsequently negative affective reactions' impact on knowledge hiding behavior. The mediating role of negative affective reactions among negative reciprocity and knowledge hiding behavior has also been assessed. Moreover, the present study examines the moderating effect of agreeableness on the relationship between negative reciprocity and negative affective reactions. Data were collected from public sector universities in Pakistan using purposive sampling. A total of 213 valid questionnaires were taken for the final data analysis. The relationships based on the hypothesis were tested by performing PLS-SEM. The results reveal that negative reciprocity is the key driver of instigating negative affective emotions among individuals. Following that, negative affective reactions also are the cause of prevalent knowledge hiding behavior in people. Furthermore, negative affective reactions intervened in the relationship between negative reciprocity and knowledge hiding behavior. However, agreeableness does not moderate the relationship between negative reciprocity and negative affective reactions. The study can be used to find out why and how knowledge is hidden by workers and how it can be controlled. The results of this research can be applied by managers, executives, and leaders to different business scenarios. Strategies can be developed to mitigate the undesirable behaviors of workers, i.e., knowledge hiding behavior. Moreover, this study will help policymakers to develop certain policies that can be implemented by managers in organizations to achieve strategic goals and objectives by avoiding negative events and reducing negative behavior, such as knowledge hiding. Knowledge hiding is a growing field that started emerging in the last decade and requires special attention. There is also a dearth of research that uses the affective event theory as the underpinning theory to predict individuals' knowledge hiding behaviors. This study enhances our perception on the significance of the knowledge hiding behavior and its relation to negative reciprocity, negative affective reactions, and agreeableness by incorporating the affective events theory perspective.

**Keywords** – Knowledge hiding behavior, Negative reciprocity, Negative affective reactions, Agreeableness, Public sector academic institutions/universities, Pakistan.

## CHAPTER 1: INTRODUCTION

### 1.1 Background of the Study

To maintain a competitive advantage, the effective use of knowledge is important for an organization (Shamim et al., 2017). Knowledge is considered to be the most important resource to achieve innovation in an organization (Xie et al., 2016). However, when employees feel they are not facilitated with what is deserved (knowledge), they often respond by hiding knowledge from other employees (Khalid et al., 2020). Knowledge hiding is the deliberate act of concealing, retaining or holding the information that another person is looking for or wants (Černe et al., 2017; Connelly et al., 2012). Even though companies frequently make great attempts to encourage workers to knowledge sharing and raise concerns, many workers intentionally opt to keep their knowledge to themselves rather than share it (Prouska & Kapsali, 2021). Such a knowledge hiding behavior has been reported to cause disputes, harm interpersonal relationships, and contribute to a decline in the performance of individuals and teams (Anand & Hassan, 2019; Hernaus et al., 2019; Nguyen et al., 2022).

In 2018, it was estimated that the productivity losses brought on by knowledge hiding behavior costed American organizations 47 million US dollars approximately (Panopto, 2018). It was observed that waiting for their coworkers to communicate existing knowledge or information cost American workers 5.3 hours per week (Panopto, 2018). That squandered time hinders corporate innovation and growth, which results in multiple missed opportunities, a lack of employee engagement, and non-compliance by employees with working standards (Hickland et al., 2020). The Globe and Mail (2006) surveyed 1,700 employees and discovered that 76% hide their knowledge from colleagues. Most of them believed that "information belongs to privacy and should not be shared". Besides, it cost 31.5 billion dollars each year for Fortune 500 companies when they are failed in knowledge sharing (Babcock, 2004). The reality is that the knowledge hiding behavior is a widespread phenomenon in the workspace (Nguyen et al., 2022) that threatens the knowledge transfer (Connelly et al., 2012) and leads to the organization's significant monetary loss (Zhao et al., 2016). Moreover, organizations suffer as the result of knowledge hiding, which builds destructive spirals of revenge (Černe et al., 2014). Experts have given significant thought

to knowledge hidden in organizations, but it still demands rigorous academic investigation (Černe et al., 2014; He et al., 2021).

Organizations may benefit from personal knowledge only when workers share the knowledge with other employees of the organization (Burmeister et al., 2019). It is stressed in the prior literature that hiding knowledge can adversely affect the competitiveness and innovation ability of an organization (Butt & Ahmad, 2019; Černe et al., 2017; Fong et al., 2018). Moreover, Knowledge hiding has been recognized to have serious adverse effects (Ellmer & Reichel, 2021; Jiang et al., 2019). Therefore, there is a critical requirement to obtain, manage, and predict those components that promote knowledge hiding behavior in the workspace and are crucial in finding the answers to the questions arising regarding knowledge hiding.

There is negative and positive reciprocity, and it relies upon the types of social interaction among workers (Gouldner, 1960). When individual 'A' is deprived of knowledge owned by individual 'B', then 'B' is most likely to retaliate and reciprocate by concealing and hiding knowledge (Ayub et al., 2021; Jahanzeb et al., 2019; Mangold, 2017). Co-workers depend on each other where individual A offers individual B, the facts, knowledge, insights, and expertise, and this gets reciprocated when the need occurs (Singh, 2019). Hence, work colleagues develop a propensity to react in a way that they reciprocate by lacking the provision of the requisite ideas, facts, expertise, and knowledge (Černe et al., 2014). A loop of doubtfulness develops between the hider and the target, leading to competence and efficiency in the workspace being compromised (Černe et al., 2014). Moreover, when the knowledge is hidden due to negative reciprocity, it results in increased deviant actions and poor job performance in the workplace (Singh, 2019). Despite its importance, little work has been done so far on the casual relationship between negative reciprocity and knowledge hiding behavior.

Incorporating affective event theory (Weiss & Cropanzano, 1996), the research suggests that negative reciprocity is among several situational causes that can potentially facilitate knowledge hiding behavior amongst individuals in the workplace. It is evident that negative work events lead to negative emotions and then result in knowledge hiding behavior (Alam et al., 2021; Zhao & Jiang, 2021). Moreover, past evidence reveals that counterproductive behaviors like knowledge hiding are often triggered by personality traits (Pan et al., 2018; Wenzhi et al., 2017). It is therefore

assumed that people with high agreeableness will exhibit less knowledge-hiding behaviors than those with low agreeableness. Personality traits, including agreeableness, have been previously studied with knowledge hiding, however, the moderating role of agreeableness from the affective event theory has yet to be explored. Hence, this study focused on agreeableness as a personality trait to conceptualize knowledge hiding behavior.

The objective of this study is to explore negative reciprocity as an antecedent of knowledge hiding behavior. Eventually, this research is anticipated to contribute to the literature as it examines a thorough model of research on hiding knowledge and its antecedents. The present study is timely as it will address the gaps in previous literature. In doing so, this research not only fills up the void in research but also responds to numerous calls for research. Furthermore, the findings of this study will help managers effectively tackle knowledge issues in the workplace.

## **1.2 Scope of the Study**

The scope of this study is restricted to the concept of knowledge hiding behavior among the faculty members of the public sector universities in Pakistan. As such it conceptualizes the concept of knowledge hiding by theorizing on affective events theory. The intervening effect of negative affective reactions and the moderating effect of agreeableness has also been incorporated. This is a comprehensive study of faculty members in higher education institutions in Pakistan to give context to prevailing knowledge hiding behavior. The scope has also been limited to the faculty members of twin cities, from whom data has been gathered via a structured survey through electronic mail.

Universities are considered knowledge-intensive organizations. The education sector was identified due to its strong link with knowledge and being a prominent sector in knowledge management. Whereas public sector higher education institutes were chosen because of their size, and it outnumbers the private sector. These institutes largely focus on the creation, management, and dissemination of knowledge within and outside the premises. Since knowledge is a core aspect of these educational institutes, it was realistic to examine the knowledge hiding behavior prevalence among their employees.

### 1.3 Problem Statement

Knowledge hiding is a worldwide issue and a form of workplace incivility (Arshad & Ismail, 2018). It is regarded as the deliberate practice of keeping back the knowledge demanded from a coworker (Černe et al., 2017). The knowledge required by organizations and colleagues is intentionally concealed by many employees (Zhao et al., 2019), which can then lead to retaliation from the receivers of such behavior. Employee knowledge hiding is a common behavior, undermining businesses' efforts to ensure knowledge exchange (Hamza et al., 2021). Knowledge hiding is associated with fewer employee interactions at work, poor decision-making, and individual performance (Alnaimi & Rjoub, 2021). Since employees work together, they might consider knowledge as a scarce resource, that must be hidden from others (Škerlavaj et al., 2018) and the way they treat and communicate with each other would affect their behavior which can then take a negative turn and result in prevailing negative behaviors consequently resulting in compromised performance and business operations. According to some scholars, a company's ability to compete and grow might be harmed by employees hiding knowledge across organizations, which inevitably results in the dissolution of client relationships (Avotra, Chengang, Marcelline, et al., 2021; Avotra, Chengang, Wei, et al., 2021). It is also believed that management in various organizations may purposefully withhold knowledge from one another, which has the potential to sabotage interactions between buyers and suppliers (Kwateng et al., 2021).

Hiding knowledge is detrimental to companies (Ellmer & Reichel, 2021; Jiang et al., 2019) as it generates negative spirals of reprisals (Anand & Hassan, 2019; Ayub et al., 2021; Jahanzeb et al., 2019) which indicated that if an individual has hidden some information he requested or not requested but is aware of, then they most likely would retaliate the behavior by hiding their knowledge. Knowledge hiding is an interesting idea, which has evident business repercussions because it prevents innovation, hinders teamwork and collaboration, and eventually lowers the performance of an organization (Yingfei et al., 2022). Knowledge hiding has various consequences (Serenko & Bontis, 2016), including majorly negative consequences. It has been shown to increase turnover intentions, diminish innovation, and increase knowledge hiding as a kind of counterproductive work behavior (Anand & Hassan, 2019) which can lead to detrimental consequences for the organizations. This is also damaging when knowledge hidings are found



indulging in knowledge hiding behavior, which can then turn out to be the main reason for an organization's demise (Wen & Ma, 2021). It is also problematic as it prevents companies from understanding the advantages linked with sharing knowledge, including creativity for individuals and teams (Dong et al., 2017) and companies stay unaware of the positive outcomes that they can achieve by mitigating such negative behaviors. Mutual mistrust motivates people to keep knowledge hidden, especially if this motivation is high, which is detrimental to the performance of the company (Ali et al., 2021; Xiaolong et al., 2021). Therefore, the focus should be given to strategies that minimize the knowledge hiding risk (Wang et al., 2019). This research focuses on the antecedents, mediators, and moderators of knowledge hiding behavior and suggests strategies to overcome and avoid it (See: Managerial Implications).

#### **1.4 Gap Analysis**

An extensive review of the literature reveals several issues. First, Serenko & Bontis (2016) reveals that 50 percent of all papers issued in the “*Journal of Knowledge Management*” specifically concentrated on knowledge sharing and the amount of research on knowledge sharing has been steadily increasing (Anand et al., 2021; Annansingh et al., 2018). However, less consideration has yet been given to this detrimental knowledge behavior though the knowledge hiding behavior seems to possess strong negative effects within an organization (Anand & Hassan, 2019). Only in the last decade has it begun to gain attention in the research literature (He et al., 2021; Men et al., 2020; Su, 2021; Yang & Ribiere, 2020). Recently, He et al. (2021) and Anand et al. (2020) argue that knowledge hiding is a growing field and more extensive research is required to recognize the causes and the consequences of the knowledge hiding behavior.

