

DEVELOPING MEANING IN LIFE AMONG
UNDERGRADUATE IRAQI STUDENTS: REPEATED
MEASURES DESIGN

BY

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degree of Doctor of Philosophy in Education

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ABSTRACT

The purpose of this study was to evaluate the effect of a novel meaning-in-life (MiL) intervention—developed based on a tripartite model of MiL—on the reported meaning in life among Iraqi university students. Using a repeated measures design, the study additionally examined the effects of religiosity and personality traits as moderator variables in this context, as well as the effect of post-meaning in life on academic achievement. The intervention was administered over five weeks across five time points. The subjects were 60 Iraqi university students, 68.3% female and 31.7% male, who were in their first and second years of study at the Department of Psychology of Salahuddin University in Iraq. They were randomly assigned to the treatment ($n = 39$) and control ($n = 21$) groups. Data were analyzed using mixed ANOVA, independent samples t -test, and simple linear regression. The results show that the MiL intervention statistically and significantly enhanced students' reports of meaning in life. The effect of the MiL intervention was significantly moderated by religiosity, while personality traits only moderated the effect on two dimensions, i.e., emotional stability and openness to new experience. The study found no effect of post-meaning in life on academic achievement. The results have important implications for the promotion of meaning in life among university students and the development of their overall well-being, which subsequently impacts their academic achievement.



ملخص البحث

تهدف هذه الدراسة إلى تنمية معنى الحياة لدى طلاب الجامعة، حيث استخدم الباحث المنهج التجريبي لاختبار مدى فعالية البرنامج المقترح . هناك ثلاث أهداف رئيسية يسعى الباحث لتحقيقها: (١) اختبار فعالية البرنامج المقترح لتطوير معنى الحياة عند طلاب الجامعة (٢) اختبار أثر المتغيرات المعدلة (مستوى التدين ونمط الشخصية)على فعالية البرنامج في تطوير معنى الحياة. (٣) التحقق من مدى تأثير معنى الحياة بعد تطبيق البرنامج على مستوى التحصيل الطلاب العلمي. تم تنفيذ البرنامج المقترح على مدى خمسة أسابيع عبر خمس فترات زمنية في تصميم تجريبي لقياسات متكررة. شملت الدراسة ٦٠ طالباً من طلاب جامعة صلاح الدين في العراق، ٦٨,٣٪ منهم إناث و٣١,٧٪ ذكور، وكانوا في سنتهم الدراسية الأولى والثانية في قسم علم النفس. حيث تم توزيع المشاركين عشوائياً إلى مجموعتي المعالجة (n = 39) والمجموعة الضابطة (n = 21). حيث تم تحليل البيانات باستخدام تحليل التباين المختلط (ANOVA المختلط)، واختبار العينات المستقلة t، والانحدار الخطي البسيط. أظهرت النتائج أن هناك دلالة إحصائية على تأثير البرنامج المقترح في تطوير معنى الحياة لدى الطلاب ، كما أظهرت النتائج أن هناك دلالة إحصائية للمتغيرات المعدلة في تأثيرها على ارتفاع معنى الحياة لدى الطلاب، في حين أشارت الدراسة على أنه لا توجد دلالة إحصائية للتنبؤ بالتحصيل العلمي من خلال معنى الحياة. أخيراً تم مناقشة و عرض التوصيات والاقتراحات.

APPROVAL PAGE

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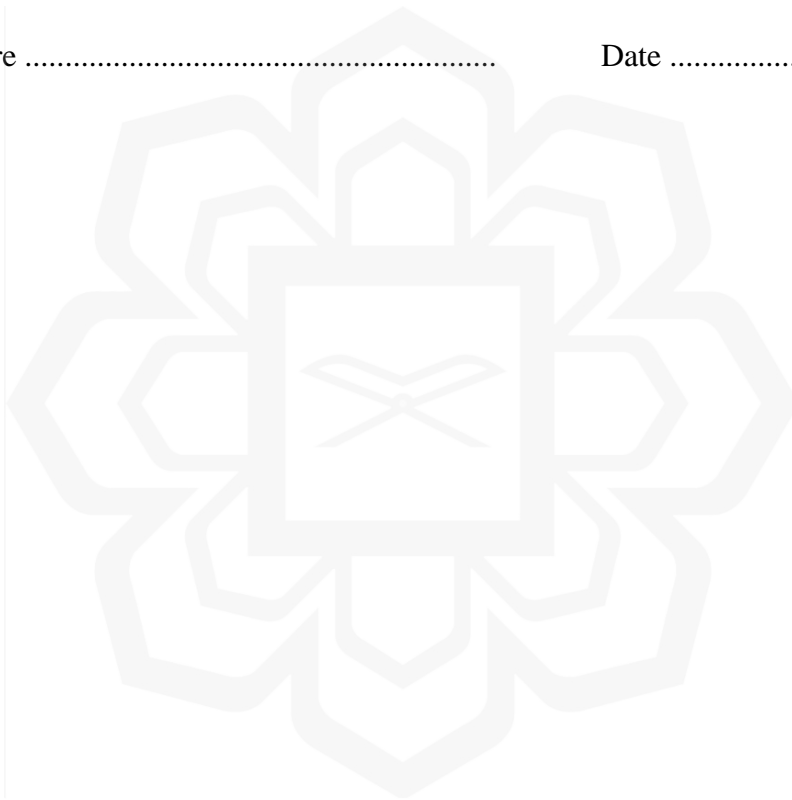
DECLARATION

