

# FORGIVENESS AND INTERPERSONAL PROBLEM SOLVING: MEDIATING ROLE OF PERSONALITY

*A thesis submitted for the requirement of the degree of*

Master of arts in psychology

Submitted By

Mitali Chauhan (862302058)

Under the supervision of

Dr. Amanpreet Kaur



**THAPAR INSTITUTE**  
OF ENGINEERING & TECHNOLOGY  
(Deemed to be University)

Thapar school of Liberal Arts & Sciences  
Thapar Institute of Engineering and Technology, Patiala

## **ABSTRACT**

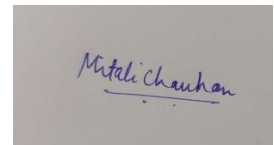
The present research sought to explore the mediating role of personality in the relationship between forgiveness and interpersonal problem-solving. This cross-sectional, correlational study involved a sample of 100 students aged 18 to 30 from four universities in Punjab. The data was collected by using standardized instruments such as Bolton Forgiveness Scale, the Big Five Inventory, and the Short Form of the Social Problem Solving Inventory. Correlational analysis and regression indicated a positive association between forgiveness and adaptive problem-solving styles (including positive problem orientation and rational problem solving) as well as with personality traits like agreeableness, extraversion and openness. Mediation analysis using Hayes' PROCESS macro revealed that agreeableness and openness partially mediated the relationship between forgiveness and interpersonal problem solving (constructive problem solving). Neuroticism was associated with maladaptive strategies such as impulsive carelessness and negative problem orientation. The results suggest that forgiveness serves as an important emotional resource that facilitates improved interpersonal functioning and conflict resolution through the influence of personality traits.

**Keywords:** Forgiveness, Interpersonal Problem Solving, Personality, Big Five Model.

## CERTIFICATE

This document certifies that the thesis titled “Forgiveness and Interpersonal Problem Solving: The Mediating Role of Personality” has been submitted in partial fulfillment of the criteria for the Master of Arts degree in Psychology at the Thapar School of Liberal Arts & Sciences, Thapar Institute of Engineering and Technology, Patiala, and represents a legitimate research effort conducted by the candidate under the guidance of Ms. Amanpreet Kaur, Assistant Professor at the Thapar School of Liberal Arts & Sciences.

Additionally, it is confirmed that this work has not been presented, either in part or in whole, for the attainment of any other degree or diploma at this institution or any other.

A rectangular box containing a handwritten signature in blue ink that reads "Mitali Chauhan".

(MITALI CHUAHAN)

This is to certify that the above statement made by the student concerned is correct and true to the best of my knowledge.

A handwritten signature in blue ink that reads "Amanpreet Kaur".

**Dr. Amanpreet Kaur**

Assistant Professor

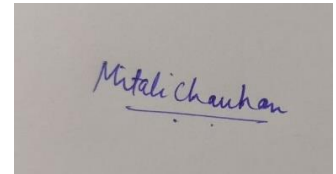
Thapar Institute of Engineering and Technology, Patiala

## CANDIDATE'S DECLARATION

I hereby state that the dissertation titled “Forgiveness and Interpersonal Problem Solving: Mediating Role of Personality” submitted to the Thapar Institute of Engineering and Technology, as part of fulfilling the requirements for earning a Master of Arts degree in Psychology, is the product of my independent research conducted under the guidance of Dr. Amanpreet Kaur.

I also affirm that this work has not been presented before, in whole or in part, to any other university or institution for the purpose of obtaining any degree, diploma, or other academic recognition.

All sources of information and support received throughout this research have been properly acknowledged.

A rectangular box containing a handwritten signature in blue ink that reads "Mitali Chauhan".

(MITALI CHAUHAN)

Location: Patiala

Date: May-2025

This is to certify that the above statement made by the student concerned is correct and true to the best of my knowledge.

## **ACKNOWLEDGEMENTS**

I wish to convey my heartfelt appreciation to everyone who supported me during the process of completing this thesis.

First and foremost, I am profoundly grateful to my supervisor, Dr. Amanpreet Kaur, whose advice, valuable feedback, and unwavering encouragement made this research achievable. Their knowledge and mentorship helped clarify my thoughts and provided a clear path for this work.

I would like to express my sincere thanks to the faculty members of the Department of Thapar School of Liberal Arts & Sciences at Thapar Institute of Engineering and Technology, Patiala, for their academic assistance and support.

I want to thank the participants of my study; their contributions and willingness to engage made this research possible.

I am genuinely thankful to my parents for their steadfast love, patience, and belief in my abilities. Their emotional and moral support kept me steady during challenging times of stress and self-doubt. A special acknowledgment goes to my friends and classmates, particularly Amita, Kritika, Ayush, and Paras, who supported me, lent a helping hand, and fostered a positive atmosphere during this demanding period.

Finishing this thesis has been a journey of personal development, and I am appreciative of everyone who contributed, whether directly or indirectly, to making it possible.

## TABLE OF CONTENTS

Abstract

---

|                                            |    |
|--------------------------------------------|----|
| Chapter 1. INTRODUCTION                    | 10 |
| 1.1 Forgiveness                            | 11 |
| 1.2 Personality                            | 13 |
| 1.2a. Big Five Factor Model of Personality | 13 |
| 1.3 Interpersonal Problem Solving          | 15 |

---

|                                                                        |    |
|------------------------------------------------------------------------|----|
| Chapter 2. REVIEW OF LITERATURE                                        |    |
| 2.1 Interpersonal Problem Solving and Personality                      | 17 |
| 2.2 Forgiveness and Personality                                        | 18 |
| 2.3 Forgiveness and Interpersonal Problem Solving                      | 19 |
| 2.4 Linking Forgiveness, Personality and Interpersonal Problem Solving | 20 |

---

|                                      |    |
|--------------------------------------|----|
| Chapter 3. RESEARCH GAP & OBJECTIVES |    |
| 3.1 Research Gap                     | 21 |
| 3.2 Aim                              | 22 |
| 3.3 Objectives                       | 22 |
| 3.4 Conceptual Model                 | 22 |
| 3.5 Hypotheses                       | 23 |

---

|                               |    |
|-------------------------------|----|
| Chapter 4. METHODOLOG         |    |
| 4.1 Research Design           | 24 |
| 4.2 Participants              | 24 |
| 4.3 Data Collection tools     | 24 |
| 4.3a Bolton Forgiveness Scale | 25 |

|                                                      |    |
|------------------------------------------------------|----|
| 4.3b Social Problem Solving Inventory- Short Version | 26 |
| 4.3c Big Five Inventory                              | 27 |
| 4.4 Procedure                                        | 28 |
| 4.5 Data Analysis                                    | 29 |
| <hr/>                                                |    |
| Chapter 5. Results                                   |    |
| 5.1 Descriptive Statics                              | 31 |
| 5.2 Correlation                                      | 34 |
| 5.3 Regression                                       | 37 |
| 5.4 Mediation                                        | 41 |
| <hr/>                                                |    |
| Chapter 6. DISCUSSION                                | 44 |
| <hr/>                                                |    |
| Chapter 7. CONCLUSION & FUTURE DIRECTIONS            |    |
| 7.1 Conclusion                                       | 48 |
| 7.2 Implications                                     | 48 |
| 7.3 Limitations                                      | 49 |
| 7.4 Future Directions                                | 49 |
| <hr/>                                                |    |
| References                                           | 51 |
| <hr/>                                                |    |
| Appendix                                             | 60 |
| <hr/>                                                |    |
| Appendix A. Models                                   | 60 |
| Appendix B. Consent Form                             | 62 |
| Appendix C. Questionnaires                           | 63 |

## LIST OF TABLES

| Sr. No. | Description                                                                       | Page No. |
|---------|-----------------------------------------------------------------------------------|----------|
| 1       | Descriptive Statistics                                                            | 32       |
| 2       | Table for Skewness and Kurtosis                                                   | 33       |
| 3       | Correlational Table                                                               | 34       |
| 4       | Multiple Linear Regression, Positive Problem Orientation                          | 37       |
| 5       | Multiple Linear Regression, Impulsive/Carelessness Style                          | 38       |
| 6       | Multiple Linear Regression, Negative Problem Orientation                          | 39       |
| 7       | Multiple Linear Regression, Rational Problem Solving                              | 40       |
| 8       | Multiple Linear Regression, Avoidant Style                                        | 41       |
| 9       | Agreeableness as a mediator between forgiveness and Positive Problem Orientation. | 42       |
| 10      | Openness as a mediator between forgiveness and Positive Problem Orientation.      | 43       |
| 11      | Openness as a mediator between forgiveness and Rational Problem Solving.          | 43       |

## LIST OF FIGURES

| Sr. No. | Figure           | Page No. |
|---------|------------------|----------|
| 1.      | Conceptual Model | 23       |

# **CHAPTER 1**

## **INTRODUCTION**

In our daily life there are various problems that an individual normally encounters. These problems can range from monetary issues to interpersonal disagreements (Mienaltowski, 2011). These interpersonal disagreements or problems have been regarded as a source of stress. A study conducted by Aanes et al., (2010) support that interpersonal stress- stress due to problems in interaction between two or more individuals (Kato, 2013), is significantly related to psychological stress as well as somatic symptoms. To deal with these difficulties and obstacles, problem solving skills are essential (Choudhary et al., 2022). A behavioural and cognitive process which helps to deal with interpersonal problems is known as interpersonal problem solving (Rubin & Rose-Krasnor, 1992).

Many scholars (Koutsos et al., 2007; Oral & Arslan, 2017; Brose et al., 2005) agree that forgiveness and personality traits play an important role in developing and shaping interpersonal problem solving skills. For instance, Kj (2018) states that forgiveness can help keep a connection going, lead to more social interactions, and is key to maintaining healthy interpersonal relationships.

However, there are few studies focusing on the interplay between these variables. Questions such as personality mediate the relationship between forgiveness and interpersonal problem solving, remains unanswered. In the present study, we are trying to understand the underlying mechanisms of these three constructs.

## 1.1 FORGIVENESS

Forgiveness is a multifaceted psychological concept (Fourie et al., 2020) that has attracted significant interest across various fields, including theology, philosophy, and contemporary psychology (Chen et al., 2018). Having its historical ties to religious and moral traditions, forgiveness has been regarded as a virtue for spiritual and community health. Religious teachings found in Hinduism, Christianity, Islam, and Buddhism have highlighted the moral importance of forgiving the wrongdoings of others (Lauritzen, 1987). With the advancement of psychological research, forgiveness has transitioned from a moral idea to a measurable and process-oriented concept that is important for emotional regulation, promoting interpersonal harmony, and improving psychological resilience (Raj et al., 2016).

Many authors (McCullough, 2000; Mehta et al., 2024; Amanze & Carson, 2019; Sells & Hargrave, 1998) have conceptualized forgiveness from various perspectives and theories. Although they cannot agree on one definition, they agree that forgiveness involves freeing oneself from negative feelings and emotions, converting them into positive emotions, and observing changes in the victim's thoughts, emotions, and behavior toward their transgressor. People who can forgive better handle their emotions and the issues encountered in their relationships (Ho et al., 2020). Amanze and Carson (2019) defined forgiveness as the ability to let go of resentment, release negative feelings and replace them with positive emotions, and the willingness to embrace positive intentions in interpersonal interactions.