Second, affective event theory remains an unexplored area of research in the prior work on knowledge hiding. Past studies used social exchange theory (Černe et al., 2014; Fong et al., 2018; Singh, 2019; Wang et al., 2019), social learning theory (Offergelt et al., 2019), Psychological ownership theory (Peng, 2013; Singh, 2019), and self-perception theory (Jiang et al., 2019) to conceptualize knowledge hiding. Xiao & Cooke (2019) and He et al. (2021) called for investigating knowledge hiding behavior from the perspective of affective events theory. Weng et al. (2020) also suggested extending the literature on knowledge hiding by incorporating the

affective events theory. Few researchers investigated knowledge hiding behavior by conceptualizing it with affective events theory (Alam et al., 2021; Good et al., 2022; Irum et al., 2020; Yao, Luo, et al., 2020; Zhao & Jiang, 2021) but none of those cover the particular aspects of our study as the researchers explored the knowledge hiding behavior with affective events theory in different contexts, with different factors, antecedents and consequences. The psychological drivers and associated knowledge hiding tactics of knowledge hidiers are not given enough attention. A thorough literature review indicates that it remains a research gap to this day thus conceptualization of individual emotions is not yet theorized and is hence underexplored (He et al., 2021). Moreover, previous research on knowledge hiding stresses the work environment, organizational knowledge culture, leadership style and individual characteristics (Jha & Varkkey, 2018; Khalid et al., 2018; Serenko & Bontis, 2016) But paid a lesser amount of attention to the effect of negative interpersonal events upon knowledge-hiding behavior (Yao, Zhang, et al., 2020).

Third, past studies rarely investigated negative reciprocity as an antecedent of knowledge hiding behavior. It is evident that there have been numerous conversations about knowledge sharing in organizations, whereas there has been little debate about acts related to knowledge hiding, particularly in learning organizations (Anand et al., 2019). Researchers have previously concentrated on the antecedents of knowledge hiding, i.e., workplace pressures (Khalid et al., 2018; Škerlavaj et al., 2018; Zhao et al., 2016), psychological ownership and territoriality of knowledge (Huo et al., 2016; Peng, 2013; Singh, 2019), receiving particular emphasis. Based on the systematic literature review of He et al. (2021), few authors have investigated the reciprocation perspective of knowledge hiding (Černe et al., 2014; Serenko & Bontis, 2016) but negative reciprocity is not investigated as an antecedent of knowledge hiding behavior by conceptualizing affective events theory. Limited studies conducted recently on negative reciprocity and knowledge hiding explored the relationship in a top-down setting i.e., supervisors and supervisees, and also the negative reciprocity is mostly considered as a moderator and not an antecedent (Ayub et al., 2021; Jahanzeb et al., 2019; Zhao et al., 2016) which is influenced by certain factors including power, authority, nature of the job. Despite frequent calls for research, the relationship amongst negative reciprocity and knowledge hiding is underexplored.

Fourth, previous studies have gone through personality traits, including agreeableness, concerning knowledge hiding (Chawla & Gupta, 2019; Hamza et al., 2021; Iqbal et al., 2020) but the moderating role of agreeableness from the affective event theory is underexplored since more of the studies covered personality traits rather than only focusing on agreeableness. Connelly and Zweig (2015) recommended looking into possible dispositional regulators of knowledge hiding. For instance, agreeableness may likely have an impact on the manner of knowledge hiding used by hidiers. Surprisingly, there is still a dearth of research on studying agreeableness as a sole personality trait in the literature on knowledge hiding.

Finally, little has been done so far on knowledge hiding in developing countries' contexts, particularly in Pakistan. Most research on knowledge hiding is done in developed countries (Connelly et al., 2012; Pan et al., 2018; Parks-Leduc et al., 2015; Peng, 2013; Škerlavaj et al., 2018). Previous research indicates that knowledge hiding is common in Pakistani organizations (Bari et al., 2020; Jahanzeb et al., 2019; Khalid et al., 2018; Khalid et al., 2020; Malik et al., 2019). Few researchers investigated the concept of knowledge hiding in higher education contexts i.e., universities (Demirkasimoglu, 2016; Xiong et al., 2021; Zhao et al., 2016; Zutshi et al., 2021). According to Khan et al. (2020), limited research is available on knowledge hiding in Pakistan, especially in higher education (Zutshi et al., 2021). Although knowledge needs substantial academic notice (Černe et al., 2014; Connelly et al., 2012), the Pakistani higher education context has received little attention.

This study addresses these aforementioned gaps in literature. Specifically, it answers the following questions and has the following objectives.

## **1.5 Research Questions**

1. Does negative reciprocity impact negative affective reactions among faculty members at public universities in Pakistan?
2. Do negative affective reactions have an impact on knowledge hiding behavior among faculty members at public universities in Pakistan?

3. Do negative affective reactions mediate the relationship between negative reciprocity and knowledge hiding behavior among faculty members at public universities in Pakistan?
4. Does agreeableness moderate the linkage between negative reciprocity and negative affective reactions among faculty members at public universities in Pakistan?

## **1.6 Research Objectives**

1. To investigate the impact of negative reciprocity on negative affective reactions among faculty members at public universities in Pakistan.
2. To investigate the impact of negative affective reactions on knowledge hiding behavior among faculty members at public universities in Pakistan.
3. To investigate the mediating role of negative affective reactions between the indirect relationship of negative reciprocity and knowledge hiding behavior among faculty members at public universities in Pakistan.
4. To investigate the moderating effect of agreeableness on the linkage between negative reciprocity and negative affective reactions among faculty members at public universities in Pakistan.

## **1.7 Context of the Study**

Higher education institutions are expected to play a major role in the creation of knowledge and new ideas generation essential for the growth of the knowledge economy as compared to other industries (Malik et al., 2019; Yang & Ribiere, 2020). Farrukh et al. (2019) stated that universities being a hub of knowledge play a pivotal part in knowledge exploration through research and also spread knowledge. However, this is unfortunate that tainted relationships are widespread in academics (Gorman & Feist, 2013) since interpersonal competitiveness is a common characteristic among academic individuals (Hernaus et al., 2019). It has been established that the pressure of rising competition for papers, employment, and research funding results in concealment (Hernaus et al., 2019; Walsh & Hong, 2003). Also, academic scholars typically have a fair amount of freedom in deciding whether or not they wish to collaborate with a particular external partner

(Niedergassel & Leker, 2011). Many scholars consider knowledge hiding to be immoral and antisocial behavior that should not be encouraged in higher education institutions (Fauzi, 2022). Furthermore, higher education in contrast to other knowledge-based organizations offers a singular setting for mediating knowledge creation, replication, and transfer. Therefore, social responsibility is a natural component of higher education, and it supports both the general welfare of the society and the fundamentals of workplace practices (Zutshi et al., 2021).

This study is conducted in the public sector universities in the twin cities (Islamabad and Rawalpindi) of Pakistan. The reason behind opting for public sector universities is that most of the HEC-recognized universities in Pakistan are categorized as public sector (141 universities) in contrast with the private sector (96 universities) (HEC, 2022). Public sector universities by province are also mostly located in Islamabad Capital Territory (17), and Punjab (42), out of which 7 universities are situated in Rawalpindi in comparison to other provinces such as Balochistan (9), Khyber Pakhtunkhwa (29), and Sindh (27). Moreover, according to Quacquarelli Symonds University Rankings (QS), the top-ranked universities of Pakistan are also situated in Islamabad i.e., the National University of Sciences And Technology (NUST) Islamabad is ranked at 334, Quaid-i-Azam University is at 363, and Pakistan Institute of Engineering and Applied Sciences (PIEAS) is ranked at 390 (TopUniversities, 2022). Notwithstanding, past evidence shows the presence of knowledge hiding behavior among faculty members of universities in Pakistan (Ali et al., 2019; Khan et al., 2020; Malik et al., 2019). Therefore, the public sector universities in the twin cities of Pakistan are deemed suitable for the present study.

## **1.8 Operational Definitions**

### *1.8.1 Knowledge Hiding Behavior*

“An intentional attempt by an individual to withhold or conceal knowledge that has been requested by another person” (Connelly et al., 2012, p. 65). Several authors have previously used this definition to define the construct in their research work (Farooq & Sultana, 2021; Liu et al., 2020; Venz & Nesher Shoshan, 2022).

### *1.8.2 Negative Reciprocity*

“Negative reciprocity is the intention of punishing those who have been mean to us” (Caliendo et al., 2012, p. 3). This statement has been used by various researchers to define negative reciprocity (Hales, 2021; Villegas & Lloyd, 2021).

### *1.8.3 Negative Affective Reactions*

“Negative Affect (NA) is a general dimension of subjective distress and unpleasurable engagement that subsumes a variety of aversive mood states, including anger, contempt, disgust, guilt, fear, and nervousness, with low NA being a state of calmness and serenity” (Watson et al., 1988, p. 1063). There are other studies which are also based on this definition (Casper et al., 2019; Venz & Neshor Shoshan, 2022; Zhao & Xia, 2019).

### *1.8.4 Agreeableness*

“Agreeableness is the degree to which a person needs pleasant and harmonious relations with others” (Hogan & Hogan, 2007, p. 9). Other studies can be found incorporating this explanation for agreeableness (Hall, 2017; Lundberg, 2012; Wehner et al., 2022).

## **1.9 Thesis Structure**

The chapters structured in this thesis are as follows

### *1.9.1 Introduction*

The first chapter of this study comprises the background, where a brief view of knowledge hiding is presented, followed by scope of the study, statement of the problem, gap analysis, research questions, objectives of study, context of the study, and in the end operational definitions of the key variables are given. For research purposes, this chapter contains relevant data.

### *1.9.2 Literature Review*

The focus of Chapter 2 of the thesis is on the review of the literature, which includes a detailed investigation and provides pertinent information from the literature that is currently available on specific constructs. Following base theory for this study, which is affective events theory, the constructs discussed here includes knowledge hiding behavior, negative reciprocity, negative

affective reactions, and agreeableness. This chapter also discusses the literature that exist on the impact of negative reciprocity on negative affective reactions, effect of negative affective reactions on knowledge hiding, mediation of negative affective reactions among the relationship of negative reciprocity and knowledge hiding behavior, and the moderating role of agreeableness between negative reciprocity and negative affective reactions. Hypotheses and conceptual framework are also developed based on the literature.

### *1.9.3 Research Methodology*

The third chapter focuses on the research methodology, which requires a lot of work to build and choose the tools for examining and measuring knowledge hiding behavior and the impact of negative reciprocity, negative affective reactions, and agreeableness on this behavior. This chapter sought to expand the area of research.

### *1.9.4 Data Analysis and Results*

In this chapter, the information on the analysis of the findings from the primary data source, which was gathered via survey questionnaires is provided. The chapter begins with data screening with reliability and validity tests, and table showing ANOVA results of faculty positions titles and knowledge hiding behavior. Finally, the results of the hypothesis examination presented with direct and indirect effect to find whether the hypothesis was accepted or rejected.

### *1.9.5 Discussion and Conclusion*

In the final chapter, the results from the previous chapters are discussed in detail. It also provides theoretical and managerial implications for the researchers and practitioners based on the findings of this study, followed by future directions and limitations. Finally, a brief conclusion is given.

## **1.10 Chapter Summary**

The focus of this chapter was to discuss the basis of the study by drawing on the background of the research topic. This chapter elaborated on the significance that the study holds which makes the efforts of the researcher valuable for the readers and future researchers. It highlights the

industry problems and gaps that lie in the prior literature, answers specific questions, and points out the specific objectives of the study. It also defined the constructs to develop an understanding of the reader on the topic before diving into further insights. It ends by providing an insight into how the study has been organized in the chapters and their subsections.



## **CHAPTER 2: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter aims on discussing all the constructs of the study in the theoretical model discussed separately and their relationship in detail. The effective events theory is discussed as an underpinning theory to support the theoretical relationship among variables. The chapter starts by presenting an in-depth summary of the literature on knowledge hiding by conceptualizing affective events theory literature, followed by discussions on the relationship of negative reciprocity and negative affective reactions and then negative affective reactions with knowledge hiding behavior. Later it shed light on the intervening role of negative affective reactions and the moderation of agreeableness between the independent and dependent variables. Hypothesis and conceptual model are also a part of this chapter. Each section in this chapter comprises shreds of evidence from previous research followed by hypotheses formulated based on the evidence.