I hereby declare that this thesis is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

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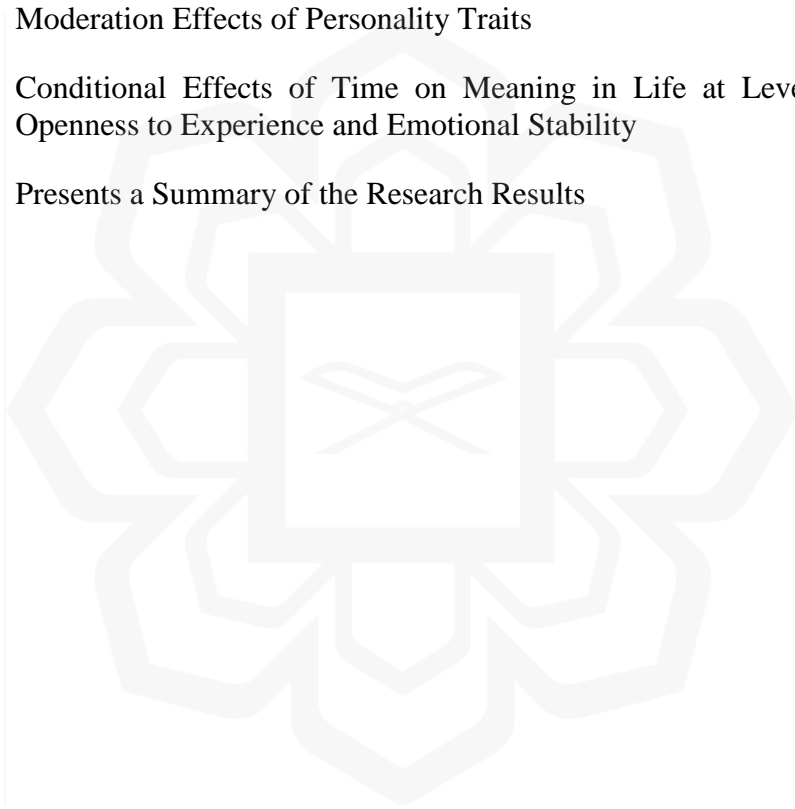
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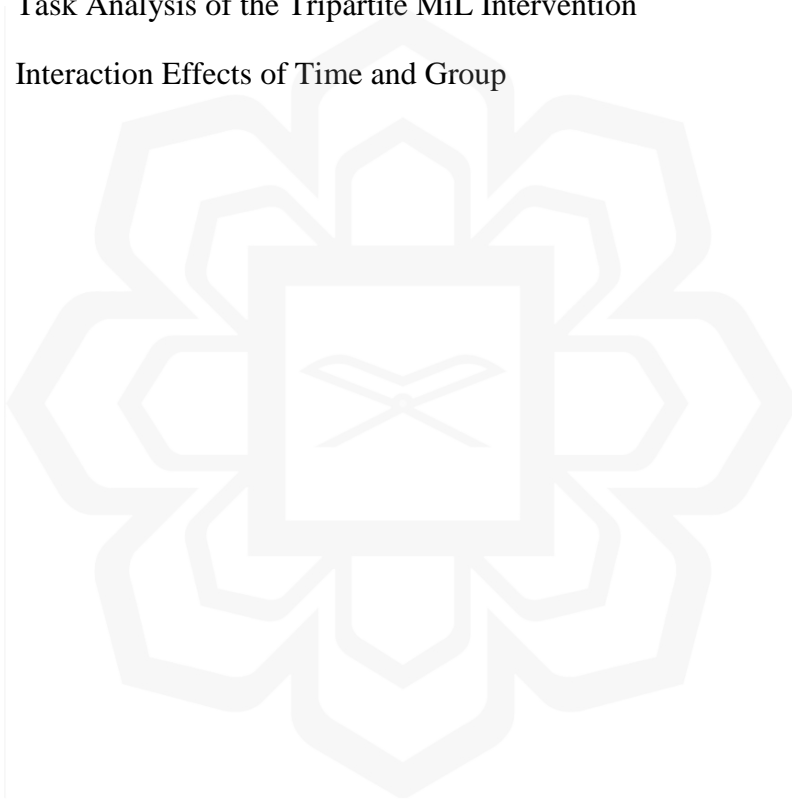
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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

College or university students go through a transition period in life where they experience significant changes in their personal, social, and academic environments. This phase often involves asking questions of critical importance, such as: "Who am I?" "What are my values and beliefs?" "What career path do I want to pursue?" "Is my life meaningful?" "How can I find meaning in life?" "Is my life worthwhile?" "Who can—or who will I become?"