Multiple theoretical frameworks provide a basis for understanding the forgiving process. Enright's Process Model of Forgiveness is a widely used model that talks about forgiveness as a four step process: uncovering the pain, deciding to forgive, managing feelings and finding meaning or personal development through the process of forgiveness (Ingersoll-Dayton et al., 2008). An

another notable framework is REACH model, developed by Worthington which consists of five components: remember the hurt, understand the offender's perspective, offer the gift of selfless forgiveness, deciding to forgive, and maintaining forgiveness (Nation et al., 2017). These models highlight that forgiveness is not just a one-time act but a dynamic and lengthy process that involves both emotional and cognitive systems.

The capacity to forgive is significantly influenced by personality traits. Various studies (Walker & Gorsuch, 2002; Brose et al., 2005; Kaleta & Mróz, 2018; Neto, 2007) have shown that individuals high in agreeableness, openness, extroversion are more inclined to forgive, while those high in neuroticism are more likely to struggle with emotional regulation and less inclined to forgive. This indicates that forgiveness is not only an interpersonal act but also a reflection of individual's personality dynamics. Forgiveness can be further classified into two major types - decisional forgiveness and emotional forgiveness. The former refers to the conscious decision to forgive, which can occur quickly, while later refers to the replacement of resentment with positive feelings which are associated with deeper psychological transformation and occurs more gradually (Lichtenfeld et al., 2019).

However, forgiveness is not always achieved easily. There are several barriers that can hamper the process of forgiveness. These barriers can include the seriousness of the wrongdoing, absence of remorse from the offender, unresolved trauma can delay the process of forgiveness (M. Raj & Wiltermuth, 2016). Individuals with emotional dysregulation may keep holding grudges and might find hard to let go, which can increase the likelihood of interpersonal conflict.

## 1.2 PERSONALITY

An individual's personality is their unique blend of traits, experiences and behaviors, which can be conceptualized as the integration of an individual's subjective experience and behavioral patterns (Kernberg, 2016). These stable sets of behavior, thoughts and feelings becomes defining characteristics of an individual over time and in various situations.

Building on this definition personality theorist agree that personality is composed of some stable, interpersonal characteristics and processes which are unique to every individual (Hampson, 2011). These theoretical understanding of personality has given rise to various perspectives. For example, Trait and Biological perspective talks about the stability, consistency of traits and neurological changes (arousal mechanisms) happening in our brain (Specht, 2017; Beri & K, 2019). However, narrative perspective and social cognition model majorly focuses on an individual's identity and ongoing adaption based on social learning and experiences. Additionally, Evolutionary and developmental perspectives see personality as an adaptive mechanism which keeps evolving throughout the life span (Boyle et al., 2008).

### 1.2.a THE BIG FIVE MODEL OF PERSONALITY

With its roots tracing back to western philosophy, flock concepts and early scientific psychology, the Big Five Model of Personality is robust and empirically validated system which tried to organize human personality into five broad dimensions (McCrae & Costa, 1996). This model explains personality as factors by putting distinct traits into major five factors, which have been supported by empirical researches (McCrae & John, 1992; Naeem, 2023; Goldberg, 1990). These five dimensions captures the most significant variations in the human personality. These dimensions are Openness to experience, Conscientiousness, Extraversion, Agreeableness, and

Neuroticism, also known as OCEAN. Each dimension ranges from high to low levels covering a range of facets.

- Openness to Experience reflects the degree of intellectual curiosity, creativity, and preference for new experiences. Individuals who are high in openness are imaginative, curious, and open-minded. They appreciate art and beauty and engage in creative things. According to McCrae (1994), openness includes a broad range of traits and is closely linked to divergent thinking and creativity. Neurobiological studies have also linked openness to specific brain structures associated with cognitive flexibility (DeYoung et al., 2010).
- Conscientiousness is linked with self-discipline, organization, and the ability to delay gratification. Highly conscientious individuals are reliable, organized, and goal-oriented. Bogg and Roberts (2013), in their study stated that conscientiousness is linked with self-discipline, organization, and the ability to delay gratification. Highly conscientious individuals are reliable, organized, and goal-oriented. Their review focus on the importance of conscientiousness in promoting healthy behaviors and avoiding risky activities.
- Extraversion is marked by traits such as sociability, assertiveness, and a need for external stimulation through social interaction. Extraverts are typically energetic and often experience positive emotions. Research indicates that extraversion is positively correlated with job satisfaction and performance (Judge et al., 2002). They often perform well in environments where there is teamwork and social interaction
- Agreeableness involves facets such as trust, altruism, kindness, and affection (McCrae & John, 1992). Agreeable individuals are cooperative and compassionate towards others. In the workplace, agreeableness has been linked to better team performance and interpersonal relationships (Mount et al., 1998).

- Neuroticism refers to emotional instability and the tendency to experience negative emotions like anxiety, anger, or depression. High levels of neuroticism are associated with a greater risk of mental health issues. In his study, Lahey (2009) emphasised the predictive role of neuroticism in mental health problems and their impact on life satisfaction.

Compared to other theoretical frameworks of personality, the big five factor model offers various advantages. It provides taxonomic clarity, which organizes personality into five specific dimensions (McCrae & John, 1992), while its universal applicability captures, core aspects of personality across diverse cultures (McCrae & Terracciano, 2005). Moreover, this model demonstrates consistency, which means that these traits remain stable over the time (McCrae & John, 1992), Lastly, various standardized instruments have been developed to measure these traits.

### 1.3 INTERPERSONAL PROBLEM-SOLVING (IPS)

Cam & Alkal (2020), stats that interpersonal conflicts or problems are the type of disagreements that can occur between individuals due to having different perspectives, emotional responses, thoughts and values. These can result in tension or friction in a relationship. During interpersonal conflicts people can experience problems in communication, understanding one another, or being unable to cooperate with the other person.

Interpersonal problem solving is a cognitive (understanding motives and predicting outcomes) and behavioral (direct or indirect requests, negotiations, and cooperative solutions) process which helps individuals to deal with interpersonal problems and maintain a harmonious relationship. It helps to reduce the tension and find an effective solution to make things work out (Rubin & Rose-Krasnor, 1992).

Davila et al. (1996), argued that interpersonal problem-solving methods are linked to attachment cognitions (comfort with closeness, good communication with peers and parents) and global self-worth (views about oneself) in women moving into adulthood. They also purposed a model stating that early experiences can lead to negative experiences about oneself and others, which in turn leads to problems in interpersonal relationships. This study employed 94 women aged between 17-19 years and assessed them using self-report measure (attachment of cognition, & global self-worth) and an interview (interpersonal negotiation strategies interview). The findings indicated that poor IPS was strongly related to low self-worth and insecure attachment cognitions. Their model was supported as mediation analysis showed that global self-worth mediated relationship between attachment cognition and IPS. This study emphasized the significance of self-worth in interpersonal functioning and how attachment insecurity leads to poorer IPS strategies.

Shure (2001), conducted an intervention study on children of age 4-12. The study's objectives were to decrease high-risk behaviors including violence, an inability to handle anger, and social disengagement, as well as to educate kids how to understand and deal with interpersonal issues with peers and adults. Two groups were created, one group did receive training (group1) and the other did not (group2). Children were made to learn to think of different ways, understanding and recognizing feelings, and to predict the results of their actions through games, dialogues, and teachers assisted training. This research continued over 2 years and preschoolers showed significant improvements in high risk behaviors i.e. after training, 71% of children of group 1 were better behaviorally adjusted as compared to 54% of group 2. The results remained consistent after six-month and one-year follow-up. This study provides an important insight on how interpersonal cognitive problem-solving skills can prevent high risk behaviors and helps to develop better coping techniques as well as harmonious interpersonal relationships.

## **CHAPTER 2**

### **REVIEW OF LITERATURE**

The literature of forgiveness, personality and interpersonal problems is very vast. There are number of studies which have done deep analysis to understand how these variables associate with each other. Findings from those suggests important role played by forgiveness and personality traits in overcoming interpersonal conflicts.

#### **2.1 INTERPERSONAL PROBLEM SOLVING AND PERSONALITY**

- Cam and Alkal (2020), conducted a research examining the connection between interpersonal problem-solving strategies and personality characteristics, resilience, and hope. Their sample comprised of 401 university students. The findings suggested that the students having high scores on neuroticism were more inclined towards negative problem solving approaches, such as avoidance and carelessness. While the students who scored more on extraversion, openness to experience, agreeableness, resilience and hope, were more inclined towards constructive problem-solving. Especially, traits such as agreeableness and openness along with hope predicted positive problem-solving strategies.
- Marjanović et al. (2023), did a narrative systematic review on the big five and collaborative problem solving. In their review they took 47 studies to understand the relationship between personality traits and various aspects of collaborative problem solving. They found out that conscientiousness and agreeableness was positively associated with problem solving, where conscientiousness accounted for task related behaviours and team performance and agreeableness was linked with social enactment and relationship oriented

team process. Other personality traits openness, extraversion and neuroticism showed less consistent associations with collaborative problem solving.

- O'Brien and DeLongis (1996), conducted a study on 270 undergraduate students to examine how personality traits, situational contexts and their interaction influences different coping mechanisms. The aim was to explore how five factor personality dimensions predicts coping behavior in stressful situation with focus on interpersonal and social relationship context. They found that agreeableness related to empathetic responding and increased support seeking, which reflected social harmony in agreeable individuals. Openness linked with positive reappraisal which means that they interpret stressful events more positively. Extroverts were linked with social engagement as a coping process. individuals high in neuroticism experience more emotional distress during interpersonal stresses and conscientious people showed adaptive coping.

## 2.2 FORGIVENESS AND PERSONALITY

- A research by Brose et al. (2005) examined the association between the five-factor model of personality and forgiveness. A sample of 275 college students was collected. They wanted to explore that does the Five Factor Model predict forgiveness outside other established predictive factors, such as religiosity, empathy and social desirability. They used hierarchical multiple regression which showed that moderate amount of variance in forgiveness can be accounted to big five factors of personality, while controlling for religiousness, empathy and social desirability. The finding suggested that forgiveness correlated positively with agreeableness and extroversion and negatively with neuroticism.

This study highlighted that personality traits are important and independent contributor of forgiveness.

- Another longitudinal study conducted by Maltby et al. (2008), aimed to understand how the personality traits within five-factor model predict emotional states for avoidance and revenge motivation after a transgression. Their sample comprised of 438 undergraduate students, aged between 18-27. They collected initial data after the year of transgression and then again after 30 months. The findings revealed that people who scored low on neuroticism were less emotionally reactive and forgave easily, but those who scored higher, their score on avoidance and revenge motivation significantly increased during second time. Agreeableness had a favorable correlation with elevated levels of forgiving. Conscientiousness and extraversion had a small yet favorable correlation with elevated levels of forgiving.

## 2.3 FORGIVENESS AND INTERPERSONAL PROBLEM SOLVING

- Büyükbayraktar et al. (2025) conducted research examining the correlation between forgiveness and interpersonal problem-solving abilities. Their sample comprised of 443 students aged between 18 to 27. By using correlation and multiple regression analysis they stated that forgiveness positively correlated with constructive problem solving and negatively with maladaptive problem solving. Their result suggested that individuals who are more forgiving are more likely to manage interpersonal conflicts in a positive manner but are less likely to show avoiding behaviours.