### **2.2 Affective Events Theory**

Affective events theory emphasizes that certain events occurring in the workspace generate emotional reactions and change in mood i.e. affective experiences (Judge & Kammeyer-Mueller, 2012; Weiss & Cropanzano, 1996); affective experiences then impacts the employees' behavior at the workplace (Judge & Kammeyer-Mueller, 2012). Affective events theory makes a distinction between two types of behaviors, where affect-driven behaviors are short-term, or state-like behaviors that are proximally generated by affective experiences.(Judge & Kammeyer-Mueller, 2012; Weiss & Cropanzano, 1996). In contrast, evaluation-driven behaviors are influenced by work attitudes and are more prone to rely on well-considered judgments (G Miner et al., 2005; Weiss & Cropanzano, 1996) and denote long-term behavior (Judge & Kammeyer-Mueller, 2012). Collectively, AET proposed that workplace events are the cause of affective experiences that directly impact workplace behavior (affect-driven behavior), whereas; the event leading to affective reactions is moderated by dispositions.

A conscious effort to hide, conceal, or withhold knowledge demanded or requested by others, and not just lack of sharing is known as knowledge hiding (Connelly et al., 2012). Affective events theory (Weiss & Cropanzano, 1996) helps in developing an understanding that how knowledge hiding behavior affects work outcomes by focusing on the factors such as the emotional and affective state of individuals. According to Xiao & Cooke (2019), knowledge hiding behavior as an affective event at work results in negative affective experiences of the target such as disappointment, frustration, and anger; and the affect might result in direct or indirect affect-driven behaviors of targets. Based on this assumption, our event of negative reciprocity where the main perpetrator of our research, from whom knowledge was hidden and as retaliation hides knowledge might face similar affective experiences resulting in affect driven behaviors (i.e., Knowledge hiding behavior).

Negative emotions and low agreeability can both result in relationships of poor quality, which can then affect an employee's tendency to hide knowledge (Zhao & Xia, 2019). Workplace situations might elicit emotional responses that lead to bad behaviors such as the desire to hide information (Irum et al., 2020), and individuals possessing a high level of emotional intelligence can increase their adaptive performance (Pradhan et al., 2017). Serenko & Bontis (2016) identified work instability as a reason that encouraged knowledge hiding behavior between individuals. When representatives believe their firm is on the level, particularly in a data-driven market, they will generally prefer to keep their knowledge hidden to achieve a competitive advantage over individual workers. Hence, this study will examine the antecedents of knowledge hiding behavior by drawing on affective events theory.

### **2.3 Negative Reciprocity and Negative Affective Reactions:**

Knowledge is an asset and its value grows as it is put to use, nonetheless, there is a widespread human instinct to regard information as a limited resource that should be kept secret (Škerlavaj et al., 2018). The previous experiences of colleagues' reciprocity can influence the probability of an employee's participation in hiding behavior (Chen & Tang, 2018). When anyone feels rejected while asking for knowledge, they are motivated to respond by hiding theirs (Anand et al., 2020; Khalid et al., 2018; Lanke, 2018). This is because negative reciprocation to a negative experience

has a greater magnitude than positive reciprocation to a positive exchange (Greco et al., 2019; Jahanzeb et al., 2019). Even a single unfavorable behavior inside an organization is probably linked to subsequent negative behaviors or activity of a comparable severity (Greco et al., 2019).

Negative reciprocity is the feeling of revenge where the focus is not on the returning benefits but on returning unfavorable and unfair treatment (Gouldner, 1960). Negative reciprocity is, of course, prevalent in an organizational setting (Černe et al., 2014), particularly when peers feel negativity or misconduct in workplace social exchange interactions (Singh, 2019). Following the concept of negative reciprocity, retaliating against those who are responsible for committing negative acts helps in maintaining the continuity of social institutions (Gouldner, 1960) because it discourages potential negative behavior. Moreover, individuals find it easier to participate in negative reciprocity (i.e., reducing their task effort and ignoring knowledge queries) than in positive reciprocity (i.e., increasing their effort at work and indulging in knowledge sharing behavior) (Greco et al., 2019).

Negative reciprocity can result in counterproductive behaviors i.e., low intrinsic motivation and reduced organizational citizenship behavior (Serenko and Bontis, 2016). A feeling of distrust is developed when a work colleague is refused knowledge and recognizes the deliberate knowledge hiding behavior (Prouska & Kapsali, 2021). Negative workplace conduct should be viewed as relational rather than solely personally motivated, such as when a worker lashes out at a coworker because they are feeling overworked, or when the lash-out victim in the previous example reciprocates in a similar manner (Greco et al., 2019). The norm of reciprocity (Gouldner, 1960) states that the individual from whom knowledge was hidden (knowledge seeker) is more prone to retaliate and hide knowledge than the individual who hid it (Knowledge hider). Therefore, this study proposes that negative reciprocity will significantly affect negative affective reactions.

*Hypothesis 1: Negative reciprocity relates positively to negative affective reactions.*

#### **2.4 Negative Affective Reactions and Knowledge Hiding Behavior:**

Negative affective reactions are the affect-driven reactions of an individual such as frustration, anger, ashamed, or sadness, which results in certain behaviors (Weiss & Cropanzano, 1996).

Employees may hide knowledge for a variety of reasons, including safeguarding their self-interest and preventing work intensification or job loss (Xiao & Cooke, 2019). They may experience physical and mental tiredness, a loss of morale and motivation, and apathy toward organizational matters because of negative affects such as emotional exhaustion (Blanco-Donoso et al., 2017; Thompson et al., 2020). Accordingly, the empirical study uncovers that these workers frequently act aggressively and inappropriately as a way to express their unpleasant emotions (Wolf et al., 2017) such as not collaborating with others. According to academic research, negative feelings directly influence unproductive work behavior. As discussed by Arshad and Ismail (2018) knowledge hiding behavior is situational; as it is the motivation of an individual to withhold knowledge influenced by his or her circumstances. Some employees choose to keep their knowledge hidden to preserve their position irreplaceable within the company, which will prevent the company from getting an advantage in the very competitive marketplace (Yao, Zhang, et al., 2020). Irum et al. (2020) emphasized knowledge hiding behavior as an ‘affect-driven behavior’ and these affective reactions are the reason for the decline in worker’s performance (Jawahar & Schreurs, 2018). Employees usually work together under the same roof, so the way they communicate with one another and treat each other has an impact on their personality and behavior. Employees that are emotionally worn out are inclined to adopt knowledge hiding (Zhao & Jiang, 2021). An encouraging organizational culture (i.e., employee trust, a standard of knowledge sharing, justice, and such.) reduces knowledge hiding behavior because people in such surroundings are more likely to feel an ethical commitment to their organization and colleagues (Serenko & Bontis, 2016).

According to the Cognitive Motivational Relational Theory of Emotion, motivational, relational, and cognitive elements are significant to trigger emotion which is supposed to result in an action (Lazarus, 1991). Emotions might arise as a result of numerous interpreted job-related characteristics, interpersonal interactions, and organizational characteristics, all of which can impact the Knowledge hiding process (Abdillah et al., 2022; Fatima et al., 2021; Rezwan & Takahashi, 2021). Emotions have been known as vital components in the cognitive processing of knowledge-demanding events as well as in the manifestation of knowledge hiding behavior (Fang, 2017; Peng et al., 2020; Weng et al., 2020). Negative emotions are usually processed more comprehensively, provoked faster, and these are more change-resistant compared to positive ones

(Anand et al., 2020), and also hiding is seen as an absence of trust that manifested in aversion or avoidance. People sometimes get a feeling that others are not going to need me if I share with them what I know, and due to their worry of losing their place and due to feelings of insecurity, this makes people conceal knowledge (Anand & Walsh, 2016; Anand et al., 2019). Serenko & Bontis (2016) recognized job uncertainty as one of the circumstances that result in knowledge hiding behavior. Therefore, this study proposes that negative affective reactions will positively affect knowledge hiding behavior.

*Hypothesis 2: Negative affective reactions are significantly related to knowledge hiding behavior.*

## **2.5 Mediating Role of Negative Affective Reactions:**

Emotional exhaustion is the tiredness that results from employees using their psychological and emotional resources excessively and it is a stress response brought on by work pressure (McDowell et al., 2019). Based on prior literature, negative affectivity, such as anger and workplace conflicts, prevent people from sharing knowledge (Başoğul, 2021; Jahanzeb et al., 2020). According to Zhao and Xia (2019), the negative affect states of staff can trigger their moral disengagement strategy, which allows them to reinterpret their knowledge hiding actions as rational and fair and so increase their knowledge hiding inclination. According to academic research, negative feelings directly influence unproductive work behavior (Eissa & Lester, 2017). Negative behavior depletes a person's cognitive skills, making them unavailable for other work-related duties. Likewise, victimization diminishes one's sense of individuality, leaving one feeling unvalued and unwanted. Similarly, withdrawal symptoms arise as a result of reduced self-efficacy, leading to declining investment in jobs and other duties. Consequently, employees' work performance suffers as a result of these affective states (Jawahar & Schreurs, 2018). Mutual mistrust and a decrease in interpersonal relationships have both been linked to knowledge hiding. Knowledge hiding has been shown to increase in environments with high levels of mistrust, perceived organizational politics, or competition (Wen & Ma, 2021).

Based on the affective events theory, Chen and Tang (2018) investigated how perceived competition promotes knowledge hiding. (Greco et al., 2019) found in their research that their

results are consistent with negative reciprocity theories since bad behavior frequently results in a similar response. (Jahanzeb et al., 2019) also found that knowledge hiding is more likely to intensify when workers hold a negative reciprocity viewpoint, which makes them more open to having negative social interactions. On the contrary, Semerci (2018) in their research discovered that competition had no considerable impact on knowledge hiding. These studies showed that it is crucial and valuable to look at the relationship between competitiveness and knowledge exchange in various organizational environments with various boundary states.

Serenko & Bontis (2016) asserts that a positive hierarchical system (i.e., a benchmark of sharing information, the proximity of social belief, equity, reasonableness, etc.) decreases knowledge hiding behavior and that workers in a culture like this will feel an ethical commitment toward their organization and colleagues in general. Whereas, Employees who have been subjected to knowledge hiding behavior are more expected to get revenge by hiding their knowledge and creating a never-ending cycle that might limit and halt the production of new information inside an organization. This might result in performance depletion of the organization as well as its employees (Jawahar & Schreurs, 2018; Singh, 2019). Hence, this study proposes that Negative affective reactions support the association between Negative reciprocity and Knowledge hiding behavior.

*Hypothesis 3: Negative affective reactions positively mediate the relationship between Negative reciprocity and Knowledge hiding behavior.*

## **2.6 Moderating Role of Agreeableness:**

Agreeableness is considered to be one of the traits of the big five personality model. In the trait theory of Graziano & Eisenberg (1997) agreeableness is defined as a trait of an individual who tends to avoid an argument. Agreeableness, also called likability is concerned with social compliance, love, friendliness, and other traits such as soft-hearted, cooperative, tolerant, good-natured, and forgiving (Barrick & Mount, 1991). A personality attribute known as agreeableness causes people to behave in an empathetic, cooperative, friendly, and caring way (Caliskan, 2019). An agreeable person is typically nice, dependable, cooperative, giving, submissive, responsive,

and has decent behavior. However, a person with low agreeableness scores is more likely to be hostile, impatient, suspicious, cruel, chilly, confrontational, and critical of others (Sholihat et al., 2020). Interpersonal abilities are also correlated with agreeableness (Latipah et al., 2021). When it comes to interpersonal and social traits of the human personality, such as friendliness, cooperation, and concern, people tend to be more agreeable (Iqbal et al., 2020; Omotayo, 2022).

Researchers have been attempting to establish a correlation between personality traits and certain individual behaviors but the link between personality and knowledge hiding behavior is mostly unexplored (Anand & Jain, 2014). Low agreeableness and negative affect can lead to poor relationships, which can then affect knowledge-based activities (Zhao et al., 2019). Agreeableness specifically is proven to harm knowledge hiding behavior (Hamza et al., 2021). Employees may hide knowledge from those around them due to personality traits that make them feel insecure and intimidated, which can lead to knowledge hiding behavior in organizations (Zhao & Jiang, 2021). C. E. Connelly & Zweig (2015) discovered that knowledge hiding behavior is a negative personality characteristic that affects the entire team as well as the organization. It also has an impact on both a single worker's success and the project's overall success. However, Khan et al. (2020) assumed that agreeableness may impact the knowledge hiding behavior type that is provided by perpetrators, such as people with high agreeableness might avoid participating in rationalized hiding and might favor the less confronting type of knowledge hiding behavior that is playing dumb strategy. Several authors found that agreeable people will not indulge in knowledge hiding behavior (Iqbal et al., 2020; Wu, 2021). An agreeable person can readily set aside their interests in favor of others. They are kind, considerate, pleasant, and helpful. They hold favorable opinions of other people. However, they might be a part of a group run by others who are hiding knowledge, in which case they might be doing it covertly (Arshad & Ismail, 2018; Pan et al., 2018).