These kinds of existential questions are not uncommon among college students who are in a stage of transition (Astin, Astin, & Lindholm, 2010). According to Frankl (1963), the main concern of humans is to discover meaning to guide their lives; thus, university students today are constantly asking their own existential questions about purpose and meaning in life (Astin, 2004). Hence, emerging adulthood, which includes the college years, is considered one of the significant stages in the lives of college students because it represents a unique and important life-goal development stage and a fertile time for significant exploration and change. It is during this time that college students engage in the process of developing their identity by discovering meaning in life (Arnett, 2000; Michael F Steger, Beeby, Garrett, & Kashdan, 2013).

Researchers commonly define emerging adulthood as the years between late adolescence and early adulthood, typically ranging from approximately 18 to 25 years of age. It is usually characterized by identity exploration, instability, self-attention, and redefining the priorities, goals, and opportunities in life (Arnett, 2014). It is also in this stage that college students encounter many challenges, such as having to make adaptations in life due to their frequent pursuits of educational and occupational opportunities (e.g., tertiary education, full-time work, the combination of education and work, etc.). The challenges are greater for those who live outside the family home and away from their families. Students in such a situation often feel the pressure to select the right college and be financially independent (Arnett, 2014, 2018; Robbins,

2004). Naturally, these types of experiences that occur during emerging adulthood can trigger an existential vacuum that manifests itself in boredom and feelings of meaninglessness (Yalom, 2002, 2008, 2020).

Persistent feelings of meaninglessness can easily lead to mental health problems; in other words, the lack of a strong personal identity that holds students together and gives them a sense of cohesion will impede their ability to create meaning in life. This deficiency is often associated with mental health problems and decreased levels of overall well-being. The absence of meaning in life has produced several negative outcomes, such as eating disorders, substance-use disorders, post-traumatic stress disorder, depression, and anxiety (He et al., 2023; Crystal L Park, 2010; M. Steger, Frazier, & Zacchanini, 2008; Michael F Steger & Kashdan, 2009).

In a global survey conducted by the World Health Organization (WHO) that involved thousands of undergraduate students from 19 colleges in eight countries (i.e., Australia, Belgium, Germany, Mexico, Northern Ireland, South Africa, Spain, and the United States), approximately 13,984 students screened positive for at least one common disorder, which included anxiety, mood swings, or substance disorder (35.3% lifetime prevalence, 31.4% in the past 12 months) (Auerbach *et al.*, 2018). The survey results suggested that major depressive disorder (MDD) was the most common of the disorders examined across all countries combined (21.2% lifetime prevalence; 18.5% 12-month prevalence), followed by generalized anxiety disorder (affecting 18.6–16.7% of the sample). Other disorders had comparatively much lower prevalence rates, ranging from 6.8%–6.3% for Alcohol Use Disorder (AUD) to 3.5%–3.1% for broadly defined bipolar disorder. The median ages marking the onset of individual disorders ranged from 14.3% for major depressive disorder to 16.2% for drug use disorder. The proportional annual persistence was considerably lower for drug use (45.9%) than for other disorders, that were markedly much higher (62.4% to 73.3%). Similarly, the twelve-month prevalence among lifetime cases was considerably much lower for drug-use disorder (59.8%) compared to other disorders (87.1% to 92.8%).

In addition, WHO (2019) reported that more than 80% of people worldwide have experienced varying mental health conditions, causing more than US\$1 trillion per year in economic losses. For example, 20% of the world's population suffers from different forms of mental disorders, which range from stress, depression, and anxiety (Eylem *et al.*, 2020). In an American study (The American College Health Association, (2017), the prevalence of mental health issues among 73,912 undergraduate students was found to be widespread, with the most common mental health problems experienced by students in the past 12 months being hopelessness (23%), loneliness (18.3%), sadness (24.4%), depression (18.9%), anxiety (22 %) and serious suicidal thoughts (8.4%). The American sample of undergraduates also indicated that within the last 12 months of the survey, they had experienced several psychological problems that seriously affected their academic performance, such as anxiety, stress, depression, and drug use. These reports give us a glimpse into the critical mental health conditions of university students in the Western world.

In the Asian context, researchers in China reported that 24.9% of medical college students experienced anxiety during the pandemic (Cao *et al.*, 2020). Indeed, COVID-19 had a profound negative effect on students' learning activities. Students struggled to adapt to a new mode of education as instruction changed from traditional face-to-face classes to the less familiar online learning. This sudden transition created much stress in students. Apart from the stress resulting from changes in the learning modes, students who worked part-time also faced increased stress and anxiety due to job losses, which left them unable to pay tuition fees and cover living expenses. This financial strain contributed to more mental stress, as many students were unable to attend online classes (Sahu, 2020).

Evidently, the COVID-19 outbreak created a fear of infection or death from the virus, thereby threatening the mental well-being of people across all ages. Emotional distress and social illness became the most pressing public health issues worldwide during this time, affecting people of all ages, especially university students (Cullen, Gulati, & Kelly, 2020; Khan, Mamun, Griffiths, & Ullah, 2020; Organization, 2020; Pfefferbaum & North, 2020; Zandifar & Badrfam, 2020). There were many reports of people being affected negatively in different aspects of their psychological health and well-being by the pandemic (Brooks *et al.*, 2020; Rajkumar,

2020). Therefore, although college students were already suffering from mental health problems before COVID-19, the pandemic had added more risk to their psychological well-being.