## 2.4 LINKING FORGIVENESS, PERSONALITY AND INTERPERSONAL PROBLEM SOLVING

- A study done by Braithwaite et al. (2011) does contribute to understand the complex dynamic between personality, interpersonal problems and forgiveness. It states that personality traits affect an individual's capacity to forgive, which in turn, does affect the quality of the interpersonal as well as the social relationships. Interpersonal relationships such as romantic one's, forgiveness is an important factor in resolving interpersonal problems and conflicts as it reduces conflict and promotes emotional closeness.

## **CHAPTER 3**

### **RESEARCH GAP & OBJECTIVES**

#### **3.1 RESEARCH GAP**

Major research has focused on understanding the dynamic interplay between personality, forgiveness, and interpersonal problems. However, much attention isn't given to understanding how forgiveness and personality traits might affect problem-solving skills in interpersonal relationships. Büyükbayraktar et al. (2025) conducted a study to understand if forgiveness enhanced interpersonal problem-solving skills. In their study, they found out that the higher the forgiving nature, the higher the constructive problem-solving behavior. They also found that fostering forgiveness leads to better management of interpersonal conflicts, which in turn plays a role in improving social interactions and life satisfaction.

It is already established that forgiveness does enhance interpersonal problem-solving skills, but the role that personality might play is still unknown. There is a lack of literature addressing these variables together. In this study, we are addressing this gap by understanding the role that personality traits (agreeableness, openness, conscientiousness, neuroticism, extraversion) might play in the relationship between forgiveness and interpersonal problem-solving.

### 3.2 AIM

The current study aims to investigate whether personality traits mediate the relationship between forgiveness and interpersonal problems solving.

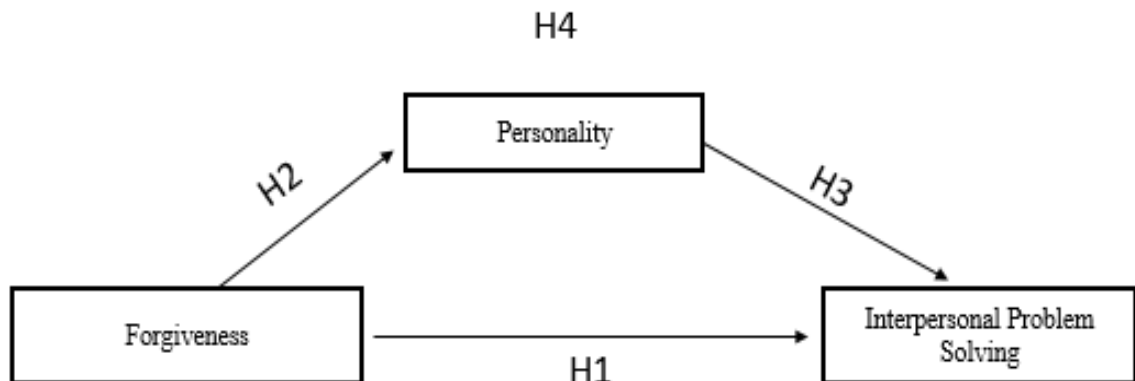
### 3.3 OBJECTIVES

There are two objectives behind conducting this research.

(a) To understand how personal characteristics like forgiveness and personality traits influence the way people handle interpersonal problem solving.

(b) To figure out how personality factors may influence the connection between forgiveness and interpersonal problem-solving.

### 3.4 CONCEPTUAL MODEL



### **3.5 HYPOTHESES**

**H1:** Forgiveness will be associated with Interpersonal Problem Solving

H1a: Forgiveness will be positively associated with constructive interpersonal problem solving (rational problem solving & positive problem orientation).

H1b: Forgiveness will have no impact on maladaptive interpersonal problem solving (Avoidant style, negative problem orientation & Impulsivity/carelessness style).

**H2:** Forgiveness will be associated with Personality.

H2a: Forgiveness will be positively associated with Extraversion, Agreeableness & Openness to experience.

H2b: Forgiveness will be negatively associated with Neuroticism.

H2c: Forgiveness will have no impact on Conscientiousness.

**H3:** Personality will be associated with Interpersonal Problem Solving.

H3a: Extraversion, Agreeableness & Openness to experience will be positively associated with constructive interpersonal problem solving (Rational Problem Solving & Positive Problem Orientation).

H3b: Neuroticism will be positively associated with maladaptive Interpersonal Problem Solving (Avoidant style, Negative Problem Orientation & Impulsivity/carelessness style).

H3c: Conscientiousness will have no impact on Interpersonal Problem Solving

**H4:** The relationship between forgiveness and constructive problem solving is expected to be mediated by personality.

## **CHAPTER 4**

### **METHODOLOGY**

In this section, we will discuss the methods and procedures used to investigate whether the personality traits (openness, agreeableness, conscientiousness, neuroticism, and extroversion) mediate the relationship between forgiveness and problem-solving among university students. It is already established that forgiveness, interpersonal problem-solving, and personality do correlate with each other.

#### **4.1 Research design**

In this study, we will be using a quantitative, cross-sectional research design. This research design is suitable because it allows the collection of objective and numeric data using standardized questionnaires, which can later be analyzed using mediation analysis.

#### **4.2 Participants**

The data were collected online (through a survey questionnaire) through Google Forms. The survey questionnaire was circulated online to individuals between 18-30 years of age. The participants were selected by using convenient sampling. The study employed university students from 4 four different universities (Thapar Institute of Engineering and Technology, Rayat Bahara University, Govt Polytechnic College Talwara & MRPD Govt College Talwara). Total 101 participants filled the google form. Out of 101 participants 43 were males and 58 were females.

#### **4.3 Data collection tools**

To collect the data, three standardized questionnaires were used.

## 1. Bolton Forgiveness Scale

This scale was developed by Amanze and Carson in 2019. This scale conceptualizes forgiveness as a multidimensional process that involves emotional, cognitive, and behavioral components (Mehta et al., 2024). Bolton's Forgiveness Scale comprises a 15-item questionnaire to measure the levels of dispositional forgiveness in individuals. This scale is a self-report measure having three subscales to measure forgiveness. Apart from the three subscales, this scale also provides the score for overall forgiveness. The participants were required to respond to each item using a six-point Likert scale, which spans from 1(*almost always false of me*), 2(*usually false of me*), 3(*sometimes false of me*), 4(*sometimes true of me*), 5(*usually true of me*), and 6 (*almost always true of me*). The scoring was done by adding each individual's response corresponding to each item. For example, if someone chose sometimes true of me, then 4 points were given to them. There was no reverse scoring for this scale. The subscales are defined below:

(a) *Coming to terms and letting go (CTLG)* is the capacity to resolve resentment and release negative feelings. The total number of items under CTLG is 7; if the score ranges from 28-35, it is considered high; if it ranges from 22-27, then moderate; and if it is less than 21, it is considered low.

(b) *Developing positive feelings (DPF)* is the ability to replace negative feelings with positive ones. The number of items under DPF is five; if the score ranges from 18-23, it is considered high, and if it is less than 13, it is low.

(c) *Giving the benefit of the doubt (GBD)* is the ability to overlook an offense by assuming that the offender might have valid reasons (Amanze & Carson, 2019). The number of items under GBD is 3; if the score is more than 12, it is considered high; if it is below 9, it is low.

(d) Overall forgiveness- This is calculated by adding all 15 responses on the scale. The maximum possible score is 90. Scores under 45 are considered poor at forgiving, 45-58 are good at forgiving, 59-70 are very good, and scores above 70 are considered highly forgiving.

Mehta et al. (2024) did a validation study of BFS for the Indian population. The study demonstrated a high internal consistency for this scale, indicated by a Cronbach's alpha of 0.847, indicating that it is reliable for measuring forgiveness within the Indian context.

## **2. Social Problem Solving Inventory- Short Version**

Social problem-solving inventory was initially developed by Thomas J. D'Zurilla and Arthur Nezu in the late 1980s. The scale's short form (SPSI-R: SF) was introduced in the 2000s (Sorsdahl et al., 2015). This scale comprises 25-item questionnaires to measure everyday problems encountered in social situations, including interpersonal problems. This inventory accesses cognitive and emotional responses to the problems encountered, which are important in social and interpersonal interactions (D'Zurilla & Nezu, 1990), (Sorsdahl et al., 2015). The participants had to respond to the 5-point Likert scale, which ranges from 1 (Not at all true of me), 2 (Slightly true of me), 3 (Moderately true of me), 4 (Very true of me), 5 (Extremely true of me). This scale is a self-report measure that has five subscales for problem-solving. The sub-scales are:

(a) Positive problem orientation: This dimension refers to the belief that problems can be solved effectively. This sub-scale includes items that show a positive attitude toward dealing with challenges. High scores in this dimension indicate that an individual is willing to solve problems rather than running away from them. Number of items in this subscale is 2.

(b) Negative problem orientation: This sub-scale helps to evaluate the negative perspective related to problem-solving. The items in this sub-scale reflect the belief that individuals may lack the resources to deal with their problems. The number of items on this subscale is 5.

(c) Rational problem solving: This dimension measures logical reasoning, the ability to analyze situations, form effective strategies, and rational assessment of the situations to form a solution. High scores indicate that the individual is comfortable in using effective problem-solving strategies. This subscale has seven items.

(d) Impulsivity/carelessness style: This sub-scale measures careless decision-making behaviors such as jumping to conclusions, acting on the first idea that came to their mind, or making decisions without giving it a thought. This subscale has four items.

(e) Avoidant style: This sub-scale contains items that measure avoidant behaviors, which include not confronting problems directly and prioritizing avoiding discomfort over taking action. This subscale has seven items.

### **3. Big Five Inventory**

The Big Five Inventory was initially developed by Oliver P. John and his colleagues in 1991. This scale comprises 44-item questionnaires to access the five-factor model of personality. This model comprises five overall measures neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. It is a self-report measure having five subscales corresponding to the five dimensions of the personality. The participants had to respond to a 5-point Likert scale and indicate how much they agreed or disagreed with the statements. The Likert scale ranges from 1 (Disagree strongly), 2 (Disagree a little), 3 (Neither agree nor disagree), 4 (Agree a little), and 5 (Agree Strongly). The scoring was done by adding each individual's response corresponding to

each item. For example, if someone chose sometimes true of me, then 4 points were given to them. There were a few items that had reverse scoring, which means that if a participant agrees with a negative statement, then low points should be awarded, i.e., if they choose the 4th option, then 2 points will be given.

(a) Extraversion: This dimension relates to the socially active, energetic, and outgoing (Lodhi et al., 2002). There are 8 items under this subscale, of which 3 are reverse-scored.

(b) Openness to experience: This dimension relates to the individuals who are more inclined towards aesthetics, ideas and intellect (Fayn et al., 2015). There are 10 items in this subscale, out of which 2 were reverse scored.

(c) Agreeableness: This dimension refers to the people who are compassionate, polite and cooperative (Laursen et al., 2002). This subscale has 9 items out of which 3 were reverse scored.

(d) Neuroticism: This dimension refers to the individuals who are more anxious, hostile and impulsive (Lahey, 2009). This subscale had 8 items out of which 3 were reverse scored.

(e) Conscientiousness: This dimension refers to the people who are orderly moral and cautious (Jackson et al., 2010). These are generally hard working and competent. There are 9 items in this subscale out of which 3 were reverse scored.