The capacity to rely on one's abilities and a desire for success go hand in hand to make someone agreeable (Kaur & Anand, 2018). Agreeableness also can impact the targets of knowledge hiding behavior and their reactions such as negative reciprocity in this study. Highly agreeable workers might not retaliate or will be less likely to negatively reciprocate toward the individual who hid knowledge from them. Being likable and good-natured, they tend to support others and will not

indulge themselves in knowledge hiding behavior (Anand & Jain, 2014). Thus, we incorporate personality as a moderating variable to better explain the association between negative reciprocity and knowledge hiding behavior.

*Hypothesis 4: Personality (Agreeableness) negatively moderates the relationship between Negative reciprocity and negative affective reactions.*

## **2.7 Past Empirical Studies**

We will introduce the pertinent papers to our study that focus on comprehending knowledge hiding given the significant research problems about knowledge hiding that still need to be investigated, and how it is different from the approach of this study. The papers are each discussed below.

The paper by Irum et al. (2020) examines the impact of workplace incivility on the targets of knowledge hiding behavior. The paper suggests that the target will indulge in playing dumb, rationalized hiding, and evasive hiding behavior to conceal knowledge. The authors use affective events theory to explain how workplace incivility will make the target feel bad, which will tempt them to retaliate by lying about what they know. It proves that information concealing is more than merely a byproduct of connections based on reciprocal exchange. The authors also suggest that gender may affect this positive link. Although their study conceptualizes knowledge hiding behavior drawing on affective events theory, the antecedents differ from the current study i.e., this study incorporates negative reciprocity as a workplace event, however, the study in discussion examines workplace incivility as an antecedent of knowledge hiding behavior. Second, the study investigates the role of gender as a moderator whereas, the present study examines the role of a personality trait (i.e., agreeableness) as a moderator in the relationship. Lastly, the authors of the study in discussion used a different methodology from this study, as they utilized a conceptual review model to summarize their findings.

Alam et al. (2021) describe how negative feelings cause employees to hide explicit knowledge. It explains why explicit knowledge is hidden when there are frustrations, relational conflicts, and irritability present. The conceptual model was developed based on affective events theory. They collected data from 290 workers at a healthcare organization in the public sector. They found a



significant relationship between relationship conflict and knowledge hiding, and a significant moderation of irritability between relationship conflict and frustration. However, there was a moderate mediation of frustration between relationship conflict and knowledge hiding. Although both the study conceptualize knowledge hiding behavior, the study in question differs from the current study based on different variables incorporated to study the knowledge hiding behavior i.e., a different antecedent (relationship conflict), a specific negative reaction (frustration) rather than negative affective reactions as a mediator, and a mood as moderator (Irritability) rather than a personality trait (agreeableness). The authors collected data from a healthcare sector following a time-lagged design, however, the current study investigated the knowledge hiding behavior in the education sector using a cross-sectional design.

Zhao and Jiang (2021) combined social network theory and affective events theory to explore how individual network positions create cogent border conditions in the process of role stress impacting knowledge hiding through emotional exhaustion. They gathered information from 222 Chinese employees who underwent three-wave testing. They found that there is a significant relationship between role stress and knowledge hiding by the mediation of emotional exhaustion. Negative centrality negatively, however, structural holes positively moderated the direct relationship and jointly impacted the indirect relationship. The study differs from the present study on several points including but not limited to the conceptualization of knowledge hiding. Knowledge hiding is conceptualized based on two different theories, one of which is affective events theory like the current study. However, the variables including antecedents, mediators, and moderators are entirely non-relevant to the present study. Moreover, the study is conducted in a developed country i.e., the Chinese context. Whereas the present study contributes to the literature in the developing country context.

Xia et al. (2021) investigated if the request for politeness causes emotional reactions (happiness, anger), which affect the concealment of knowledge subsequently by drawing on affective events theory. The study focuses on the three types of knowledge hiding i.e., playing dumb, rationalized hiding, and evasive hiding. Research data yielded a total of 1,195 daily surveys from 210 full-time knowledge workers. They found that request politeness was positively related to happiness whereas negatively related to anger. Additionally, the effects of request politeness on playing

dumb were mediated by happiness, which was only adversely related to playing dumb and no other types of knowledge hiding. Whereas anger mediated the influence of request politeness on knowledge hiding, and it was significantly linked with all three categories of knowledge hiding. The study is different from the present study in most ways as the major similarity between the two studies is only that both conceptualize knowledge hiding behavior based on the affective events theory perspective. However, the study is conversation uses different variables to study the impacts on the knowledge hiding behavior such as mediation of positive and negative affect, while the present study focuses on only the mediation of negative affect based on a negative event. The methodology is also different for both studies.

By going through the recent research, we can conclude that the present study is not entirely similar to any other study based on various concepts, but only in one or another aspect. We can deduce that the study is significant and presented to add value to the existing literature.

## 2.8 Conceptual Framework

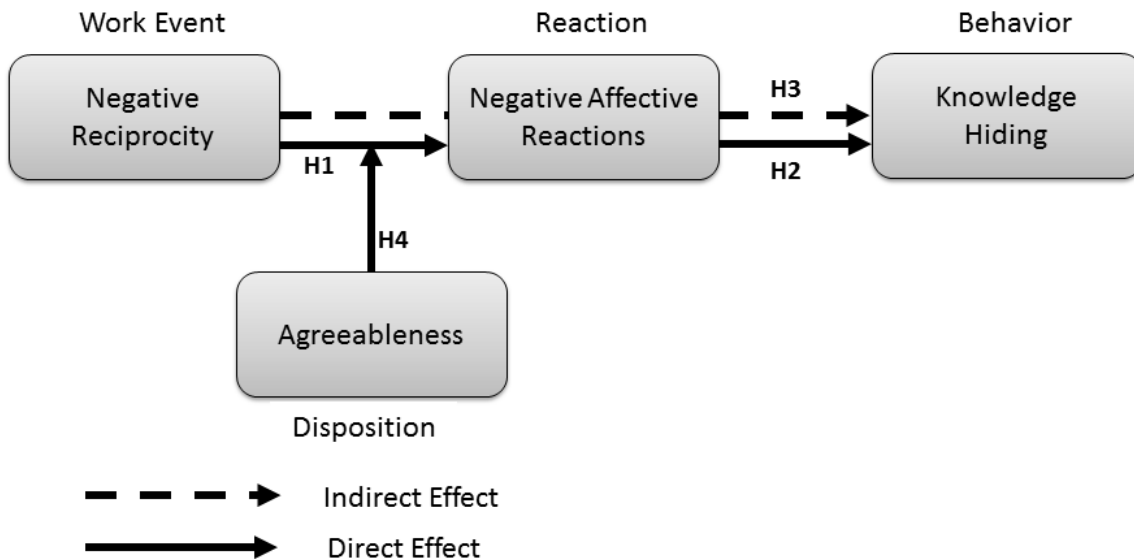


Figure 1: Conceptual Framework

## **2.9 Chapter Summary**

This chapter's primary objective was to examine the historical context of affective events theory, knowledge hiding behavior, negative reciprocity, negative affective reactions, and agreeableness in general. In this chapter, a comprehensive history and various definitions regarding the constructs were vigorously emphasized to learn the research methodology and strategies for further study. Knowledge hiding has been studied widely with different constructs, resulting in exploring various antecedents and consequences of this behavior. It focuses on how the behavior is harmful to organizations and what are the causes. This chapter also sheds some light on the specific antecedent, mediator, moderator, and supporting theory chosen for this study. Such that, it elaborates on how individuals retaliate against negative behavior by developing negative emotions towards the people who hide their knowledge and how the agreeable personality of the targets plays a role.

## **CHAPTER 3: Research Methodology**

### **3.1 Introduction**

The purpose of the chapter is to provide insight into the methodology utilized in collecting and analyzing data for the study. The selection of a research methodology involves a lot of work and calls for a review of the literature on the area and subject in question. The chapter starts by discussing the context this study is conducted in. The chapter provides an insight into the academic sector of Pakistan which is where the data has been collected for this study. Further, it highlights the importance of research design alongside the particular approach adapted for this study. It comprises sample size details, selection criteria of the sample, and demographics. It also offers specifics about the analytical procedure performed on the collected data.

### **3.2 Research Design**

The research design is defined as a researcher's plan that shapes the procedures and methods for gathering and interpreting data (Zikmund et al., 2013). This is a quantitative research study that uses surveys because a survey is appropriate for this research within the restrictions of the resources and time available. A survey is a quantitative method for collecting substantial amounts of data from a large population cost-effectively while also answering the questions of 'what?' (Saunders et al., 2009).

### **3.3 Research Philosophy**

Knowledge conception and creation methods are always subjective (James & James, 2012). Research philosophy is a perspective on how information should be gathered, examined, and applied. It primarily addresses how we perceive information, its existence, and reality as well as how we understand the world as it is (Crotty, 1998). A research paradigm is a way of understanding and researching the world and how to learn more about it. The base and foundation for all knowledge generation worldwide are provided by the research paradigm. Four components make up a paradigm: epistemology, ontology, methodology, and axiology (Lincoln & Guba, 1985).

Epistemology examines the nature, sources, use of knowledge, and its justification (Cohen, 2007; Hofer, 2001). The many different types of cognitive achievement that epistemology is concerned with comprehending include knowledge (Steup & Neta, 2005). Positivism and interpretivism are two different types of epistemologies. A positivistic approach, instead of developing new theories, relies on ones that have previously been developed. It is more focused on establishing and confirming the correlation between variables (Orlikowski & Baroudi, 1991).

The overall goal of the current study was to evaluate and analyze data based on theories that were already well-established to determine the causal relationship between variables. The study adopted a positivistic epistemology, deducing information from the grounded theory of affective events theory to construct hypotheses, which were then evaluated using a quantitative survey. By being independent in the current study, the researcher aimed to avoid having any influence over or being impacted by the topic of the research. The researcher acted impartially throughout the study, and their expectations had no bearing on the outcomes.

### **3.4 Instrument**

Widely accepted instruments were adapted from past studies. Questionnaires were administered in the English language because it is the official language of Pakistan. All items can be found in [Appendix](#).

#### *3.4.1 Knowledge Hiding Behavior*

Knowledge hiding behavior was measured from the hider's perspective, and in the holistic construct as done by previous research (Jiang et al., 2019). Connelly et al. (2019) stressed regarding Knowledge hiding that "there will be instances where the overall construct is of interest; in these cases, the entire measure should be used" (p. 780). Therefore, this study explored the antecedents of knowledge hiding behavior as a whole construct. The 12-item scale was adapted from Connelly et al. (2012). A number of empirical research have demonstrated the high reliability and validity of this scale (He et al., 2021). The instrument opens with "In a specific episode in which a particular coworker requested knowledge from you and you declined". Then, it asks other items such as "I explained that the information is confidential and only available to people on a

particular project”. The reliability of this scale was 0.89. A 5-point Likert-type scale from “*Strongly Disagree*” (1) to “*Strongly Agree*” (5) was used to measure the variable. Cronbach's coefficient ( $\alpha$ ) is 0.922 which is greater than 0.7, hence the items are reliable.

Table 1: Knowledge Hiding Items

Items	Cronbach's coefficient $\alpha$
I explained that I would like to tell them but was not supposed to.	
I explained that the information is confidential and only available to people on a particular project.	
I told them that my boss would not let anyone share this knowledge.	
I said that I would not answer their questions.	
I agreed to help them but never really intended to.	
I agreed to help them but instead gave them information different from what they wanted.	0.922
I told them that I would help them out later but stalled as much as possible.	
I offered them some other information instead of what they really wanted.	
I pretended that I did not know the information.	
I said that I did not know, even though I did.	
I pretended I did not know what they were talking about.	
I said that I was not very knowledgeable about the topic.	