Recent research shows that meaning in life (MiL) plays a substantial role in reducing psychological stress and suffering among people, acting as a critical buffer against mental health problems (Güngör & Uçman, 2020; Jun & Yun, 2020; Marco, Pérez, & García-Alandete, 2016; Schnell & Krampe, 2020; Michael F. Steger, 2017; Michael F. Steger, Sung, Dao, & Tompkins, 2023). Given its critical role in promoting mental health, MiL is one of the key components in the psychological recovery model (Andresen, Oades, & Caputi, 2003) and the personal recovery model (Leamy, Bird, Le Boutillier, Williams, & Slade, 2011). Steger (2017) provides a detailed review of previous studies that explained the association between meaning in life and psychological health and human well-being. Conclusively, meaning in life plays a vital role in students' mental health and psychological well-being, which is positively reflected in their academic performance. Therefore, meaning in life has been shown to be one of the causes of many favorable life outcomes.

The ability to find meaning in life has many benefits for college students. However, there has been a dearth of studies that have looked into how this may be promoted among college or university students. Therefore, this study will address this research gap by providing a concrete intervention to enhance meaning-in-life aspects among college students.

1.2 STATEMENT OF THE PROBLEM

Several psychological interventions have been implemented to make life meaningful for college students. These interventions aimed to help students discover meaning in their existence. Although using different terminology, overall, the programs have focused largely on enhancing the well-being of students instead of focusing on the meaning-in-life (MIL) construct itself. Furthermore, all prior interventions had neglected the “feeling matters” component as being a critical aspect of life’s meaning, not having given it any emphasis in their program’s modules. Another shortcoming is

that none of the previously used scales can be utilized in the present study to examine the three important facets of MiL, namely coherence, mattering (feelings of significance), and purpose. In other words, all of the instruments used in previous research to measure meaning in life are yet to be tested on a tripartite model comprising the three MiL components of coherence, mattering, and purpose.

Previous interventions administered by MiL researchers can be classified into three categories based on three theoretical foundations, i.e., the existential, cognitive, and positive perspectives. The first perspective, existential psychology, plays a big role in the design of MiL interventions, especially logotherapy, which has been extensively used to help people struggling to find meaning in life (Frankl, 1963). Several studies have used logotherapy in educational settings in various formats. Although logotherapy has been adapted and adopted by many researchers (; Chen, Xiao, Zheng, Zhang, & Lin, 2020; Da Luz, Murta, & De Aquino, 2017; Kasler, White, & Elias, 2013; Mason & Nel, 2015; C. L. Park et al., 2019), the interventions based on the logotherapy have been the subject of several criticisms. Firstly, logotherapy was originally designed for people under adverse life conditions, such as trauma or chronic diseases, to help them focus on MiL as their coping mechanism. This is not the same as finding meaning in life under normal life conditions. Furthermore, Frankl's logotherapy was not designed to enhance specific skills and techniques as a means of helping people to develop their meaning in life (Shin & Steger, 2014). Because of this, a number of studies in educational settings preferred to design their MiL interventions based on the cognitive perspective.

In adopting the cognitive perspective, four studies (i.e., (Bundick, 2011; Feldman & Dreher, 2012; Pizzolato, Brown, & Kanny, 2011; M. F. Steger, Shim, Barenz, & Shin, 2014) used different cognitive theories to enhance the construct of MiL and participants' experience of it. However, all these interventions treated meaning in life as coherent or purposeful, and neglected the third dimension of MiL, which is the feelings of significance (or mattering). Moreover, most of the aforementioned studies did not target meaning in life as a primary focus. Hence, we cannot ascertain that the improvement of MiL in the said studies was due to the MiL interventions themselves or to other factors.

Meanwhile, a few other efforts had used interventions based on the perspective of positive psychology (e.g., (Bloch et al., 2017; Kennon M Sheldon, 2014; Y. J. Wong, McKean Blackwell, Goodrich Mitts, Gabana, & Li, 2017), with an emphasis on improving the psychological well-being or quality of life of the participants, rather than their experience of MiL, which is the present study's construct of interest. No attention was given to meaning in life as a direct outcome of the interventions. As such, it gives us little information on whether the interventions were successful in specifically impacting MiL. In general, several interventions have been used in education settings to promote meaning in life; however, these studies that utilized numerous interventions have several limitations, which are discussed next.