#### **4.4 Procedure**

This research was conducted to understand whether the personality traits mediate the link between forgiveness and interpersonal problem solving styles. It was also aimed to explore how these three variables correlated with each other. The study was conducted on university students. Different participants from four different universities of Punjab, belonging to different departments were

included. Participants were provided with brief introduction of the topic and their consent to participate in the study was taken. After taking consent a Google form was circulated online among the participants. The participants for provided with the following instructions:

- There are no objectively correct or incorrect responses.
- They have to choose the option with which the most relate.
- Their participation is entirely voluntary; they can withdraw from the study any moment they want.

They took 10 to 15 minutes to complete the Google form. After screening, the data was checked if it contained any outliers. There were 12 outliers that were found in the screening and those were removed. The final sample of the study included 88 participants. Data was analyzed by using SPSS software version 25 and correlation, regression and mediation analysis was done.

#### **4.5 Data analysis**

Statistical analysis was performed using SPSS version 25, with Pearson correlation employed to examine the association between the variables. A regression analysis was carried out in order to ensure the model's fit. In addition, Haye's MACRO PROCESS model 4 was used for the mediation process.

## **CHAPTER 5**

### **RESULTS**

In this chapter we will discuss the results obtained by using different methods. The methods used are descriptive statistics, Pearson correlation, multiple regression and mediation analysis.

## 5.1 DESCRIPTIVE STATISTICS

Table 1: Descriptive Statistics

|                              | N  | Minimum | Maximum | Mean  | Std. Deviation |
|------------------------------|----|---------|---------|-------|----------------|
| Coming to let go             | 88 | 8       | 36      | 20.30 | 7.125          |
| Developing positive feelings | 88 | 5       | 30      | 18.17 | 4.455          |
| Doubt of benefit             | 88 | 4       | 18      | 12.33 | 3.230          |
| Forgiveness                  | 88 | 24      | 75      | 50.80 | 11.337         |
| Positive problem orientation | 88 | 2       | 10      | 7.33  | 2.061          |
| Impulsive carelessness       | 88 | 4       | 18      | 11.57 | 3.216          |
| Negative problem orientation | 88 | 5       | 23      | 13.56 | 3.942          |
| Rational problem solving     | 88 | 8       | 34      | 23.42 | 5.201          |
| avoidance                    | 88 | 7       | 30      | 17.95 | 4.816          |
| Extroversion                 | 88 | 16      | 38      | 26.44 | 4.722          |
| Agreeableness                | 88 | 20      | 43      | 33.78 | 5.557          |
| Conscientiousness            | 88 | 18      | 40      | 28.99 | 5.528          |
| Neuroticism                  | 88 | 12      | 35      | 23.07 | 4.952          |
| Openness to experience       | 88 | 20      | 47      | 32.93 | 5.856          |

Table 1 showing the values of descriptive statistics for the variables shows an overall mean score of 25.05 (SD=11.75). The scores indicate moderate variability in the responses of participants.

Table 2: Table for Skewness and Kurtosis

|                              | Skewness  |            | Kurtosis  |            |
|------------------------------|-----------|------------|-----------|------------|
|                              | Statistic | Std. Error | Statistic | Std. Error |
| Coming to let go             | .602      | .257       | -.276     | .508       |
| Developing positive feelings | .136      | .257       | .174      | .508       |
| Giving benefit of doubt      | -.298     | .257       | -.542     | .508       |
| Forgiveness                  | .115      | .257       | -.293     | .508       |
| Positive problem orientation | -.432     | .257       | -.552     | .508       |
| Impulsive carelessness       | -.125     | .257       | -.218     | .508       |
| Negative problem orientation | -.217     | .257       | -.468     | .508       |
| Rational problem solving     | -.189     | .257       | -.061     | .508       |
| avoidance                    | -.043     | .257       | .030      | .508       |
| Extroversion                 | .152      | .257       | -.550     | .508       |
| Agreeableness                | -.440     | .257       | -.560     | .508       |
| conscientious                | .225      | .257       | -.685     | .508       |
| neuroticism                  | .172      | .257       | .325      | .508       |
| openness                     | -.115     | .257       | -.296     | .508       |

Table 2 showing the value of skewness lying between -0.440 to 0.620 and kurtosis lying between -0.685 to 0.324. All values of skewness and kurtosis is between the acceptable range of +/-1.

## 5.2 CORRELATION

Table 3: Correlation Table

|                              | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9   | 10    | 11  | 12 | 13 | 14 |
|------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-----|----|----|----|
| Coming to let go             | -     |       |       |       |       |       |       |       |     |       |     |    |    |    |
| Developing positive feelings | .23** | -     |       |       |       |       |       |       |     |       |     |    |    |    |
| Benefit of doubt             | .34** | .57** | -     |       |       |       |       |       |     |       |     |    |    |    |
| Forgiveness                  | .82** | .70** | .72** | -     |       |       |       |       |     |       |     |    |    |    |
| Positive problem orientation | .40** | .33** | .17   | .43** | -     |       |       |       |     |       |     |    |    |    |
| Impulsive carelessness       | .04   | .00   | .09   | .05   | .18   | -     |       |       |     |       |     |    |    |    |
| Negative problem orientation | -.14  | -.08  | .06   | -.10  | -.07  | .34** | -     |       |     |       |     |    |    |    |
| Rational problem solving     | .33** | .12   | .23*  | .32** | .60** | .15   | -.09  | -     |     |       |     |    |    |    |
| Avoidance                    | -.20  | -.10  | .01   | -.16  | .00   | .47** | .40** | .11   | -   |       |     |    |    |    |
| Extroversion                 | .46** | .22*  | .31** | .47** | .37** | .03   | -.02  | .27*  | .02 | -     |     |    |    |    |
| Agreeableness                | .42** | .44** | .53** | .59** | .45** | .00   | -.06  | .38** | -   | .27** | -   |    |    |    |
| Conscientiousness            | .16   | -.09  | -.04  | .05   | .04   | -.19  | -     | .15   | -   | .07   | .10 | -  |    |    |
|                              |       |       |       |       |       |       | .42** |       | .20 |       |     |    |    |    |

|             |       |       |      |       |       |       |       |       |     |       |       |       |     |   |
|-------------|-------|-------|------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-----|---|
| Neuroticism | -     | .01   | -.04 | -.20  | -.06  | .35** | .58** | -.15  | .22 | -     | -.11  | -     | -   |   |
|             | .30** |       |      |       |       |       |       |       |     | .32** |       | .53** |     |   |
| Openness    | .27** | .30** | .18  | .34** | .50** | .04   | -.04  | .41** | -   | .09   | .56** | .13   | .10 | - |
|             |       |       |      |       |       |       |       |       | .10 |       |       |       |     |   |

---

\*significant at .05 level, \*\*significant at 0.01 level

Table no.3 showing the correlation values.

Pearson product correlation was computed to check the association between the variables. The subscale positive problem orientation showed moderately positive and statistically significant correlation with coming to terms of letting go ( $r=.40$ ,  $p<0.01$ ) and forgiveness ( $r=.43$ ,  $p<0.01$ ) & weakly positive and statistically significant with developing positive feelings ( $r=.33$ ,  $p<0.01$ ). The subscale rational problem solving showed weak positive and statistically significant correlation with coming to terms of letting go ( $r=.33$ ,  $p<0.01$ ) and forgiveness ( $r=.32$ ,  $p<0.01$ ) & very low positive and statistically significant with developing positive feelings ( $r=.23$ ,  $p<0.05$ ). This indicates that our H1a (Forgiveness will be positively associated with constructive interpersonal problem solving (rational problem solving & positive problem orientation)) is accepted.

Avoidant style, negative problem orientation & Impulsivity/carelessness style showed no correlation with any of the forgiveness dimensions, supporting our H1b (: Forgiveness will have no impact on maladaptive interpersonal problem solving (Avoidant style, negative problem orientation & Impulsivity/carelessness style)).

The subscale extroversion showed moderately positive and statistically significant correlation with coming to terms of letting go ( $r=.46$ ,  $p<0.01$ ) and forgiveness ( $r=.47$ ,  $p<0.01$ ), weakly positive and statistically significant with giving benefit of doubt ( $r=.33$ ,  $p<0.01$ ) and very low positive and statistically significant with developing positive feelings ( $r=.22$ ,  $p<0.05$ ). The subscale

agreeableness showed moderately positive and statistically significant correlation with coming to terms of letting go ( $r=.42$ ,  $p<0.01$ ), forgiveness ( $r=.59$ ,  $p<0.01$ ), developing positive feelings ( $r=.44$ ,  $p<0.01$ ), giving benefit of doubt ( $.53$ ,  $p<0.01$ ). The subscale openness showed weakly positive and statistically significant correlation with coming to terms of letting go ( $r=.27$ ,  $p<0.01$ ), forgiveness ( $r=.34$ ,  $p<0.01$ ), developing positive feelings ( $r=.30$ ,  $p<0.01$ ). These three traits of personality show a positive association with forgiveness, supporting our H2a (Forgiveness will be positively associated with Extraversion, Agreeableness & Openness to experience).

The subscale neuroticism showed very weak negative and statistically significant correlation with coming to terms of letting go ( $r=-.30$ ,  $p<0.01$ ) and did not show any association with any other dimension of forgiveness.

Conscientiousness did not show any association with forgiveness or any of its constructs, supporting our H2c (Forgiveness will have no impact on Conscientiousness).

The subscale extroversion showed moderately positive and statistically significant correlation with positive problem orientation ( $r=.37$ ,  $p<0.01$ ), & very low positive and statistically significant with rational decision making ( $r=.27$ ,  $p<0.05$ ). The subscale agreeableness showed moderately positive and statistically significant correlation with positive problem solving ( $.45$ ,  $p<0.01$ ) & weakly positive and statistically significant with rational problem solving ( $r=.38$ ,  $p<0.01$ ). The subscale openness showed moderately positive and statistically significant with positive problem solving ( $.50$ ,  $p<0.01$ ) and rational problem solving ( $r=.41$ ,  $p<0.01$ ). these results indicate that our H3a (Extraversion, Agreeableness & Openness to experience will be positively associated with constructive interpersonal problem solving (Rational Problem Solving & Positive Problem Orientation)) is supported.

The subscale neuroticism showed weakly positive and statistically significant correlation with impulsive carelessness ( $r=.35$ ,  $p<0.01$ ) and moderately positive and statistically significant correlation with negative problem orientation ( $r=.58$ ,  $p<0.01$ ).

The subscale conscientiousness showed moderately negative and statistically significant correlation with negative problem orientation ( $r=-.42$ ,  $p<0.01$ ).

The subscale conscientiousness showed moderately negative and statistically significant correlation with negative problem orientation ( $r=-.42$ ,  $p<0.01$ ).