### 3.4.2 Negative Reciprocity

Negative reciprocity was measured through a 3-item scale created by (Caliendo et al., 2012). A sample item includes “If somebody puts me in a difficult position, I will do the same to him/her”. A 5-point Likert-type scale from “*Strongly Disagree*” (1) to “*Strongly Agree*” (5) was used to measure the variable. Cronbach's coefficient ( $\alpha$ ) is 0.873.

Table 2: Negative Reciprocity Items

Items	Cronbach's coefficient $\alpha$
If somebody puts me in a difficult position, I will do the same to him/her.	0.873
If I suffer a serious wrong, I will take revenge as soon as possible, no matter what the cost.	
If somebody offends me, I will offend him/her back.	

### 3.4.3 Negative Affective Reactions

Negative affective reactions was measured with a 6-item scale adapted from the positive and negative affect scales (PANAS) developed by Watson et al. (1988). A sample item includes “My job made me feel upset.” A 5-point Likert-type scale from “*Not at all*” (1) to “*Very much*” (5), was used to measure the degree of their affective state explained by the adjectives such as “distressed, upset, irritable, nervous, jittery, and afraid”. Cronbach's coefficient ( $\alpha$ ) is 0.929.

Table 3: Negative Affective Reactions Items

Items	Cronbach's coefficient $\alpha$
My job made me feel distressed.	0.929
My job made me feel upset.	
My job made me feel irritable.	
My job made me feel nervous.	
My job made me feel anxious.	
My job made me feel afraid.	

### 3.4.4 Agreeableness

All analyses used a personality measure derived from the Hogan Personality Inventory (HPI)'s item pool (Hogan & Hogan, 1992, 1995). The HPI is a 206-item self-reporting test of typical

personality that correlates with the Big Five higher-order variables (Hogan & Hogan, 2007). The new short version of the HPI is used to measure agreeableness in this study. The procedure of Smith and Ellingson (2002) was followed and they adapted items from the Shortened version of the HPI developed by Smith et al. (Smith, 1996; Smith et al., 2001). The 4-item scale was used. A sample item includes “I work well with other people”. A 5-point Likert-type scale from “*Strongly Disagree*” (1) to “*Strongly Agree*” (5) was used to measure the variable. Cronbach's coefficient ( $\alpha$ ) is 0.696, which is below 0.7, so the items are not reliable. The item “I am sensitive to other people’s mood” has been removed due to lower outer loadings in the analysis which improves the reliability of the scale.

Table 4: Agreeableness Items

Items	Cronbach's coefficient $\alpha$
I work well with other people.	
I always try to see the other person’s point of view.	0.696
I am sensitive to other people’s moods.	
I enjoy being with other people.	

### 3.5 Sampling and Data Collection

Data were collected using a quantitative research approach to explore the relationship. By providing structured data, the Quantitative approach can help to generalize results. This research emphasizes public sector universities. The population consisted of public sector universities situated in twin cities (Rawalpindi and Islamabad) of Pakistan. Using the non-probability sampling technique i.e., Purposive sampling, data were collected from the faculty members of universities in Rawalpindi and Islamabad via a survey questionnaire. A structured questionnaire was utilized to collect the data. The structured questionnaire was designed to gather all the required data and to reflect the nature of the variables involved. Keeping in view the prevailing pandemic situation at the time of data collection, it was collected online, thus the questionnaires were shared with respondents via Google forms.



Data Collection was conducted from August 2021 till the start of November 2021. A survey was sent via email to 3339 faculty members by getting email addresses from the official websites of public sector universities. People were requested to share the survey questionnaire with other faculty members that they know from the industry. To ensure that only legitimate people from public sector universities received the survey, it was sent to only individuals with an authorized email address. To reduce the potential social desirability bias (Heerwegh, 2009), the layout of the email was designed to offer respondents, the opportunity to respond at their convenience. The email survey for this study yielded 221 responses over 3 months. Out of all, 213 usable responses were considered for data analysis.

### 3.6 Sample Characteristics

The demographics used in this study are age, gender, qualification, qualification (terminal degree), teaching sector, province, position, discipline, and years of teaching experience. Majorly, the respondents comprised males (67.1%), which is not very surprising considering Pakistan's male-dominated working class. The respondents possessed a university degree as a minimum qualification. Most respondents (60.1%) qualified for their terminal degrees locally. Most of the respondents were appointed as Assistant Professors (54.5%) at the time of recording their responses. Most respondents (46.5%) had more than 10 years of experience in the field. The demographic details are shown in [Table 5](#) below:

Table 5: Demographic Information ( $n = 213$ )

Variable	Category	Frequency	Percentage
Gender	Male	143	67.1%
	Female	70	32.9%
	Prefer not to say	0	0.0%
Age	20-30	19	8.9%
	31-40	107	50.2%
	41-50	60	28.2%
	>50	27	12.7%
Qualification	Bachelor	0	0.0%
	Masters/MS/MPhil	71	33.3%
	PhD	129	60.6%

	Postdoc	13	6.1%
Terminal Degree	Local	128	60.1%
	Abroad	85	39.9%
Position	Lecturer	61	28.6%
	Asst. Prof.	116	54.5%
	Assoc. Prof.	25	11.7%
	Professor	11	5.2%
Teaching Sector	Public	213	100.0%
	Private	0	0.0%
Teaching Experience	<1	0	0.0%
	1-5yrs	69	32.4%
	6-10yrs	45	21.1%
	>10yrs	99	46.5%

### 3.7 Inclusion and Exclusion Criteria

The focus of this research is on faculty members of higher education institutions i.e., Lecturer, Assistant Professors, Associate Professors, and Professors. Therefore, the responses with a Bachelor's degree ( $n=2$ ) have been excluded since the minimum qualification required to become a faculty member of universities in Pakistan is MS/MPhil degree or a Master's degree from a foreign university, based on faculty appointment criteria for Pakistan (HEC), hence faculty with either of the degrees and extensive years of experience is considered eligible for this study. Few responses were received from the respondents having less than one year of experience ( $n=4$ ) and were also excluded due to lack of experience in the field. There were a few outliers found in the dataset ( $n=2$ ) which were also excluded from the demographics for the final analysis. Hence, in total 10 responses were excluded out of 221 responses. The sample size of the study for analysis was 213.

### 3.8 Power Analysis

As the data was supposed to be analyzed using PLS-SEM, initially the inverse square root method suggested by Kock & Hadaya (2018) has been utilized to decide the sample size. The sample size was decided to be at least 160 as the coefficient and magnitude for this study were unknown at the

time (Memon et al., 2020). Later, using G\*Power 3.1.9.7 software a priori power analysis was also performed to decide the required sample size for the suggested model (Faul et al., 2007). For the proposed structural model, at least 77 observations were calculated to attain 80% statistical power for a medium effect of 15% (0.15), on a significance level of 5% (0.05), as indicated by the power analysis result. The sample size of this study ( $n = 213$ ) is consistent with common rules of thumb as it is quite higher than the calculated minimum sample size (Barclay et al., 1995; Hair et al., 2010; Kline, 2005; Roscoe, 1975).

### **3.9 Common Method Bias**

The self-report survey method was utilized and the fact that all the collected data came from a particular source raised the likelihood of common method bias (Podsakoff et al., 2003). So, to negate the common method bias influence on the results, statistical and procedural methods were both utilized. Participants, for example, were given clear instructions and their confidentiality and anonymity were guaranteed during data collection (Reio Jr, 2010). Furthermore, the questionnaire avoided using any complex or unclear terms to ensure that all responses needed the same amount of effort (Reio Jr, 2010; Shuck et al., 2014). Other than the procedural methods, Statistical methods were also performed such as exploratory factor analysis for all of the items around all latent constructs. For the purpose of identifying common method bias (Podsakoff et al., 2003; Reio Jr, 2010) Harman one-factor test (Harman, 1976) was also used. For all items across all five latent variables, exploratory factor analysis was conducted. According to the findings, there was a 24% likelihood that a single factor could account for the maximum variance. This demonstrates that common method bias is not a problem in this research because no single factor can account for greater than 40% of the variance (Babin et al., 2016).

### **3.10 Content and Face Validity**

Content validity and face validity cannot be checked quantitatively. According to Kamis et al. (2012), face validity determines if the created questionnaire is appropriate for the survey participants in terms of adaptable language use and item structure. Content validity can be verified

by a rational assessment of the items in the instrument by evaluators who are cognizant of the concept or by enlisting the assistance of experts of the specified subject matter (Albers et al., 2011). For this purpose, the questionnaire was shared with five faculty members who are Ph.D. holders from different countries including a professor at Universiti Teknologi (Malaysia), an associate professor from King Abdul Aziz University (Kingdom of Saudi Arabia), a head of research & associate professor at NUST Business School (Pakistan) and 3 assistant professors from Nust Business School (Pakistan).

### **3.11 Pre-Testing**

For pretesting, the subject matter experts were invited to analyze and fill in the structured questionnaire and share their feedback before moving to collect the data to avoid issues in the future i.e., offensive, confusing and awkward queries (Memon, Ting, Ramayah, Chuah, & Cheah, 2017). There were no serious concerns raised. A few suggestions were given by the faculty members which were minor e.g., adding more details from the study, font size, full abbreviations, precise text, and grammatical errors. All the suggestions were noted and incorporated before the main data collection.

### **3.12 Pilot Testing**

The first step was to conduct pilot research to confirm the validity and reliability of the survey questionnaire, as well as to eliminate any ambiguity such that respondents are not confused and awkward questions are avoided (Memon, Ting, Ramayah, Chuah, & Cheah, 2017). The rationale and consistency of the data were tested by carrying out the pilot testing of 34 questionnaires data collected from relevant industry employees. This revealed that the data backed the hypothesis, proved that the scale was reliable and that there were no data issues other than minor concerns. There was an acceptable level of internal consistency for each construct (i.e., all Cronbach alphas exceeded 0.70). Hence, the questionnaire was emailed to the respondents over the internet to collect data.

### **3.13 Chapter Summary**

This chapter contains the methodology of this study. The research methodology that was chosen and employed to carry out the study to achieve the study objectives and find the results for the hypotheses is explained in this chapter, which is crucial following the literature evaluation. First, the chapter elaborated on the context of the study to explain why the chosen context is significant for the topic. The study utilized a quantitative research approach where the sample was derived by using surveys. The Purposive sampling technique was used to draw data from the population. Further, this chapter elaborated on the demographics and different strategies adopted before going for the main analysis to smoothen the process.

## CHAPTER 4: DATA ANALYSIS AND RESULTS

### 4.1 Introduction

This chapter comprises of the details regarding data analysis and the major findings of the study. First, the procedure used for analyzing the data is discussed. The reliability and validity of the data is discussed i.e., internal consistency reliability, convergent validity, and discriminant validity. It further progresses by detailing the Analysis of Variance (ANOVA) test which was conducted to ensure the variance. The results of the assessment of theoretical model are stated. In the end, the hypothesis is tested where the direct and indirect effect of mediation is calculated and presented in this chapter. The chapter also contains details of moderation analysis.

### 4.2 Data Analysis

The analysis was performed on the data comprising 213 usable responses. After collection, the data was analyzed on SPSS version 22. The analysis of the hypothesized model was performed using partial least squares structural equation modeling (PLS-SEM), which is a standard method of statistical analysis usually used in social sciences and HRM (Ringle et al., 2020). Given that this study is exploratory in nature, the use of PLS-SEM was considered to inspect the hypothesized model. It is a popular technique for analyzing complex inter-relationships among observed and latent variables (Memon, Salleh, et al., 2017; Memon, Ting, Ramayah, Chuah, & Hwa, 2017). PLS-SEM was deemed suitable to promote the dependent variable's prediction (Hair et al., 2017) and due to this study being incremental (i.e. Agreeableness as a moderator between negative reciprocity and negative affective reactions; and negative affective reactions as a mediator between negative reciprocity and knowledge hiding behavior) (Nitzl et al., 2016). Moreover, mediating models are suggested for PLS-SEM (Memon et al., 2018). For the examination of the inner and outer models, SmartPLS 3.0 (Ringle et al., 2015) was utilized. The reliability and validity of generated results were also checked. The analysis in PLS-SEM was split into two sections, where the first was focusing on the measurement models (internal consistency reliability, discriminant validity (DV), and convergent validity (CV)) and the second section focused on the structural model ( $R^2$ ,  $Q^2$ , and  $f^2$ ) (Hair Jr et al., 2016; Ramayah et al., 2018).