First, according to Michael F Steger, O'Donnell, and Morse (2021), many researchers have implemented interventions to enhance meaning in life, but the components of MiL are still not concrete or not clearly underlined in the interventions literature. Therefore, the construct and sub-constructs of MiL are yet to be explored and ascertained through systematic research involving college-aged populations, as the construct remains largely untested in this group of young adults. For this reason, the researcher in this study has combined several psychological models to create a concrete intervention that represents the tripartite model of meaning in life. Up to now, to the researcher's best knowledge, this is the first study that tests the tripartite MiL intervention using the life narratives model (D. P. McAdams, 2011) to establish coherence, while for the purpose domain, the study uses a combination of the model of action phases (P. Gollwitzer, 2012) and the self-concordance model (Milyavskaya, Nadolny, & Koestner, 2014; Kennon M Sheldon, 2014; Kennon M Sheldon, Prentice, & Osin, 2019). Finally, self-transcendence through prosocial actions is used to increase the feeling of matter (Wong, 1998).

Second, as illustrated in the preceding discussion, most of the measurements used in previous research were designed to focus on one or two dimensions of MiL, such as coherence and purpose in life. None of these previous studies used instruments that included a tripartite perspective of meaning in life. A recently unified model has been proposed, which includes coherence, purpose, and feeling of matter, the positive results of which have been confirmed by several researchers (George & Park, 2016; King & Hicks, 2021; Martela & Steger, 2016; M. Steger, 2018). Thus, this study

decided to use instruments based on the unified model of MiL (Martela & Steger, 2022). In short, it is imperative to empirically substantiate the efficacy of a newly proposed tripartite MiL model.

Third, all of these interventions did not investigate underlying mechanisms that could help researchers and policymakers to understand why, how, and under which conditions MiL programs or interventions would work. Needless to say, program development should not be restricted to merely evaluating program efficacy and/or theoretical tenability, but it should also look into ways of improving service delivery and information dissemination to target participants using evidence-based methods that lend insight into the construct validity of the program (Fairchild & MacKinnon, 2014). Therefore, in the current study, the researcher decided to investigate the potential role of personality traits and levels of religiosity in moderating the effect of the intervention on university/college students' MiL.

Fourth, all of the previous interventions were often derived from Western contexts and may be counterproductive in non-Western settings in that their adoption may undermine cultural values, which in themselves contribute to meaning in life in non-Western nations. For example, the theory of MiL that emphasizes the importance of finding life's meaning for human well-being was itself derived from the Aristotelian notion of a good life (Ryff & Singer, 1998). According to Hofstede (2001), cultural dimensions classify nations on the dimensions of power distance (acceptance of class inequality), masculinity (competitiveness, assertiveness), uncertainty avoidance (valuing order and tradition), and individualism (the extent to which individuals are expected to follow personal interests over those supported by the group). Concerning the latter, Iraq, with a score of 26, is considered a collectivistic society. This is manifest in a close long-term commitment to the member's group, be it a family, extended family, or extended relationships. Loyalty in a collectivist culture is paramount and overrides most other societal rules and regulations (Hofstede, 2001).

In essence, culture plays a significant role in shaping one's self-concept along a continuum from interdependence (collectivism) to independence (individualism) (Markus & Kitayama, 1991; Triandis, 1989). Individualistic cultures regard the self as an independent agent and its members may improve their self-image (Heine, Kitayama, & Lehman, 2001), whereas collectivist cultures focus on the individual as a member of a social group and part of the community network, and they may criticize their self-image (Heine, Lehman, Markus, & Kitayama, 1999). Hence, meaning in life is inexorably linked to how people perceive themselves (Baumeister, 1991). As a result of that, individuals' attitudes, expectations, and wants may likely be influenced by their culture (Markus & Kitayama, 1991). In a nutshell, individuals from independent cultures tend to focus on establishing and improving the feeling that their lives have meaning. In contrast, persons from interdependent cultures tend to place a higher value on effort and strive for self-improvement, rather than focusing on success and self-enhancement, which are valued more in interdependent cultures (Heine *et al.*, 1999; Oishi & Diener, 2003). In trying to understand these dynamics, researchers, consequently, have been engrossed in extending the investigation of MiL interventions in different cultural contexts (Chan *et al.*, 2023; Shin & Steger, 2014). Thus far, it is largely unknown whether MiL interventions work similarly in non-Western cultures, especially in Muslim contexts. Hence, recent research is needed to extend the examination of a tripartite MiL intervention, as proposed in this study, in a non-Western and Muslim context. Furthermore, for undergraduate students at IRQA, developing a sense of meaning in life (MiL) is especially important given the unique pressures they face, from economic instability to political challenges and cultural expectations. The uncertainty surrounding job opportunities and economic conditions can lead to feelings of anxiety about the future, leaving students at risk of feeling adrift (George & Park, 2014). Political or social instability may add to these feelings, making it difficult for students to maintain a sense of control and optimism. By nurturing a deeper sense of purpose, students can find a personal foundation that helps them stay focused, motivated, and resilient through these challenges (Heintzelman & King, 2014). Additionally, cultural expectations around family roles and career choices may intensify the pressure, sometimes leaving students disconnected from their own goals. By fostering MiL, these students can better define what is meaningful to them personally, strengthening their path forward (Martela & Steger, 2016).