### 5.3. REGRESSION TABLES

Table 4: Multiple Linear Regression, Positive Problem Orientation

|                           | Unstandardized |       | Standardized |       |            |
|---------------------------|----------------|-------|--------------|-------|------------|
|                           | coefficients   |       | Coefficients |       |            |
|                           | B              | Beta  | Beta         | t     | sig        |
|                           |                |       |              |       | Adjusted R |
|                           |                |       |              |       | Square     |
| (Constant)                | -1.440         | 2.528 |              | -.570 | .570       |
| Forgiveness               | .024           | .022  | .141         | 1.122 | .265       |
| Extroversion              | .103           | .045  | .241         | 2.269 | .026       |
| Agreeableness             | .027           | .046  | .073         | .591  | .556       |
| Conscientiousness         | -.018          | .040  | -.050        | -.445 | .658       |
| Neuroticism               | -.002          | .047  | -.006        | -.051 | .960       |
| Openness to<br>experience | .136           | .040  | .386         | 3.444 | .001       |

Regression analysis in the above table showed that openness to experience and extraversion significantly predicted positive problem orientation, with openness having the strongest effect ( $\beta = .386, p = .001$ ). The overall model explained 30% of the variance in positive problem orientation. Forgiveness and the other personality traits (agreeableness, conscientiousness, and neuroticism) were not significant predictors in this model. These results suggest that individuals high in openness and extraversion are more likely to use constructive approach to interpersonal problem solving.

Table 5: Multiple Linear Regression, Impulsive/Carelessness Style

|                           | Unstandardized<br>coefficients |       | Standardized<br>Coefficients |       |      |                      |
|---------------------------|--------------------------------|-------|------------------------------|-------|------|----------------------|
|                           | B                              | Beta  | Beta                         | t     | sig  | Adjusted R<br>Square |
| (Constant)                | 4.074                          | 4.470 |                              | .911  | .365 | .099                 |
| Forgiveness               | .064                           | .038  | .241                         | 1.686 | .096 |                      |
| Extroversion              | .046                           | .080  | .069                         | .569  | .571 |                      |
| Agreeableness             | -.081                          | .082  | -.139                        | -.984 | .328 |                      |
| Conscientiousness         | .036                           | .071  | .065                         | .510  | .611 |                      |
| Neuroticism               | .268                           | .082  | .445                         | 3.259 | .002 |                      |
| Openness to<br>experience | -.043                          | .070  | -.079                        | -.614 | .541 |                      |

The above regression model explained about 10% of the variance in impulsive/carelessness problem-solving style. Neuroticism was the only significant predictor ( $\beta = .445$ ,  $p = .002$ ), showing a strong positive relationship. No significant effects were found for forgiveness, extraversion, agreeableness, conscientiousness, or openness.

Table 6: Multiple Linear Regression, Negative Problem Orientation

|                           | Unstandardized |       | Standardized |       |      |            |
|---------------------------|----------------|-------|--------------|-------|------|------------|
|                           | coefficients   |       | Coefficients |       |      |            |
|                           | B              |       | Beta         | t     | sig  | Adjusted R |
|                           |                | Beta  |              |       |      | Square     |
| (Constant)                | 4.073          | 4.667 |              | .873  | .385 | .386       |
| Forgiveness               | -.009          | .040  | -.028        | -.235 | .815 |            |
| Extroversion              | .139           | .084  | .165         | 1.654 | .102 |            |
| Agreeableness             | .023           | .086  | .031         | .263  | .793 |            |
| Conscientiousness         | -.060          | .075  | -.084        | -.798 | .427 |            |
| Neuroticism               | .484           | .086  | .635         | 5.631 | .000 |            |
| Openness to<br>experience | -.116          | .073  | -.167        | -     | .117 |            |
|                           |                |       |              | 1.584 |      |            |

The regression model explained 38.6% of the variance in negative problem orientation. Neuroticism was the only significant predictor ( $\beta = .635$ ,  $p < .001$ ), while all other predictors including forgiveness, extraversion, agreeableness, conscientiousness, and openness were non-significant.

Table 7: Multiple Linear Regression, Rational Problem Solving

|                           | Standardized |       | Standardized |       |      |            |
|---------------------------|--------------|-------|--------------|-------|------|------------|
|                           | coefficients |       | Coefficients |       |      |            |
|                           | B            | Beta  | Beta         | t     | sig  | Adjusted R |
|                           |              | Beta  |              |       |      | Square     |
| (Constant)                | 9.124        | 6.816 |              | 1.339 | .184 | .178       |
| Forgiveness               | .074         | .058  | .174         | 1.269 | .208 |            |
| Extroversion              | .100         | .123  | .094         | .813  | .418 |            |
| Agreeableness             | .014         | .125  | .015         | .109  | .913 |            |
| Conscientiousness         | .066         | .109  | .074         | .605  | .547 |            |
| Neuroticism               | -.113        | .126  | -.117        | -.900 | .371 |            |
| Openness to<br>experience | .251         | .107  | .287         | 2.349 | .021 |            |

The above regression model accounted for 17.8% of the variance in rational problem solving. Openness to experience significantly predicted rational problem solving ( $\beta = .287$ ,  $p = .021$ ), while all other predictors including forgiveness, extraversion, agreeableness, conscientiousness, and neuroticism were not statistically significant.

Table 8: Multiple Linear Regression, Avoidance Style

|                           | Unstandardized<br>coefficients |       | Standardized<br>Coefficients |       |      |            |
|---------------------------|--------------------------------|-------|------------------------------|-------|------|------------|
|                           | B                              |       | Beta                         | t     | sig  | Adjusted R |
|                           |                                | Beta  |                              |       |      | Square     |
| (Constant)                | 19.403                         | 7.021 |                              | 2.763 | .007 | .034       |
| Forgiveness               | -.027                          | .060  | -.067                        | -.449 | .655 |            |
| Extroversion              | .133                           | .126  | .132                         | 1.055 | .295 |            |
| Agreeableness             | -.105                          | .129  | -.119                        | -.811 | .420 |            |
| Conscientiousness         | -.051                          | .112  | -.060                        | -.454 | .651 |            |
| Neuroticism               | .177                           | .129  | .193                         | 1.367 | .175 |            |
| Openness to<br>experience | -.079                          | .110  | -.095                        | -.715 | .477 |            |

The regression model for avoidance style had low explanatory power (Adjusted  $R^2 = .034$ ) and revealed no significant predictors. Forgiveness and all personality traits failed to predict avoidance problem-solving style, indicating that these variables do not significantly influence avoidance behavior in interpersonal problem contexts.

#### 5.4. MEDIATION TABLES

Table 9: Agreeableness as a mediator between forgiveness and Positive Problem Orientation.

|                                                            |  |  |  | Effect | Std.  |       |       |
|------------------------------------------------------------|--|--|--|--------|-------|-------|-------|
|                                                            |  |  |  |        | Error | LLCI  | ULCI  |
| Forgiveness-> Agreeableness-> Positive Problem Orientation |  |  |  | .0321  | .0139 | .0051 | .0591 |
| Forgiveness-> Positive Problem Orientation                 |  |  |  | .0472  | .0213 | .0049 | .0894 |
| Total                                                      |  |  |  | .0793  | .0176 | .0443 | .1144 |

The results in the table no. 5.1 revealed a significant indirect effect with confidence interval ranging from (LLCI = .0051, ULCI = .0591). The total effect of forgiveness on positive problem orientation was statistically significant ( $B=.0793$ ,  $p=.0000$ ). After controlling for mediator, the direct effects of forgiveness remained significant ( $B=.0472$ ,  $p<.05$ ).

Table 10: Openness as a mediator between forgiveness and Rational Problem Solving

|                                                   | Effect | Std. Error | LLCI  | ULCI  |
|---------------------------------------------------|--------|------------|-------|-------|
| Forgiveness-> Openness-> Rational Problem Solving | .0538  | .0538      | .0086 | .1221 |
| Forgiveness-> Rational Problem Solving            | .0947  | .0472      | .0010 | .1885 |
| Total                                             | .1487  | .0468      | .0555 | .2416 |

The results in the table no.5.2 indicate a significant indirect effect, with 95% confidence interval (LLCI = .0086, ULCI = .1221). the total effect of forgiveness was significant (B=.1487, p=.0555). even after accounting for mediator, the direct effect of forgiveness was still significant (B=.1468, p=<.05).

Table 11 Openness as a mediator between Forgiveness and Positive Problem Orientation

|                                                       | Effect | Std. Error | LLCI  | ULCI  |
|-------------------------------------------------------|--------|------------|-------|-------|
| Forgiveness-> Openness-> Positive Problem Orientation | .0253  | .0103      | .0085 | .0474 |
| Forgiveness-> Positive Problem Orientation            | .0541  | .0171      | .0200 | .0881 |
| Total                                                 | .0793  | .0176      | .0443 | .1144 |

The results in the table no.5.3 indicate a significant indirect effect, with 95% confidence interval (LLCI = .0085, ULCI = .0474). the total effect of forgiveness was significant (B=.0793, p=<0.01).

even after accounting for mediator, the direct effect of forgiveness was still significant ( $B=.0541$ ,  $p<.05$ ).

## **CHAPTER 6**

### **DISCUSSION**

In this study we were trying to explore if personality mediates the relationship between forgiveness and interpersonal problem solving. As it was hypothesized that the personality traits (extroversion, agreeableness, and openness) will be positively associated with forgiveness. To check this association correlation method was used. Our results showed that extroversion, agreeableness and openness did show positive association with forgiveness. These results are consistent with the previous literature (Skalski-Bednarz et al., 2024; Hampton et al., 2023; Kaleta & Mróz, 2018).

It was hypothesized that neuroticism will be positively associated with maladaptive problem solving (impulsive/carelessness style, avoidance style and negative problem orientation). Our results indicated that neuroticism did show positive correlation with impulsive carelessness and negative problem orientation, which is consistent with previous studies (Kipman et al., 2022) but it did not show any significant correlation with avoidance style. Avoidance means distancing oneself from the source of stress or problem. Since people high in neuroticism have problems in controlling their emotions (Yang et al., 2020) and they also show high association with rumination (Du Pont et al., 2019), they might show over indulgence instead of avoidance when it comes to interpersonal problems. Due to which they may not show avoidance tendencies or avoidance style.

It was also hypothesized that neuroticism will be negatively related with forgiveness. Our results showed that it did not show any correlation with forgiveness but it showed a negative correlation with one sub scale of forgiveness (coming to terms of letting go), which suggested that people high

in neuroticism may not be able to let go of the hurt. The other sub scales of forgiveness were giving benefit of doubt and developing positive feelings. Due to high rumination and less emotional control, neurotic individuals may not be able to develop positive feelings or give benefit of doubt.

It was also hypothesis was that conscientiousness will not show any relationship with forgiveness or interpersonal problem solving. Our results indicated that conscientiousness did not show any relationship with forgiveness and interpersonal problem solving, but it did show a moderately negative relationship with negative problem orientation. Results suggest that people who are high in conscientiousness will be low in using negative problem orientation. Conscientious people are generally hard working, follow routines, responsible, resistant to change and cognitively rigid (Paloş et al., 2022; Jackson et al., 2010). Negative problem orientation refers to the belief that problems can't be solved, or they are helpless in solving a problem. Conscientious individuals, on the other hand are responsible and hard working. So, this negative relationship might be due to their belief in themselves to manage the problems, which is against helplessness.

Our fourth hypothesis was that personality traits will mediate the relationship between forgiveness and interpersonal problem-solving. In mediation analysis openness and agreeableness emerged as significant mediators between forgiveness and interpersonal problem solving, while other traits did not mediate this relationship.