### 4.3 Internal Consistency Reliability

The metric of how well items reflect latent constructs is known as internal consistency reliability; and composite reliability might be used to assess internal consistency reliability (Richter et al., 2016). A composite reliability value exceeding 0.7 is regarded as satisfactory (Nunally, 1978; Ringle et al., 2020). The findings reveal satisfactory composite reliability for all the constructs – knowledge hiding behavior (0.938), negative reciprocity (0.923), negative affective reactions (0.945), and agreeableness (0.847) – therefore indicating that internal consistency reliability is high.

### 4.4 Convergent Validity

Convergent validity is the degree to how closely two measurements of the same construct are positively correlated with one another (Hair et al., 2014). It can be determined by assessing the outer loadings of all the indicators and the average variance extracted (AVE) (Hair Jr et al., 2017). An indicator with a higher outer loading is greatly reflective of the construct. According to a general principle, an indicator's outer loading must be greater than 0.708, because when the number is squared (0.708), it equals 50 percent AVE (0.50) (Hair Jr et al., 2017). The findings of convergent validity show that all the indicators, except A3 (loading: 0.230; AVE: 0.364), have suitable loadings. Hence, A3 was disregarded. Even though the outer loading of some of the indicators of knowledge hiding behavior – KH1 (0.502), KH2 (0.551), KH3 (0.500), KH4 (0.624), and KH12 (0.680) – was beneath the standard criterion of 0.708, but it was kept because all of the other indicators for the particular construct generated high scores as their loading is more than 0.7 and AVE is more than 0.5. The AVE scores – knowledge hiding behavior (0.566), negative reciprocity (0.795), negative affective reactions (0.741), and agreeableness (0.592) – validated the convergent validity of the measurement model, as illustrated in [Table 6](#).

Table 6: Internal Consistency Reliability and Convergent Validity

Constructs	Items	Loadings	AVE	CR
Knowledge Hiding Behavior	KH1	0.502	0.566	0.938
	KH2	0.551		

	KH3	0.500		
	KH4	0.624		
	KH5	0.830		
	KH6	0.832		
	KH7	0.856		
	KH8	0.836		
	KH9	0.851		
	KH10	0.885		
	KH11	0.902		
	KH12	0.680		
Negative Reciprocity	NR1	0.861	0.795	0.923
	NR2	0.898		
	NR3	0.915		
Negative Affective Reactions	NAR1	0.801	0.741	0.945
	NAR2	0.891		
	NAR3	0.890		
	NAR4	0.902		
	NAR5	0.824		
	NAR6	0.854		
Agreeableness	A1	0.867	0.592	0.847
	A2	0.740		
	A4	0.690		

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Note(s): CR, Internal Consistency Reliability; and AVE, Average Variance Extracted

A3 was excluded because of low loadings

#### 4.5 Discriminant Validity

Discriminant validity is the degree to which a construct is said to be truly different from other constructs using empirical criteria (Hair et al., 2014). The present study applied the heterotrait-monotrait ratio (HTMT) criterion to measure the discriminant validity, which when compared to



other techniques of assessing discriminant validity, is frequently thought to be the most conservative (Henseler et al., 2015). HTMT is defined by Hair Jr et al. (2017) as the ratio of within-trait correlation to between-trait correlation. To attain discriminant validity, the value of HTMT must not be more than 0.85 (Clark & Watson, 1995; Kline, 2011), or rather 0.90 (Gold et al., 2001; Teo et al., 2008). Each construct passed through both the criteria of HTMT (0.85) and HTMT (0.90) (Clark & Watson, 1995; Gold et al., 2001; Kline, 2011; Teo et al., 2008), denotes the discriminant validity of the model, as demonstrated in [Table 7](#).

Table 7: Discriminant Validity

Construct	Agreeableness	Knowledge Hiding Behavior	Negative Affective Reactions	Negative Reciprocity
Agreeableness	<b>0.806</b>			
Knowledge Hiding Behavior	-0.146	<b>0.753</b>		
Negative Affective Reactions	-0.128	0.281	<b>0.860</b>	
Negative Reciprocity	-0.233	0.344	0.415	<b>0.894</b>

#### 4.6 Analysis of Variance (ANOVA)

The study was conducted among different position titles (Lecturer, Assistant Professor, Associate Professor, and Professor). To test the variance among these positions from demographics, one-way ANOVA in SPSS software was performed. Results showed that there is an insignificant difference present in knowledge hiding behavior among different positions in academia. The ANOVA results show that the knowledge hiding scores of the positions differs insignificantly ( $F_{3, 217} = 9.248, p = 0.64/p > 0.05$ ). As indicated, the Levene's statistics is insignificant, so the equal variance was assumed. Post-hoc comparisons were assessed for checking the individual differences amongst the groups using Tukey. According to the test the mean score for Lecturer ( $M = 2.20, S.D = 0.948$ ), Assistant Professor ( $M = 1.94, S.D = 0.899$ ), Associate Professor ( $M = 1.73, S.D = 0.962$ ), and Professor ( $M = 1.64, S.D = 0.809$ ) were insignificantly different from each other at the 0.05 level. There were no differences detected in any of the positions. Hence, position titles

from the demographics were not controlled due to insignificant results in ANOVA. It is preferable to exclude controls from the research study if it is determined that they have a negligible effect because doing so could change the outcomes (Becker, 2005).

Table 8: One Way ANOVA

Test of Homogeneity of Variance					Anova	
Positions	Mean	Std. Deviation	Levene's Statistics	Sig.	F	Sig.
Lecturer	2.20	.948	0.606	0.612	2.456	0.064
Asst. Prof	1.94	.899				
Assoc. Prof	1.73	.962				
Professor	1.64	.809				

Group Differences			
Positions	Mean Difference	Sig.	95% Confidence Interval [LL, UL]
Lecturer - Asst. Prof.	.256	.268	-.11 .62
Lecturer - Assoc. Prof.	.466	.128	-.08 1.02
Lecturer - Professor	.561	.241	-.21 1.33
Asst. Prof. - Assoc. Prof.	.210	.717	-.30 .72
Asst. Prof. - Professor	.304	.719	-.44 1.05
Assoc. Prof. - Professor	.094	.992	-.76 .95

## 4.7 Structural model

### 4.7.1 Hypothesis Testing (Direct Effect)

In structural model assessment, the fundamental relationships amongst the constructs are tested. Path coefficients, effect size ' $f^2$ ', coefficients of determinations ' $R^2$ ', and predictive relevance ' $Q^2$ ' were all used to evaluate the structural model (Chin, 1998; Hair Jr et al., 2017). Overall prediction accuracy of the model is represented by  $R^2$  (Hair et al., 2014). Values of 0.26, 0.13, and 0.02 for  $R^2$  are suggested to be considered large, medium, and small (Cohen, 1988). The findings of the analyzed structural model suggest a moderate  $R^2$  (0.079) for knowledge hiding behavior and similarly a moderate  $R^2$  (0.173) for negative affective reactions, as depicted in [Table 9](#).

Joseph Hair et al. (2014) referred to effect size ' $f^2$ ' as the shift in the  $R^2$  when a particular exogenous construct was excluded from the model which could be utilized to assess whether the

excluded construct had a considerable effect on the endogenous variable”. Values of 0.02, 0.15, and 0.35 for  $f^2$  as effect sizes are suggested to be considered large, medium, and small (Cohen, 1988). The findings of effect size ' $f^2$ ' reveal that agreeableness ( $f^2 = 0.001$ ) has no substantial influence on negative affective reactions. On the other hand, negative affective reactions have a smaller effect on the knowledge hiding behavior ( $f^2 = 0.085$ ). Moreover, negative reciprocity ( $f^2 = 0.19$ ) has medium effect on negative affective reactions. The findings are shown in [Table 10](#).

Blindfolding was run in SmartPLS 3.0 to calculate  $Q^2$  values. It is considered a sample reusing approach that eliminates each  $d^{th}$  data point in the endogenous constructs indicators (Hair Jr et al., 2017). A  $Q^2$  score greater than 0 implies that dependent constructs of the model are predictively relevant (Cha, 1994). The  $Q^2$  values for knowledge hiding behavior (0.037) and negative affective reactions (0.136) exhibited satisfactory predictive relevance, as depicted in [Table 9](#).

The statistical level of significance of the parameter was estimated using the bootstrapping procedure (one-tailed significance and 5,000 subsamples) suggested by Ramayah et al. (2017). Depicted in [Table 11](#), the findings show that negative reciprocity (H1,  $\beta = 0.407$ ,  $t = 6.004$ ,  $p = 0.000$ ) was significantly positively related to negative affective reactions. Negative affective reactions (H2,  $\beta = 0.281$ ,  $t = 4.254$ ,  $p = 0.000$ ) was also significantly positively correlated with knowledge hiding behavior. However, agreeableness (H4,  $\beta = -0.033$ ,  $t = 0.486$ ,  $p = 0.314$ ) does not have any effect on negative affective reactions. Hence, H1 and H2 were supported.

Table 9: R2 and Q2 of constructs

Construct	R <sup>2</sup>	Predictive Accuracy	Q <sup>2</sup>
Knowledge Hiding Behavior	0.079	Slightly moderate	0.037
Negative Affective Reactions	0.173	Moderate	0.136

Table 10:  $f^2$  values (Path model)

Predictor Construct	Target Construct	$f^2$	Effect Size
Agreeableness	Negative Affective Reactions	0.001	No effect
Negative Affective Reactions	Knowledge Hiding Behavior	0.085	Small

Negative Reciprocity

Negative Affective Reactions

0.19

Medium

Table 11: Findings of hypotheses testing (The direct effect)

Hypothesis	Beta	STDEV	t-value	p-value	VIF	LL	UL	Decision
H1: Negative Reciprocity → Negative Affective Reactions	0.407	0.068	6.004	0.000	1.057	0.054	0.183	Supported
H2: Negative Affective Reactions → Knowledge Hiding Behavior	0.281	0.066	4.254	0.000	1.000			Supported

Note(s): LL, lower level; UL, upper level; STDEV, standard deviation

#### 4.7.2 Hypothesis Testing (Mediation Analysis):

Afterward, mediation analysis was run to test H3, in which the mediation of negative affective reaction among the relationship between negative reciprocity and knowledge hiding behavior was hypothesized. The indirect effect approach (0 = no mediation) by Preacher & Hayes (2008) was used to analyze the effect of mediation in this model. The findings of the indirect effect indicate that negative reciprocity ( $\beta = 0.114$ ,  $t = 3.230$ ,  $p = 0.001$ , 95% CI (confidence interval): LL (lower level) = 0.055, UL (upper level) = 0.186) have significant indirect effect on knowledge hiding behavior via negative affective reactions. This significance is proved by the  $p$ -value  $< 0.05$ ,  $t$  value  $> 1.96$  (two-tailed) and the LL & UL values being both positive. Therefore, H3 was supported, as shown in Table 12.

Table 12: Mediation Analysis

Hypothesis	Beta	STDEV	t-value	p-value	LL	UL	Decision
H3: Negative Reciprocity -> Negative Affective Reactions -> Knowledge Hiding Behavior	0.114	0.035	3.23	0.001	0.055	0.186	Supported

Note(s): LL, lower level; UL, upper level; STDEV, standard deviation

### 4.7.3 Hypothesis Testing (Moderation Analysis):

The effect of the moderation test is examined by introducing an interacting variable in software (Smart PLS) and repeating the procedure using the PLS algorithm, which indicates that the  $R^2 = 0.204$  of negative affective reactions. Bootstrapping is used to determine the significance level of the interacting variable, where the  $p$ -value (0.123) is greater than 0.05 and the  $t$  value (1.162) is smaller than 1.645, which means that agreeableness, contradicting our hypothesis does not moderate the relationship between negative reciprocity and negative affective reactions. Hence, H4 was rejected, as shown in Table 13.