Academic challenges and limited institutional resources further underscore the need for MiL enhancement among IRQA students. Unlike students in more developed contexts, IRQA students may have fewer academic or mental health supports, making it essential for them to cultivate their inner motivation and clarity around personal goals (Leontiev, 2013). A stronger MiL can not only improve their academic persistence but can also encourage them to feel more engaged and connected to their studies, even in the face of challenges. This sense of meaning can extend beyond their personal lives, instilling a drive to use their skills for positive change in their communities and addressing larger social issues. In this way, enhancing MiL empowers IRQA students with a sense of agency and purpose, helping them build both personal resilience and a vision for contributing positively to their society (Steger et al., 2006).

Fifth, in terms of methodology, most of the previous interventions have primarily utilized non-randomized control trials (NRCT), while only a few studies have employed randomized controlled trials (RCT). These studies often faced methodological issues or challenges, such as small sample sizes and brief intervention durations, with some involving only a single session or a one-off interview (Bundick, 2011; Cheng, Hasche, Huang, & Su, 2015; Feldman & Dreher, 2012). In such circumstances, the potential effects of many (other) variables could not be controlled for, such as the influence of the researcher on participants, which might have affected the study's objectivity. Furthermore, in terms of analysis, only two studies had utilized a multilevel analysis in their research (Bloch et al., 2017; Cheng et al., 2015). Thus, there was a need to consider a repeated measures design using advanced statistical procedures in analyzing the data to address this methodological gap. Therefore, this study decided to use a factorial experimental design to test the effect of the MiL intervention within and between subjects simultaneously.

Finally, individuals must decide for themselves what constitutes a meaningful life to them, so the meaning they attach to life is inherently subjective. Their decisions may be entirely influenced by how they perceive themselves and the world (P. Wong, 2012). Hence, it is possible for someone to find meaning in life in ways that abuse or harm others, such as in the case of a tyrant or a serial killer, a point highlighted by Stager (2018), who asserted that not everyone attains good meaning in life. There are

people who find MiL in vice and harmful acts. Taking this into account, the study recognized the need for an objective framework to help people live their lives meaningfully while balancing their individual needs with community interests, and this research gap is yet to be addressed in the psychology literature. Accordingly, for Muslims, there is no other framework to shape the foundation of their MiL than the *Maqasid Shari'ah* itself, hence the inclusion of this framework in the present study. Figure 1.1 below summarizes the main research gaps addressed in the present study.

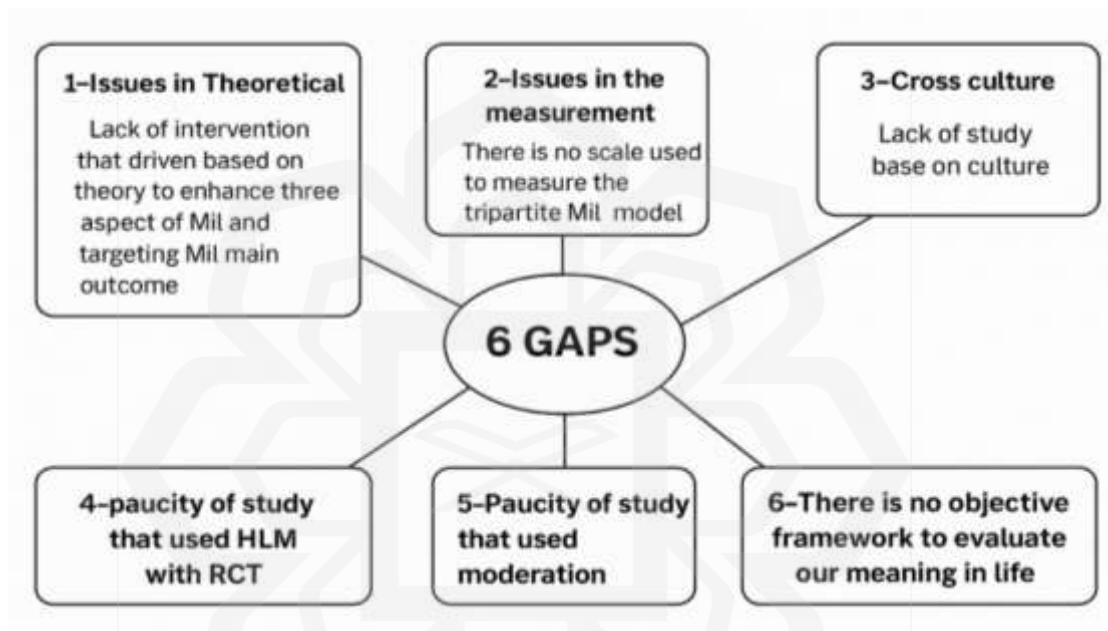


Figure 1.1 Research Gaps Addressed in the Study

1.3 RESEARCH OBJECTIVES

The study aimed to achieve the following four objectives:

1. To test the effect of the proposed Meaning in Life (MiL) intervention in enhancing Iraqi university students' levels of meaning in life, both between and within the experimental and control groups.
2. To test the interaction effect between groups and across time on the enhancement of Iraqi university students' levels of meaning in life.