In the model 1 (model given in the appendix), agreeableness mediated relationship between forgiveness and positive problem orientation. This can mean that forgiveness can help to approach interpersonal problems in constructive and optimistic way as forgiving individuals are also more

agreeable. Agreeableness and forgiveness both accounts for Pro social motivation. Forgiveness reflects emotional regulation, empathy which does aligned with the core traits of agreeableness which are kindness, corporation, and tendency to maintain interpersonal harmony. A research also supports this connection (Reizer et al., 2023) suggested that individuals who score high in agreeableness are kind, generally trusting, cooperative, motivated to maintain harmony and empathetic. These traits can make an individual to think that problems are solvable which in turn supports positive problem orientation.

In the model 2 and 3 (model given in the appendix), openness mediated relationship between forgiveness and positive problem orientation & rational problem solving. This can mean that forgiveness can help to approach interpersonal problems in constructive and optimistic way as forgiving individuals are of flexible mindset and can think form various prespectives (Çolak & Koç, 2016). Cognitive flexibility and perspective taking are the core feature of openness (McCullough, 2000). The traits such as being able think form different viewpoint and cognitive flexibility can lead to positive problem orientation and rational problem solving.

The results indicated that forgiveness significantly predicted constructive problem solving styles. This suggest that people who are more forgiving are more likely to indulge in constructive problem solving, especially a rational problems solving and positive problem orientation. Rational problem-solving means to look at a problem in logical and thoughtful way and then trying to find an effective way. They might look from their own perspective and the perspective of the other person to find the effective solution.

The results also indicated that positive personality traits, such as extraversion, agreeableness and openness also predicted constructive problem solving styles.

While neuroticism correlated with negative problem orientation, impulsive carelessness, which can mean that people who are not emotionally stable might have more problems in understanding the context of the problem and may lack a way to solve these problems. Rather than solving the problems they might choose to avoid the problems or may act impulsively. This can lead to facing more problems in their interpersonal relationships.

## **CHAPTER 7**

### **CONCLUSION & FUTURE DIRECTIONS**

#### **7.1 CONCLUSION**

The findings of this study provides insight into how forgiveness and personality traits influence interpersonal problem-solving. The current study supports that forgiveness is positively associated with constructive interpersonal problem-solving, particularly through rational problem-solving and positive problem orientation. This suggests that individuals who are more forgiving tends to deal with interpersonal conflicts in more effective and constructive way.

Moreover, this study adds on to the literature that personality traits (extraversion, agreeableness, and openness to experience) are significantly associated with both forgiveness and effective problem-solving. These traits likely play an important role in helping individuals to manage interpersonal problems with empathy, openness, and cognitive flexibility.

By identifying personality traits (agreeableness and openness to experience) as mediators in the association between forgiveness and interpersonal problem-solving, the current study provides an important contribution in explaining how forgiveness leads to better problem-solving.

Overall, the study adds to a growing body of literature supporting the dynamic interplay between personality traits, forgiveness and interpersonal problem solving.

#### **7.2 IMPLICATIONS**

This study has theoretical and practical implications. Theoretically, this study offers a novel contribution by examining the mediating role of personality traits in the relationship between forgiveness and interpersonal problem solving. While the pervious literature has independently

examined the associations between these constructs, the current study is among the first to empirically test a model connecting all three variables.

As the results suggested that personality mediates the relationship between forgiveness and interpersonal problem solving in both ways, directly and indirectly. This findings point to the potential value of interventions aimed at enhancing specific personality traits as enhancing some personality traits might indirectly improve person's ability to handle interpersonal conflicts. For example, an intervention focused to enhance empathy or cooperativeness may indirectly boost a person's capacity to forgive others and resolve conflicts in adaptive ways. In practice, this could mean that psychological programs or therapy sessions aimed for personality development may have an indirect effect on the capacity to forgive and dealing with interpersonal issues.

### **7.3 LIMITATIONS**

Despite providing valuable insights, this study has few limitations:

- This study used cross-sectional research design, which limits the ability to determine the casual relationships between these variables.
- Because the data was collected using self-report methods, potential biases such as social desirability might limit the objectivity of data.
- This study only included sample from specific population (university students), which might restrict the generalizability of finding to diverse populations.

### **7.4 FUTURE DIRECTION**

Future studies can expand the findings of this study in various ways. Firstly, it was cross-sectional study and casual relationship between variables could not be established. So, the future studies can

use longitudinal research design. Future studies can also use multi- method approaches such as behavioral tasks or experiments. Moreover, this study did not explore how these variables interact in different interpersonal contexts such as friendship vs. romantic relationships? Future studies can focus on exploring this comparison across different relationships types.

## REFERENCES

- Aanes, M. M., Mittelmark, M. B., & Hetland, J. (2010). Interpersonal stress and poor health. *European Psychologist, 15*(1), 3–11. <https://doi.org/10.1027/1016-9040/a000003>
- Amanze, R. U., & Carson, J. (2019). Measuring forgiveness: psychometric properties of a new culturally sensitive questionnaire: the Bolton Forgiveness Scale (BFS). *Mental Health Religion & Culture, 22*(10), 994–1010. <https://doi.org/10.1080/13674676.2020.1716211>
- Atari, M., & Yaghoubirad, M. (2016). The Big Five personality dimensions and mental health: The mediating role of alexithymia. *Asian Journal of Psychiatry, 24*, 59–64. <https://doi.org/10.1016/j.ajp.2016.08.008>
- Beri, D., & K, J. R. (2019). Physiological Correlates of Arousal: A Metaanalytic Review. *Journal of Neurology and Neuroscience, 10*(04). <https://doi.org/10.36648/2171-6625.10.4.302>
- Boyle, G. J., Matthews, G., & Saklofske, D. H. (2008). Personality Theories and Models: An Overview. In *SAGE Publications Ltd eBooks* (pp. 1–30). <https://doi.org/10.4135/9781849200462.n1>
- Braithwaite, S. R., Selby, E. A., & Fincham, F. D. (2011). Forgiveness and relationship satisfaction: Mediating mechanisms. *Journal of Family Psychology, 25*(4), 551–559. <https://doi.org/10.1037/a0024526>
- Brose, L. A., Rye, M. S., Lutz-Zois, C., & Ross, S. R. (2005). Forgiveness and personality traits. *Personality and Individual Differences, 39*(1), 35–46. <https://doi.org/10.1016/j.paid.2004.11.001>

- Büyükbayraktar, Ç. G., Yalçın, S. B., Öztürk, İ. Y., & Say, S. (2025). Exploring the relation: Does forgiveness enhance interpersonal problem solving? *Behavioral Sciences*, 15(1), 35. <https://doi.org/10.3390/bs15010035>
- Cam, S., & Alkal, A. (2020). An investigation of interpersonal problem solving in university students in terms of personality traits, resilience and HOP. *European Journal of Educational Sciences*, 07(01). <https://doi.org/10.19044/ejes.v7no1a2>
- Chen, Y., Harris, S. K., Worthington, E. L., & VanderWeele, T. J. (2018). Religiously or spiritually-motivated forgiveness and subsequent health and well-being among young adults: An outcome-wide analysis. *The Journal of Positive Psychology*, 14(5), 649–658. <https://doi.org/10.1080/17439760.2018.1519591>
- Choudhar, S., Bi, N., Singh, P. N., & Talwar, P. (2022). Study on problem solving skills and its importance. *World Journal of English Language*, 12(3), 47. <https://doi.org/10.5430/wjel.v12n3p47>
- Çolak, T. S., & Koç, M. (2016). Forgiveness flexibility. *International Journal of Psychology and Educational Studies*, 3(1), 14–30. <https://doi.org/10.17220/ijpes.2016.01.002>
- Coleman, M., Wheeler, L., & Webber, J. (1993). Research on Interpersonal Problem-Solving Training. *Remedial and Special Education*, 14(2), 25–37. <https://doi.org/10.1177/074193259301400205>
- Conte, S., & Puliga, P. (2021). International Journal of Humanities and Social Science. *Deleted Journal*. <https://doi.org/10.30845/ijhss>
- Davila, J., Hammen, C., Burge, D., Daley, S. E., & Paley, B. (1996). Cognitive/interpersonal correlates of adult interpersonal problem-solving strategies. *Cognitive Therapy and Research*, 20(5), 465–480. <https://doi.org/10.1007/bf02227908>

- Du Pont, A., Rhee, S. H., Corley, R. P., Hewitt, J. K., & Friedman, N. P. (2019). Are rumination and neuroticism genetically or environmentally distinct risk factors for psychopathology? *Journal of Abnormal Psychology, 128*(5), 385–396. <https://doi.org/10.1037/abn0000430>
- Efrat, A., & Zait, A. (2024). The effect of personality characteristics on the development of interpersonal communication skills through One-Time training. *Scientific Annals of Economics and Business, 71*(2), 265–283. <https://doi.org/10.47743/saeb-2024-0018>
- Fayn, K., MacCann, C., Tiliopoulos, N., & Silvia, P. J. (2015). Aesthetic emotions and aesthetic people: openness predicts sensitivity to novelty in the experiences of interest and pleasure. *Frontiers in Psychology, 6*. <https://doi.org/10.3389/fpsyg.2015.01877>
- Fourie, M. M., Hortensius, R., & Decety, J. (2020). Parsing the components of forgiveness: Psychological and neural mechanisms. *Neuroscience & Biobehavioral Reviews, 112*, 437–451. <https://doi.org/10.1016/j.neubiorev.2020.02.020>
- Goldberg, L. R. (1990). An alternative “description of personality”: The Big-Five factor structure. *Journal of Personality and Social Psychology, 59*(6), 1216–1229. <https://doi.org/10.1037/0022-3514.59.6.1216>
- Hampson, S. E. (2011). Personality processes: mechanisms by which personality traits “Get outside the skin.” *Annual Review of Psychology, 63*(1), 315–339. <https://doi.org/10.1146/annurev-psych-120710-100419>
- Hampton, L. E., Carruth, N. P., Lurquin, J. H., & Miyake, A. (2023). Personality correlates of dispositional forgiveness: a direct comparison of interpersonal and self-forgiveness using common transgression scenarios. *Frontiers in Psychology, 14*. <https://doi.org/10.3389/fpsyg.2023.1218663>

- Ho, M. Y., Van Tongeren, D. R., & You, J. (2020). The Role of Self-Regulation in Forgiveness: A Regulatory Model of Forgiveness. *Frontiers in Psychology, 11*.  
<https://doi.org/10.3389/fpsyg.2020.01084>
- Ingersoll-Dayton, B., Campbell, R., & Ha, J. (2008). Enhancing Forgiveness: a group intervention for the elderly. *Journal of Gerontological Social Work, 52*(1), 2–16.  
<https://doi.org/10.1080/01634370802561901>
- Jackson, J. J., Wood, D., Bogg, T., Walton, K. E., Harms, P. D., & Roberts, B. W. (2010). What do conscientious people do? Development and validation of the Behavioral Indicators of Conscientiousness (BIC). *Journal of Research in Personality, 44*(4), 501–511.  
<https://doi.org/10.1016/j.jrp.2010.06.005>
- Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction: A meta-analysis. *Journal of Applied Psychology, 87*(3), 530–541.  
<https://doi.org/10.1037/0021-9010.87.3.530>
- Kaleta, K., & Mróz, J. (2018). Personality traits and two dimensions of forgivingness. *Roczniki Psychologiczne, 21*(2), 147–162. <https://doi.org/10.18290/rpsych.2018.21.2-3>
- Kato, T. (2013). Assessing Coping with Interpersonal Stress: Development and validation of the interpersonal stress coping scale in Japan. *International Perspectives in Psychology, 2*(2), 100–115. <https://doi.org/10.1037/ipp0000002>
- Kernberg, O. F. (2016). What is personality? *Journal of Personality Disorders, 30*(2), 145–156.  
<https://doi.org/10.1521/pedi.2106.30.2.145>
- Kipman, U., Bartholdy, S., Weiss, M., Aichhorn, W., & Schiepek, G. (2022). Personality traits and complex problem solving: Personality disorders and their effects on complex