Table 13: Moderation Analysis

Hypothesis	Beta	STDEV	$t$ -value	$p$ -value	LL	UL	Decision
<i>H4</i> : NR*Agreeableness -> Negative Affective Reactions	0.179	0.154	0.078	0.123	-0.188	0.292	Not-Supported

Note(s): LL, lower level; UL, upper level; STDEV, standard deviation

## 4.8 Chapter Summary

The chapter discusses the study's main conclusions as well as the data analysis process. The sample size is ( $n=213$ ). Reliability, validity, confirmatory and exploratory factor analysis are debated. The model fitness is displayed in tables by presenting the results achieved from analyzing the data. It includes the findings of the theoretical model evaluation. The direct and indirect effect of mediation is calculated and presented in this chapter. The chapter contains details of moderation analysis. The calculation and presentation of the direct and indirect effects of mediation are made. The moderation analysis is covered in full in this chapter.

## CHAPTER 5: DISCUSSION AND CONCLUSION

### 5.1 Introduction

This chapter starts with a brief recap of the processes in the previous chapters including the strategy and the findings and the hypothesis decision reported. It aims to thoroughly discuss the findings of this study in the light of prior literature available. The chapter portrays the general understanding of the findings of the researchers of prior studies and this study is based on the findings on the specific topics. It elaborated on how the hypothesis is in line with other studies and what could be the potential reasons for a hypothesis to be rejected. It further progresses by describing the theoretical and managerial implications of the study. The use of the findings of this study for further researchers, managers, and other practitioners has been discussed. It also includes the limitations and future directions for future researchers to further elaborate on the topic. Lastly, the study has been concluded in a few words to summarize the general results found.

### 5.2 Recapping

The study intends to investigate if knowledge hiding behavior is prevalent in higher education institutions in Pakistan. For this purpose, affective events theory has been incorporated to study behavior. It also examined if negative reciprocity has an effect on knowledge hiding behavior with the mediation of negative affective reactions and the moderation of agreeableness, which is in line with affective events theory. Further, 213 usable responses are first checked for validity and reliability and the analysis has been performed where the hypothesis are tested for the direct and indirect effects. It has been found that the results of hypothesis testing are significant, other than the moderation effect, which is insignificant. The decision on hypothesis testing can be seen in [Table 14](#).

Table 14: Hypothesis Decision

Hypothesis	Decision
H1 Negative reciprocity relates positively to negative affective reactions.	Supported

H2	Negative affective reactions are significantly related to knowledge hiding behavior.	Supported
H3	Negative affective reactions positively mediate the relationship between Negative reciprocity and Knowledge hiding behavior.	Supported
H4	Personality (Agreeableness) negatively moderates the relationship between Negative reciprocity and negative affective reactions.	Not Supported

## 5.3 Discussion

### 5.3.1 Hypothesis 1: Negative reciprocity relates positively to negative affective reactions.

The present study explored the impacts of negative reciprocity on negative affective reactions, the impact of negative affective reactions on knowledge hiding behavior, the mediating role of negative affective reactions between the relationship between negative reciprocity and knowledge hiding behavior, and the moderation of agreeableness among the relationship of negative reciprocity and negative affective reactions. As per expectation, the result of Hypothesis 1 indicates that negative reciprocity has a significant and positive influence on negative affective reactions. This entails that when employees witness or even sense that somebody at their workplace has hidden some knowledge from them, it develops negative affects and negative reactions in them. They feel that they are not being valued or the person does not feel the need to share something with them to help them which can lead to other thoughts i.e., the person does not like me, or either he or she is envious (Zhao et al., 2016). The finding is somewhat in line with prior research by C. E. Connelly et al. (2012), as they implied that negative affective emotions are activated more quickly, processed more fully, and are more resilient to change than positive affective emotions, as generally believed that “Bad is stronger than good” (Baumeister et al., 2001). Those who have previously had their requests for help turned down may respond by concealing their knowledge (Connelly et al., 2012). Concealing and hiding are associated with a deficiency of trustworthiness expressed through hate or avoidance (Anand et al., 2020).

### *5.3.2 Hypothesis 2: Negative affective reactions are significantly related to knowledge hiding behavior.*

The results of Hypothesis 2 indicate that negative affective reactions have a significant and positive effect on knowledge hiding behavior. The spike in knowledge hiding behavior seems to be because of negative emotions that the person feels and then they decide to indulge in a hiding behavior which is considered to be negative mostly. Following the H1, the individual might feel negative emotions because of the other person hiding information from them and it instigates their negative emotions which then result in them retaliating and indulging in knowledge hiding behavior themselves. In the presence of such behavior from others, the employee's commitment and engagement with the organization can deteriorate as they feel detached from the organization. Negative emotions, such as those induced by unpleasant coworkers' acts (for example, when they purposefully hide their knowledge), limit thought-action abilities, require deliberate action concentrated on personal gain and diminish the possibility of knowledge reciprocation (Serenko & Bontis, 2016). Furthermore, knowledge ownership is common in workplaces where employees perceive an absence of respect and a competitive risk from their bosses and peers (Pan et al., 2018). Hence, it is concluded that negative affective reactions are the antecedents of knowledge hiding behavior.

### *5.3.3 Hypothesis 3: Negative affective reactions positively mediate the relationship between Negative reciprocity and Knowledge hiding behavior.*

The finding of Hypothesis 3 suggests that negative affective reactions intervene in the relationship between negative reciprocity and knowledge hiding behavior. Based on H1 and H2, it is evident that when there is a negative event i.e., negative reciprocity, it results in a negative behavior i.e., knowledge hiding, which is strengthened in the presence of negative affects. When an employee is at the receiving end of knowledge not being shared with them, they develop negative emotions towards their colleagues and the organization, which is the result of feeling deprived and not being valued in their workplace. They then indulge in the same behavior by hiding the knowledge that they possess. This corresponds to the research of (Černe et al., 2014) who found that when a coworker is refused knowledge, then they are more likely to reciprocate by hiding knowledge (Connelly et al., 2014; Khalid et al., 2018; Lanke, 2018) because when an individual perceives or



sees a negative behavior (Vardi & Weitz, 2003), he or she develops a distrustful mindset, which includes a deficiency of trust in the other or a fear that the other would hurt them (Grovier, 1994). In a dyad, one person's distrust causes the other to reciprocate the conduct (Gouldner, 1960). Zhao et al. (2016) gave an introductory discussion based on the negative reciprocity theory on the relationship between exclusion at the workplace and knowledge hiding conduct, believing that knowledge hiding behavior is a kind of retaliation by the employees for their exclusion; the study supplemented the antecedents of knowledge hiding behavior. (Anand & Hassan, 2019) also implied that knowledge hiding can be caused due to many causes including person-related factors i.e., revenge and they also suggested core self-assessments to be a potential way of avoiding this particular cause of knowledge hiding. Each member's knowledge hiding conduct is influenced by the collective knowledge hiding activities of all the employees in an organization (Serenko & Bontis, 2016). Therefore, it is apparent that in the presence of a negative event i.e., negative reciprocity in this study, knowledge hiding behavior is most prevalent because of the negative affect.

#### *5.3.4 Hypothesis 4: Personality (Agreeableness) negatively moderates the relationship between Negative reciprocity and negative affective reactions.*

The results of Hypothesis 4 portray a different picture. It indicates that there is no moderation of agreeableness in the relationship between negative reciprocity and negative affective reactions. Since agreeableness is a positive disposition, an agreeable person may think positively even in a negative situation. It is assumed that a positive personality employee will most likely not indulge in negative behavior since they have comparatively more tolerance of attitudes from others. An agreeable person has traits like social compliance, love, friendliness, cooperative tolerance, good-naturedness, and forgiveness (Barrick & Mount, 1991) which could be the reason an agreeable employee does not develop negative emotions resulting in negative behaviors. An agreeable employee possibly will adhere to social compliance and will try to keep their friendship with others, so they might take even a negative situation positively; ignore it and move on or take measures to resolve the issue that bothered them rather than retaliating or indulging in the same behavior. The findings are coherent with the results of Ode & Robinson (2007), according to whom agreeableness may play a major role in dampening diverse types of negative affect. Although

agreeableness has fewer emotional correlations, it has been proven that those who are agreeable are less likely to aggression and reactive behavior (Martin et al., 2000; Robinson, 2007). However, the result of this study shows no effect on the relationship of negative reciprocity and negative affective reactions. Which can be considered from a cultural perspective of the context of this study. According to Nguyen et al. (2019), cultural circumstances may also influence how employees feel about keeping knowledge hidden. As the study is conducted in Pakistan, which although is considered to be a hospitable country, individuals in public sector organizations are considered to be less likely to work together, have less interactions, less communication and are likely to work solely rather than in teams. Hence, they are less likely to have an agreeable personality towards their peers since agreeableness relies on emotional correlations and interpersonal communications.

## **5.4 Theoretical implications**

### *5.4.1 Affective Events Theory*

Considering knowledge hiding is still a growing topic, more and more advanced research is needed to fully comprehend its prevalence and impact (Anand et al., 2020). In general, this study broadens our understanding of knowledge-hiding behavior from the lens of affective events theory. With this, the research extends the current literature in various ways. First, to the greatest of the researcher's knowledge, this research is among the few studies that use affective event theory to conceptualize knowledge hiding behavior. This important contribution will open future avenues of research for scholars to know the significance of affective event theory to further expand the knowledge hiding literature.

### *5.4.2 Hypothesis 1: Negative reciprocity relates positively to negative affective reactions.*

To date, the link between negative reciprocity and knowledge hiding behavior has been studied a little. Despite several calls for research in the past, none of the previous studies have considered negative reciprocity as one of the events leading to knowledge-hiding behavior. This research makes a major contribution to the knowledge-hiding literature by conceptualizing negative reciprocity as an antecedent of knowledge-hiding behavior.

*5.4.3 Hypothesis 2: Negative affective reactions are significantly related to knowledge hiding behavior & Hypothesis 3: Negative affective reactions positively mediate the relationship between Negative reciprocity and Knowledge hiding behavior.*

The specific way in which social ties influence the individuals' decisions would have remained unknown without looking into these emotional reactions. Hence, the research is useful to understand how the negative affect of an individual can impact their interpersonal choices and affect their behavior, which in this case is negative reciprocity and knowledge hiding behavior. The finding can help future researchers to further dig into the topic by keeping in mind these results so that the topic can be further extended.

*5.4.4 Hypothesis 4: Personality (Agreeableness) negatively moderates the relationship between Negative reciprocity and negative affective reactions.*

Although personality traits have long been viewed as predictors of individual workplace outcomes, little is known to date about the moderating role of agreeableness in relation to negative reciprocity and negative affective reactions while exploring knowledge hiding behavior. This study addresses the gap and contributes to the existing form of knowledge by incorporating agreeableness as a moderator to confirm its significance in affective event theory.

*5.4.5 Knowledge hiding in Higher Education Institutions*

Finally, this study adds to the affective events theory and knowledge hiding construct in higher education in Pakistan. Although few attempts have been made before, they were mainly focused on the information technology (IT) sector (Bari et al., 2020; Zakariya & Bashir, 2020) and hospitality (Khalid et al., 2018; Khalid et al., 2020). By examining the phenomenon of knowledge hiding behavior with the lens of affective event theory, the present study takes a step forward in expanding current knowledge and provides a unique perspective on the subject matter in a higher education context.

## 5.5 Managerial implications

Knowledge hiding and Knowledge sharing might adversely impact the knowledge management process of organizations (Arain et al., 2019; Butt & Ahmad, 2019). Although managers invest in promoting knowledge sharing, still knowledge hiding behavior is prevalent in workspaces (Wang et al., 2019). Hence, the findings of this research offer beneficial insights for practitioners. Specifically, the study will help to find out why and how knowledge is concealed by workers and how it can be controlled. It will encourage managers, leaders, and executives to apply the results of this study to real business scenarios. The results of this research will be helpful for corporate leaders to formulate strategies to alleviate the undesirable behaviors of workers, knowledge hiding behavior, in particular. Moreover, this study will help policymakers to develop certain policies that can be implemented by managers in organizations to achieve strategic goals and objectives by avoiding negative events and reducing negative behavior, such as knowledge hiding.