3. To assess the roles of religiosity and personality traits in moderating the effect of the Meaning in Life (MiL) intervention among Iraqi university students.
4. To examine how increasing the level of meaning in life (MiL) can positively contribute to Iraqi university students' academic achievement and psychological adjustment.

1.4 RESEARCH QUESTIONS

In line with the objectives, the study posed the following research questions:

1. Is there a statistically significant difference in Iraqi university students' levels of meaning in life (MiL) between and within the experimental and control groups?
2. Is there any interaction effect between groups and across time that statistically impacts the levels of MiL among Iraqi college students?
3. Do religiosity and personality traits moderate the effectiveness of the MiL intervention in enhancing the level of meaning in life among Iraqi university students?
4. Does post-intervention meaning in life influence or predict Iraqi university students' psychological adjustment and academic achievement?

1.5 RESEARCH HYPOTHESES

- H1: The MiL intervention has a positive causal effect on the MiL levels of Iraqi university students both within and between the experimental and control groups.
- H2: There is an interaction effect between groups and time on the MiL levels of Iraqi university students.

H3: Religiosity and personality traits positively moderate the effect of the MiL intervention on Iraqi university students' levels of MiL.

H4: Iraqi university students' levels of post-intervention MiL will influence or predict their psychological adjustment and academic achievement.

1.6 THEORETICAL FRAMEWORK

Meaning in life is one of the complex phenomena in the area of psychology. Because of this, using just one theory to design an MiL intervention often falls short, especially for complex psychosocial issues (Gitlin & Czaja, 2015). In such cases, a multi-faceted approach that draws from multiple theories tends to be more effective. In this study, three underpinning theories contributed to developing the MiL intervention to enhance the three aspects of meaning in life among Iraqi university students (Gollwitzer, 2012; McAdams, 2011; Sheldon, 2014; Wong, 1998). The first theory, Narrative Identity Theory, offers a powerful framework for understanding how individuals construct meaning in their lives. According to McAdams (1993, 1995), people form a sense of identity by developing internalized life stories that connect their past experiences with the present and imagined future. These narratives provide continuity across time and help individuals understand who they are, how they have changed, and what matters most to them. A central concept within this theory is narrative coherence—the degree to which a person's life story is logically structured, emotionally meaningful, and thematically integrated (Habermas & Bluck, 2000). Coherent narratives not only enhance self-understanding but also support psychological well-being by offering a stable sense of self across changing life circumstances (Singer, 2004). One particularly meaningful type of narrative that emerges within this framework is the growth-oriented narrative. These narratives reflect how people interpret their lives through the lens of development, insight, and positive transformation. Rather than focusing solely on stability or safety—as is typical in security-oriented narratives—growth-oriented stories highlight personal progress and learning, even in the face of difficulty (Bauer, McAdams, & Pals, 2008). Research has shown that people who construct narratives centered on growth tend to experience greater psychological

adaptation and a deeper understanding of their life (Bauer & McAdams, 2010; King & Smith, 2004; Pals, 2006).

Secondly, motivational theory employed in this study is the Rubicon Model of Action Phases (Gollwitzer, 1990, 2012), which conceptualizes goal pursuit as a sequential and phase-based process involving four distinct stages: predecisional, preactional, actional, and postactional. This model elucidates how individuals undergo cognitive and motivational shifts as they move from deliberating potential goals to planning and implementing actions and ultimately evaluating their outcomes. Within a motivational context, the Rubicon Model highlights how intention formation, goal commitment, and behavioral regulation are influenced by these transitions between phases. To enhance the applicability of this model in educational settings, particularly in supporting students' development of purpose, it is integrated with the Self-Concordance Model (Sheldon, 2014). The Self-Concordance Model posits that individuals experience greater persistence, engagement, and well-being when pursuing goals that are congruent with their authentic values, interests, and core identity. This integration is especially relevant during the predecisional (deliberative) phase, where students engage in reflective evaluation of their possible goals. By encouraging alignment with self-concordant motivations, this combined framework supports the selection of goals that are personally meaningful, intrinsically motivating, and identity-relevant (Sheldon et al., 2019). Together, the Rubicon Model and the Self-Concordance Model offer a dynamic and developmentally sensitive lens for understanding how students can be guided toward intentional goal pursuit. This framework not only informs how students move through the goal-setting process but also emphasizes why certain goals foster sustained effort, personal growth, and a deeper sense of purpose.

Finally, this study also employed the self-transcendence model, which plays a central role in fostering the feeling of mattering—the perception that one is significant, valued by others, and capable of making a meaningful impact (Wong, 1998, 2011). Self-transcendence involves shifting focus beyond the self and engaging in pursuits that benefit others, contribute to a greater cause, or serve a larger moral or spiritual purpose (Frankl, 1963; Wong, 2008). Within this framework, mattering is cultivated not through self-enhancement but through actions that affirm one's

relevance to others and to the world. Research shows that individuals who engage in self-transcendent activities—such as volunteering, mentoring, acts of compassion, or value-driven service—are more likely to experience a heightened sense of mattering (Van Tongeren et al., 2016; Fowers, 2012). These actions reinforce the belief that one’s life has value because it makes a positive difference in the lives of others. In academic settings, fostering self-transcendence can support students in developing a sense of matter that is deeply connected to social contribution, thereby enhancing their psychological sense of being needed, valued, and impactful. By adopting self-transcendence as a guiding framework, this study aims to design interventions that encourage students to reflect on how their actions matter in the lives of others. In doing so, the framework provides a culturally sensitive and psychologically grounded approach to enhancing students’ sense of mattering—a key protective factor for resilience, motivation, and overall well-being.