- problem-solving ability. *Frontiers in Psychology*, 13.  
<https://doi.org/10.3389/fpsyg.2022.788402>
- Kj, L. (2018). Forgiveness: Definitions, perspectives, contexts and correlates. *Journal of Psychology & Psychotherapy*, 08(03). <https://doi.org/10.4172/2161-0487.1000342>
- Koutsos, P., Wertheim, E. H., & Kornblum, J. (2007). Paths to interpersonal forgiveness: The roles of personality, disposition to forgive and contextual factors in predicting forgiveness following a specific offence. *Personality and Individual Differences*, 44(2), 337–348. <https://doi.org/10.1016/j.paid.2007.08.011>
- Lahey, B. B. (2009). Public health significance of neuroticism. *American Psychologist*, 64(4), 241–256. <https://doi.org/10.1037/a0015309>
- Laursen, B., Pulkkinen, L., & Adams, R. (2002). The antecedents and correlates of agreeableness in adulthood. *Developmental Psychology*, 38(4), 591–603. <https://doi.org/10.1037/0012-1649.38.4.591>
- Lichtenfeld, S., Maier, M. A., Buechner, V. L., & Capo, M. F. (2019). The influence of decisional and emotional forgiveness on attributions. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.01425>
- Lodhi, P. H., Deo, S., & Belhekar, V. M. (2002). The Five-Factor model of personality. In *Springer eBooks* (pp. 227–248). [https://doi.org/10.1007/978-1-4615-0763-5\\_11](https://doi.org/10.1007/978-1-4615-0763-5_11)
- Maltby, J., Wood, A. M., Day, L., Kon, T. W., Colley, A., & Linley, P. A. (2008). Personality predictors of levels of forgiveness two and a half years after the transgression. *Journal of Research in Personality*, 42(4), 1088–1094. <https://doi.org/10.1016/j.jrp.2007.12.008>
- Marjanović, Z. J., Krstić, K., Rajić, M., Ilić, I. S., Videnović, M., & Dimitrijević, A. A. (2023). The Big Five and Collaborative Problem Solving: A Narrative Systematic review.

- European Journal of Personality*, 38(3), 457–475.  
<https://doi.org/10.1177/08902070231198650>
- McCrae, R. R., & Costa, P. T., Jr. (n.d.). Toward a new generation of personality theories: Theoretical contexts for the five-factor model. *APA Psy Net*.  
<https://psycnet.apa.org/record/1996-97942-003>
- McCrae, R. R., & John, O. P. (1992). An introduction to the Five-Factor model and its applications. *Journal of Personality*, 60(2), 175–215. <https://doi.org/10.1111/j.1467-6494.1992.tb00970.x>
- McCrae, R. R., & Terracciano, A. (2005). Universal features of personality traits from the observer’s perspective: data from 50 cultures. *Journal of Personality and Social Psychology*, 88(3), 547–561. <https://doi.org/10.1037/0022-3514.88.3.547>
- McCullough, M. E. (2000). Forgiveness as Human Strength: Theory, Measurement, and Links to Well-Being. *Journal of Social and Clinical Psychology*, 19(1), 43–55.  
<https://doi.org/10.1521/jscp.2000.19.1.43>
- Mehta, P., Vyas, M., & Shah, N. (2024). A validation study of the Bolton Forgiveness Scale (BFS-15) in India. *Mental Health and Social Inclusion*, 28(6), 1163–1172.  
<https://doi.org/10.1108/mhsi-02-2024-0029>
- Mienaltowski, A. (2011). Everyday problem solving across the adult life span: solution diversity and efficacy. *Annals of the New York Academy of Sciences*, 1235(1), 75–85.  
<https://doi.org/10.1111/j.1749-6632.2011.06207.x>
- Naeem, F. (2023). A critical analysis of Big Five personality theory. *International Journal of Advance Research and Innovation*, 11(1), 83–88. <https://doi.org/10.51976/ijari.1112309>

- Nation, J. A., Wertheim, E. H., & Worthington, E. L. (2017). Evaluation of an online self-help version of the REACH forgiveness program: Outcomes and predictors of persistence in a community sample. *Journal of Clinical Psychology, 74*(6), 819–838.  
<https://doi.org/10.1002/jclp.22557>
- Neto, F. (2007). Forgiveness, personality and gratitude. *Personality and Individual Differences, 43*(8), 2313–2323. <https://doi.org/10.1016/j.paid.2007.07.010>
- O'Brien, T. B., & DeLongis, A. (1996). The interactional context of Problem-, Emotion-, and Relationship-Focused Coping: The role of the big five Personality Factors. *Journal of Personality, 64*(4), 775–813. <https://doi.org/10.1111/j.1467-6494.1996.tb00944.x>
- Oral, T., & Arslan, C. (2017). The investigation of university students' forgiveness levels in terms of self-compassion, rumination and personality traits. *Universal Journal of Educational Research, 5*(9), 1447–1456. <https://doi.org/10.13189/ujer.2017.050902>
- Paloş, R., Virgă, D., & Craşovan, M. (2022). Resistance to change as a mediator between conscientiousness and teachers' job satisfaction. The moderating role of learning goals orientation. *Frontiers in Psychology, 12*. <https://doi.org/10.3389/fpsyg.2021.757681>
- Raj, M., & Wiltermuth, S. S. (2016). Barriers to forgiveness. *Social and Personality Psychology Compass, 10*(11), 679–690. <https://doi.org/10.1111/spc3.12290>
- Raj, P., Elizabeth, C., & Padmakumari, P. (2016). Mental health through forgiveness: Exploring the roots and benefits. *Cogent Psychology, 3*(1), 1153817.  
<https://doi.org/10.1080/23311908.2016.1153817>
- Reizer, A., Harel, T., & Ben-Shalom, U. (2023). Helping others results in helping yourself: How Well-Being is shaped by agreeableness and perceived team cohesion. *Behavioral Sciences, 13*(2), 150. <https://doi.org/10.3390/bs13020150>

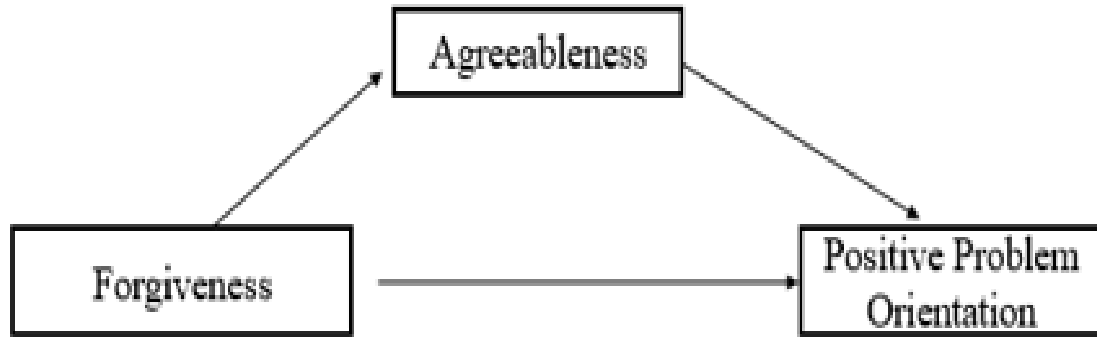
- Roberts, B. W., & Yoon, H. J. (2021). Personality Psychology. *Annual Review of Psychology*, 73(1), 489–516. <https://doi.org/10.1146/annurev-psych-020821-114927>
- Rubin, K. H., & Rose-Krasnor, L. (1992). Interpersonal problem solving and social competence in children. In *Springer eBooks* (pp. 283–323). [https://doi.org/10.1007/978-1-4899-0694-6\\_12](https://doi.org/10.1007/978-1-4899-0694-6_12)
- Salonen, A. O., & Savander-Ranne, C. (2015). Teachers' shared expertise at a multidisciplinary university of applied sciences. *SAGE Open*, 5(3). <https://doi.org/10.1177/2158244015596206>
- Sells, J. N., & Hargrave, T. D. (1998). Forgiveness: a review of the theoretical and empirical literature. *Journal of Family Therapy*, 20(1), 21–36. <https://doi.org/10.1111/1467-6427.00066>
- Shure, M. B. (2001). I Can Problem Solve (ICPS): an interpersonal cognitive problem solving program for children. *Residential Treatment for Children & Youth*, 18(3), 3–14. [https://doi.org/10.1300/j007v18n03\\_02](https://doi.org/10.1300/j007v18n03_02)
- Skalski-Bednarz, S. B., Toussaint, L. L., Konaszewski, K., & Surzykiewicz, J. (2024). Personality traits as predictors of forgiveness and gratitude/awe: a two-wave longitudinal study. *Current Psychology*. <https://doi.org/10.1007/s12144-024-06768-x>
- Specht, J. (2017). Personality development research. In *Elsevier eBooks* (pp. 3–6). <https://doi.org/10.1016/b978-0-12-804674-6.00001-6>
- Steiner, M., Allemand, M., & McCullough, M. E. (2011). Do agreeableness and neuroticism explain age differences in the tendency to forgive others? *Personality and Social Psychology Bulletin*, 38(4), 441–453. <https://doi.org/10.1177/0146167211427923>

- Sun, E. R., & Jakubiak, B. K. (2024). Attachment avoidance predicts limited and selective sharing of personal events in close relationships. *Personal Relationships*, 31(2), 397–419. <https://doi.org/10.1111/pere.12537>
- The mediating role of forgiveness in the context of interpersonal relationship styles and conflict resolution tendencies. (2022). *Psycho-Educational Research Reviews*, 11(3). [https://doi.org/10.52963/perr\\_biruni\\_v11.n3.08](https://doi.org/10.52963/perr_biruni_v11.n3.08)
- Walker, D., & Gorsuch, R. (2002). Forgiveness within the Big Five personality model. *Personality and Individual Differences*, 32(7), 1127–1137. [https://doi.org/10.1016/s0191-8869\(00\)00185-9](https://doi.org/10.1016/s0191-8869(00)00185-9)
- Widiger, T. A., & Crego, C. (2019). The Five Factor Model of personality structure: an update. *World Psychiatry*, 18(3), 271–272. <https://doi.org/10.1002/wps.20658>
- Yang, J., Mao, Y., Niu, Y., Wei, D., Wang, X., & Qiu, J. (2020). Individual differences in neuroticism personality trait in emotion regulation. *Journal of Affective Disorders*, 265, 468–474. <https://doi.org/10.1016/j.jad.2020.01.086>
- Yu, Y., Zhao, Y., Li, D., Zhang, J., & Li, J. (2021). The relationship between Big Five Personality and Social Well-Being of Chinese residents: The mediating effect of social support. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.613659>