### 5.5.1 Hypothesis 1: Negative reciprocity relates positively to negative affective reactions.

As we have examined, that knowledge hiding is harmful to businesses in their operations (Černe et al., 2014). Managers from the same cultural background could prevent knowledge hiding by getting high-status workers to focus on the sense of duty to share knowledge instead of feeling envious (Mangold, 2017). Collective rather than individual accomplishments should be given more weight in reward and promotion systems so that employees work together and share the information with peers to avoid hiding and consequently retaliation by hiding their knowledge. Managers who are interested in fostering knowledge sharing should not only link knowledge sharing behaviors to organizational benefits (such as salary rewards, bonus schemes, or promotions) but also step up their efforts to encourage employees' interpersonal interactions and focused relations. Furthermore, co-teaching and co-research might be encouraged by articulating the academic employment structure. Seminars, workshops, and casual social events can all promote regular knowledge transmission. In other words, it should be the mindset change from "knowledge is power" to "knowledge sharing is power" (Yang & Ribiere, 2020). Similar to this, it is necessary to foster flexibility in conventional and ceremonial academic jobs where the hiding of some knowledge may be deeply ingrained so that both gradual and drastic shifts to knowledge management can be managed and accepted (Kumar et al., 2020; Shukla, 2020). Employees are

more prone to regard knowledge sharing positively and might perform better eventually if they believe they may benefit in return from their peers by sharing their knowledge.

*5.5.2 Hypothesis 2: Negative affective reactions are significantly related to knowledge hiding behavior.*

Secondly, the review of the literature revealed that even while knowledge hiding happens on a modest level in higher education, it still has a considerable impact on how the industry functions. If knowledge hiding leads to inaccurate and misleading information, then the results may not be favorable from an ethical or legal standpoint and the target of knowledge hiding can develop negative emotions towards the hider and the organization. Management of the organizations should promote knowledge sharing inside organizations and prevent knowledge hiding, for example, by giving preference to individuals who actively help their coworkers acquire knowledge for growth (Zhao & Xia, 2019). Employees might be less prone to participate in knowledge hiding behavior if they trust one another because they may not be as worried about looking bad if they give erroneous information. Managers should specifically encourage a mastery-oriented environment that supports collaboration and learning by giving staff leadership opportunities and reminding them of their knowledge-sharing responsibilities (Nerstad et al., 2018).

*5.5.3 Hypothesis 3: Negative affective reactions positively mediate the relationship between Negative reciprocity and Knowledge hiding behavior.*

Thirdly, our research has significant policy implications for universities, urging decision-makers to think about ways to lessen knowledge hiding and the detrimental effects it has on various stakeholders. One of the requirements is to encourage a cooperative and knowledge sharing organizational culture during the hiring procedure so that negative emotions of employees in the future can be avoided. The selection process should give priority to candidates with a collaborative experience and distinct vision, both within and outside of research. Hiring departments should choose managers who have the potential to be role models for their employees (Yukl & Mahsud, 2010) and engage in vocal or non-vocal actions that encourage knowledge exchange. Managers must be mindful of reciprocal mistrust loops, which occur when the workers who ask for knowledge believe it to be purposefully withheld from them and reciprocate in kind. Managers

must instill the idea in employees who join their organizations that knowledge hiding is improper behavior and frequently discuss the advantages of sharing knowledge when it is sought to avoid such loops from forming. Also, businesses should aim to foster collaborative, non-competitive work cultures where staff members are eager to learn from one another. To reduce employees' worries about others' jealousy, managers should also make every effort to keep the workplace free of social comparisons and politics.

*5.5.4 Hypothesis 4: Personality (Agreeableness) negatively moderates the relationship between Negative reciprocity and negative affective reactions.*

Lastly, in our results, we found that agreeableness is a personality trait that is found in an individual and is least likely to affect negative emotions and its consequences. This implies that managers need to focus on the negative events more than the disposition of the human resources involved since the personality of individual is not affecting the consequences. Since a person's agreeableness does not affect how targets respond to knowledge-hiding behaviors; although it is believed that agreeable workers might be less likely to take revenge on a person who has hidden some knowledge from them (Connelly & Zweig, 2015). For this purpose, managers must ensure a healthy and positive working environment rather than find a positive and an agreeable person for work.

## **5.6 Limitations and Future Directions**

This Study covers knowledge hiding behavior instigated by a negative event, negative affective reactions but a positive disposition. However, the construct has been studied in a negative light with the potential for detrimental consequences. Some research suggests that sharing should be discouraged and not appreciated (Husted & Michailova, 2002) because withholding is beneficial to businesses (Kräkel, 2005). Therefore, future researchers can study the concept in other proposed events and evaluate the positive and negative outcomes.

This research dealt with knowledge hiding behavior as a dependent variable and examined the effects of a certain event, reactions, and personality traits in resulting knowledge hiding behavior. Researchers can further explore the outcomes of knowledge hiding behavior in positive or negative

events, reactions, and personality traits. They can further investigate if a negative or positive event, reaction, or personality trait results in positive or negative outcomes of knowledge hiding behavior. The focus of most research is on realizing the harmful impacts of knowledge hiding behavior and particularly, on getting businesses to focus on two important questions: What are the reasons that knowledge is hidden amongst peers? and What can businesses do to keep knowledge hiding behavior at bay in the workspace? However, knowledge hiding behavior is not detrimental, according to some researchers, because it may be altered by prosocial drive (Connelly et al., 2012). Therefore, the researchers can focus on the positive outcomes of knowledge hiding behavior in organizations as most prior studies portray knowledge hiding behavior as a negative construct with negative consequences. Moreover, further research is needed to determine if such occurrences push organizations to alter or reorganize their culture, processes, and strategy discourse.

The study used a quantitative approach to explore the constructs. Further researchers can extend the literature by using qualitative approach to explore the constructs. This study is cross-sectional in nature; hence, researchers can also adopt a longitudinal approach to extend the literature.

Lastly, this research was conducted in academic institutions in a developing country. The proposed event may have different results in different industry sizes or the kind of industries (e.g., financial institutions, IT, manufacturing, retail). So, future researchers can investigate the construct in different settings. Moreover, they can further examine the behavior in other developing and particularly, developed countries to generalize the results.

## **5.7 Conclusion**

The main goal of this research was to explore the effects of negative reciprocity on negative affective reactions and the effect of negative affective reactions on knowledge hiding behavior. The present study also explored the mediating role of negative affective reactions among negative reciprocity and knowledge hiding behavior. Furthermore, the study explored the moderation of agreeableness as a disposition between the correlation of negative reciprocity and negative affective reactions. The findings of this study reveal that negative reciprocity has a significant direct influence on negative affective reactions and negative affective reactions also significantly

have a direct effect on knowledge hiding behavior. The indirect correlation of negative reciprocity and knowledge hiding behavior is also significantly mediated by negative affective reactions. However, this study did not discover any moderation of agreeableness between the association of negative reciprocity and negative affective reactions. It contradicts the traditional thinking and the general viewpoint of positive disposition hindering negative emotions in negative situations. This study denies the belief of positive disposition by indicating that agreeableness does not affect the relationship between negative events (negative reciprocity) and negative reactions (negative affective reactions). The study contributes to literature in several ways including theoretical and managerial implications. It indicates how negative events leads to increase in negative reactions which causes a negative behavior.



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## APPENDIX (QUESTIONNAIRE)

This section contains **demographic information**. Please answer the following questions:

1. Gender

1	2
Male	Female

2. Age

1	2	3	4
20-30	31-40	41-50	> 50

3. Education

1	2	3	4	5
Bachelor	Masters	MS/MPhil	PhD	Postdoc

4. Qualified (Terminal degree)

1	2
Local	Abroad

5. Teaching Institute Name (Optional)

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6. Sector (Teaching)

1	2
Public	Private

7. Province

1	2	3
Islamabad (ICT)	Punjab	Sindh
4	5	6
Balochistan	KPK	Others

8. Position

1	2	3	4
Lecturer	Asst. Prof.	Assoc. Prof.	Professor

9. Discipline

1	2	3
Natural & Physical Sciences	Biological & Medical Sciences	Social Sciences
4	5	6
Engineering & Technology	Business Education	Arts & Humanities

10. Years of teaching experience

1	2	3	4
<1	1-5yrs	6-10yrs	>10yrs

**Knowledge Hiding Behavior** (Connelly et al., 2012)

The below portion of the questionnaire is regarding the knowledge you have. Please think of a recent interaction with your colleagues/coworkers working in a team/group activity or research project and they ask for some help or some information from you. How you responded to them. Please respond to the following statement on a scale from 1 to 5 where:

1= Strongly Disagree

2= Disagree

3= Neutral

4= Agree

5= Strongly Agree

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1 I explained that I would like to tell them but was not supposed to.	1	2	3	4	5

2	I explained that the information is confidential and only available to people on a particular project.	1	2	3	4	5
3	I told them that my boss would not let anyone share this knowledge.	1	2	3	4	5
4	I said that I would not answer their questions.	1	2	3	4	5
5	I agreed to help them but never really intended to.	1	2	3	4	5
6	I agreed to help them but instead gave them information different from what they wanted.	1	2	3	4	5
7	I told them that I would help them out later but stalled as much as possible.	1	2	3	4	5
8	I offered them some other information instead of what they really wanted.	1	2	3	4	5
9	I pretended that I did not know the information.	1	2	3	4	5
10	I said that I did not know, even though I did.	1	2	3	4	5
11	I pretended I did not know what they were talking about.	1	2	3	4	5
12	I said that I was not very knowledgeable about the topic.	1	2	3	4	5

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**Job Insecurity** (Hellgren et al., 1999)

Please respond to the following statement on a scale from 1 to 5 where:

1= Strongly Disagree

2= Disagree

3= Neutral

4= Agree

5= Strongly Agree

	Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I am worried about having to leave my job before I would like to.	1	2	3	4	5
2	There is a risk that I will have to leave my present job in the year to come.	1	2	3	4	5
3	I feel uneasy about losing my job in the near future.	1	2	3	4	5

**Negative Reciprocity** (Caliendo et al., 2012).

Please respond to the following statement on a scale from 1 to 5 where:

1= Strongly Disagree

2= Disagree

3= Neutral

4= Agree

5= Strongly Agree

	Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	If somebody puts me in a difficult position, I will do the same to him/her.	1	2	3	4	5

2	If I suffer a serious wrong, I will take revenge as soon as possible, no matter what the cost.	1	2	3	4	5
3	If somebody offends me, I will offend him/her back.	1	2	3	4	5

**Negative Affective Reactions** [Followed the procedure from (Sonnentag et al., 2008) and assessed NA with six items of the Positive and Negative Affect Scale (Watson, 1988)]

Please respond to the following statement on a scale from 1 to 5 where:

1= Not at all

2= A little

3= Moderately

4= Quite a bit

5= Extremely

	Items	Not at all	A little	Moderately	Quite a bit	Extremely
1	My job made me feel distressed.	1	2	3	4	5
2	My job made me feel upset.	1	2	3	4	5
3	My job made me feel irritable.	1	2	3	4	5
4	My job made me feel nervous.	1	2	3	4	5
5	My job made me feel anxious.	1	2	3	4	5
6	My job made me feel afraid.	1	2	3	4	5

**Agreeableness** Followed (Smith & Ellingson, 2002) and they adapted items from Shortened version of the HPI (Hogan & Hogan, 1992) developed by Smith et al. (Smith, 1996; Smith et al., 2001).

Please respond to the following statement on a scale from 1 to 5 where:

1= Strongly Disagree

2= Disagree

3= Neutral

4= Agree

5= Strongly Agree

	Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I work well with other people.	1	2	3	4	5
2	I always try to see the other person's point of view.	1	2	3	4	5
3	I am sensitive to other people's moods.	1	2	3	4	5
4	I enjoy being with other people.	1	2	3	4	5