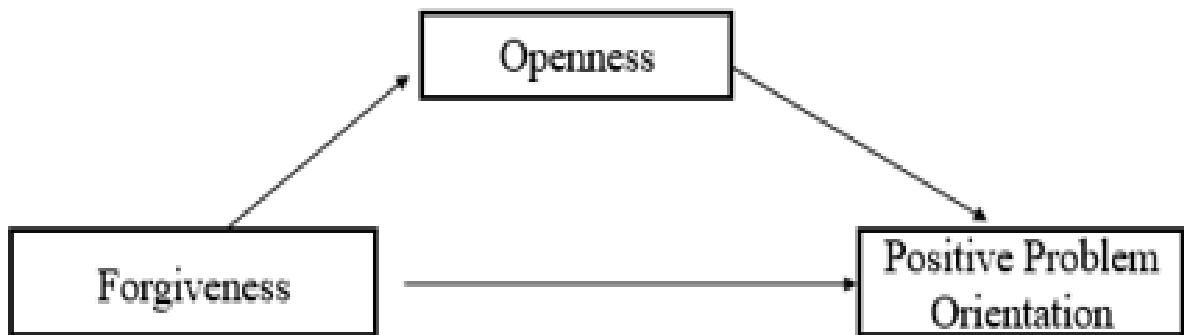
## APPENDIX

### APPENDIX A. MODELS

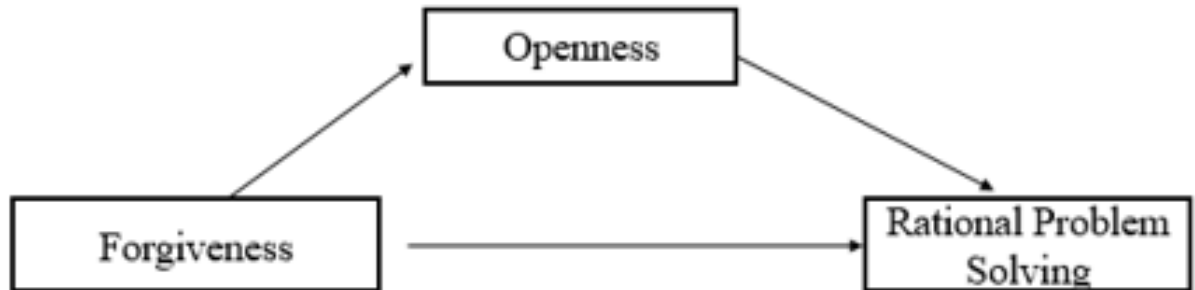
Model 1 Agreeableness as mediator between Forgiveness and Positive Problem Orientation.



Model 2 Openness to experience as mediator between Forgiveness and Positive Problem Orientation.



Model 3 Openness to experience as mediator between Forgiveness and Rational Problem Solving.



## APPENDIX B. CONSENT FORM

Greetings!!

I am Mitali Chauhan, a student of Masters of Arts in Psychology from the THAPAR SCHOOL OF LIBERAL ARTS AND SCIENCE (TSLAS) at THAPAR INSTITUTE OF ENGINEERING AND TECHNOLOGY (TIET), Patiala. I am conducting a study to understand the interaction between forgiveness and interpersonal problems. There are no right or wrong answers. It will take about 10 to 15 minutes approximately.

- All your responses will be kept confidential and will be used for academic research only.
- At any point in time, if you feel uncomfortable, feel free to discontinue.
- By clicking the “I Agree” button below and continuing with the questionnaire, you acknowledge that:

You have read and understood the information above.

You voluntarily agree to participate in the study.

You are at least 18 years old.



**I give my informed consent to participate in this study \***

☐ Yes

## APPENDIX C. QUESTIONNAIRES

### Questionnaire 1. Bolton Forgiveness Scale

|                                                                                                                           | 1                        | 2                                  | 3                                | 4                               | 5                                 | 6                       |
|---------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------|----------------------------------|---------------------------------|-----------------------------------|-------------------------|
| Statements                                                                                                                | Always<br>false<br>of me | Almost<br>always<br>false<br>of me | Some-<br>times<br>false<br>of me | Some-<br>times<br>true of<br>me | Almost<br>always<br>true of<br>me | Always<br>true of<br>me |
| 1. With time I can be understanding of bad things in my life.                                                             |                          |                                    |                                  |                                 |                                   |                         |
| 2. I have compassion for the person who wronged me.                                                                       |                          |                                    |                                  |                                 |                                   |                         |
| 3. With time I let go of negative thoughts about bad things that are beyond anyone's control.                             |                          |                                    |                                  |                                 |                                   |                         |
| 4. If I encountered the person who wronged me I would feel at peace.                                                      |                          |                                    |                                  |                                 |                                   |                         |
| 5. I hold nothing against someone who hurt me as it could be that sometimes people don't really know what they are doing. |                          |                                    |                                  |                                 |                                   |                         |
| 6. I feel relief by forgiving someone who has hurt me.                                                                    |                          |                                    |                                  |                                 |                                   |                         |
| 7. I wish for good things to happen to the person who wronged me.                                                         |                          |                                    |                                  |                                 |                                   |                         |
| 8. Generally I don't wait to be asked before forgiving someone who hurt me.                                               |                          |                                    |                                  |                                 |                                   |                         |
| 9. With time I am understanding of myself for mistakes I've made.                                                         |                          |                                    |                                  |                                 |                                   |                         |
| 10. I hope the person who wronged me is treated fairly by others in the future.                                           |                          |                                    |                                  |                                 |                                   |                         |
| 11. Although I feel bad at first when I mess up, over time I can give myself some slack.                                  |                          |                                    |                                  |                                 |                                   |                         |
| 12. I believe there are no offences that cannot be forgiven under the right conditions.                                   |                          |                                    |                                  |                                 |                                   |                         |
| 13. I eventually make peace with bad situations in my life.                                                               |                          |                                    |                                  |                                 |                                   |                         |
| 14. I pray for the person who wronged me.                                                                                 |                          |                                    |                                  |                                 |                                   |                         |
| 15. With time I can be understanding of bad circumstances in my life.                                                     |                          |                                    |                                  |                                 |                                   |                         |

## Questionnaire 2. Big Five Inventory

### The Big Five Inventory (BFI)

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

|                      |                      |                               |                   |                   |
|----------------------|----------------------|-------------------------------|-------------------|-------------------|
| Disagree<br>strongly | Disagree<br>a little | Neither agree<br>nor disagree | Agree<br>a little | Agree<br>Strongly |
| 1                    | 2                    | 3                             | 4                 | 5                 |

#### I see Myself as Someone Who...

- |                                                |                                                    |
|------------------------------------------------|----------------------------------------------------|
| ___ 1. Is talkative                            | ___ 23. Tends to be lazy                           |
| ___ 2. Tends to find fault with others         | ___ 24. Is emotionally stable, not easily upset    |
| ___ 3. Does a thorough job                     | ___ 25. Is inventive                               |
| ___ 4. Is depressed, blue                      | ___ 26. Has an assertive personality               |
| ___ 5. Is original, comes up with new ideas    | ___ 27. Can be cold and aloof                      |
| ___ 6. Is reserved                             | ___ 28. Perseveres until the task is finished      |
| ___ 7. Is helpful and unselfish with others    | ___ 29. Can be moody                               |
| ___ 8. Can be somewhat careless                | ___ 30. Values artistic, aesthetic experiences     |
| ___ 9. Is relaxed, handles stress well         | ___ 31. Is sometimes shy, inhibited                |
| ___ 10. Is curious about many different things | ___ 32. Is considerate and kind to almost everyone |
| ___ 11. Is full of energy                      | ___ 33. Does things efficiently                    |

- |                                       |                                                   |
|---------------------------------------|---------------------------------------------------|
| ___ 12. Starts quarrels with others   | ___ 34. Remains calm in tense situations          |
| ___ 13. Is a reliable worker          | ___ 35. Prefers work that is routine              |
| ___ 14. Can be tense                  | ___ 36. Is outgoing, sociable                     |
| ___ 15. Is ingenious, a deep thinker  | ___ 37. Is sometimes rude to others               |
| ___ 16. Generates a lot of enthusiasm | ___ 38. Makes plans and follows through with them |
| ___ 17. Has a forgiving nature        | ___ 39. Gets nervous easily                       |
| ___ 18. Tends to be disorganized      | ___ 40. Likes to reflect, play with ideas         |
| ___ 19. Worries a lot                 | ___ 41. Has few artistic interests                |

— —

- |                                   |                                                       |
|-----------------------------------|-------------------------------------------------------|
| ___ 20. Has an active imagination | ___ 42. Likes to cooperate with others                |
| ___ 21. Tends to be quiet         | ___ 43. Is easily distracted                          |
| ___ 22. Is generally trusting     | ___ 44. Is sophisticated in art, music, or literature |

### Scoring:

BFI scale scoring ("R" denotes reverse-scored items):

Extraversion: 1, 6R, 11, 16, 21R, 26, 31R, 36  
 Agreeableness: 2R, 7, 12R, 17, 22, 27R, 32, 37R, 42  
 Conscientiousness: 3, 8R, 13, 18R, 23R, 28, 33, 38, 43R  
 Neuroticism: 4, 9R, 14, 19, 24R, 29, 34R, 39  
 Openness: 5, 10, 15, 20, 25, 30, 35R, 40, 41R, 44

Questionnaire 3. Social Problem Solving: Revised; Short Form

*SPSI-R:SF items<sup>a</sup>*

---

- 18. I spend more time avoiding my problems than solving them
- 17. When a problem happens in my life, I put off trying to solve it for as long as possible
- 22. I put off solving problems until it is too late to do anything about them
- 4. When my first efforts to solve a problem fail, I give up quickly because finding a solution is too difficult
- 8. If I am faced with a difficult problem, I probably will not be able to solve it on my own no matter how hard I try
- 10. I try to do anything I can in order to avoid problems in my life
- 6. If I avoid problems, they will generally go away on their own
- 21. After carrying out a solution to a problem, I try to evaluate as carefully as possible how much the situation has changed for the better
- 16. When I have a problem to solve, one of the first things I do is get as many facts about the problem as possible
- 19. Before I try to solve a problem, I set a specific goal so that I know exactly what I want to accomplish
- 12. When I have a decision to make, I take the time to try to predict the positive and negative consequences of each possible option before I act
- 23. When I am trying to solve a problem, I think of as many options as possible until I cannot come up with any more ideas
- 13. When problems occur in my life, I like to deal with them as soon as possible
- 5. Sometimes even difficult problems can have a way of moving my life forward in positive ways
- 7. When I cannot solve a problem, I get very frustrated

- 3. I get nervous and unsure of myself when I have to make an important decision
- 11. Difficult problems make me very upset
- 1. I feel afraid when I have an important problem to solve
- 2. When making decisions, I do not think carefully about my many options
- 25. I am too impulsive when it comes to making decisions
- 24. When making decisions, I go with my “gut feeling” without thinking too much about the consequences of each option
- 14. When I am trying to solve a problem I go with the first good idea that comes to mind
- 20. When I have a decision to make, I do not take the time to consider the pros and cons of each option
- 15. When I am faced with a difficult problem, I believe that I will be able to solve it on my own if I try hard enough
- 9. Whenever I have a problem, I believe that it can be solved