In conclusion, these three theories cumulatively form a robust framework for developing interventions aimed at enhancing the meaning in life experiences among college students, offering a comprehensive approach that holistically integrates narrative identity theory, the Rubicon model, and self-transcendence.

1.7 CONCEPTUAL FRAMEWORK

In this study, the researcher utilized foundational theories to construct a conceptual framework aimed at developing an intervention to enhance Meaning in Life (MiL) among college students (Gollwitzer, 2012; McAdams, 2011; Sheldon, 2014; Wong, 1998), as depicted in Figure 1.2.

First, it used a life narrative that focused on growth-oriented themes and interpreted the lives of individuals as stories of a progressive and prosocial development encompassing both autobiographical memories of the past and personal goals for the future (Bauer *et al.*, 2008). Research indicates that fostering growth-oriented identities precedes enhanced meaning-making and adaptation (Bauer & McAdams, 2010; King & Smith, 2004; Pals, 2006), thereby emphasizing the coherence of past experiences among students. Therefore, helping people to create

growth-oriented narratives develops coherence for the past experiences of students. Next, the Rubicon Model (Gollwitzer, 1990, 2012) renders goal pursuit as a sequential process involving pre-decisional (deliberation), pre-actional (planning), actional (execution), and post-actional (evaluation) phases. By integrating these phases, students can select more fulfilling life purposes to pursue. This model integrates with the self-concordance model (Sheldon, 2014), wherein individuals engage in goal pursuit when these goals align with their authentic selves, including core interests and values. This alignment, particularly during the deliberative phase, highlights the role of self-concordance in signaling a goal's fit with implicit motives (Sheldon *et al.*, 2019), thereby guiding students intrinsically toward meaningful goals. Last but not least, prosocial behavior serves as a critical mechanism for enhancing individuals' sense of mattering, defined as the perception that one is valued and makes a meaningful contribution to others (Rosenberg & McCullough, 1981; Flett, 2018). Grounded in the self-transcendence model, prosocial actions—including volunteering, helping, and supporting others—are understood as tangible expressions of self-transcendence, where in individuals extend their focus beyond self-interest toward the well-being of others (Wong, 1998; Emmons, 2003). Empirical evidence indicates that engagement in prosocial behavior not only promotes social connectedness but also reinforces the belief that one's life is significant and impactful (Van Tongeren *et al.*, 2016; Heine *et al.*, 2006). Accordingly, by facilitating prosocial engagement, interventions can effectively cultivate a stronger sense of mattering among students.

Furthermore, the researcher included religiosity and personality traits as moderating factors to understand the conditions in which the intervention may work. First, Janoff-Bulman and Frantz (1997) stated that according to the world theory (Lerner, 1980), "theories of deservingness generally encompass many religious perspectives, which enable believers to perceive meaning through the expectations of rewards and punishments that may be considerably delayed, such as one's fate after death" (p. 93). Thus, religion is a belief system that can give people complete, integrated frameworks of meaning that let them satisfactorily explain what happens in the world (Spilka *et al.*, 2003). However, religion offers a way of understanding both commonplace events and extraordinary ones (e.g., Geyer & Baumeister, Chapter 23, this volume; Spilka *et al.*, 2003). These frameworks of meaning are particularly

important in interpreting and responding to the most difficult aspects of life, such as suffering, death, tragedy, and injustice (e.g., Pargament, 1997). Hence, students' religiosity may interact with the impact of the intervention to increase or reduce their level of MiL.

Secondly, personality traits may shape how people perceive and experience meaning in life. Due to the significance of personality traits, studies on MiL have recently included distinctive personal characteristics, and more specifically, the Big Five personality traits (Halama, 2005; Henningsgaard & Arnau, 2008; Mascaró & Rosen, 2005). The five primary personality traits are neuroticism, extraversion, openness to experience, conscientiousness, and agreeableness, according to the Five-Factor Model, which is an umbrella model for various viewpoints on personality (Bacani *et al.*, 2009). According to Costa and McCrae (1995), neuroticism is characterized by the propensity to feel negative emotions like guilt, anxiety, despair, and dread. It also includes behaviors like a lack of self-acceptance, perfectionism, and being closed off to criticism. Extroversion is a measure of a person's sociability, activity, drive, talkativeness, sensation-seeking, and outgoingness (Bono *et al.*, 2002). Meanwhile, intellectual engagement and being open to novel feelings and ideas are traits of openness to experience. In a way, intellectual curiosity, aesthetic sensitivity, inventiveness, adaptability, and unconventional views are all related to being open to experience (Chamorro-Premuzic, 2007). According to Costa and McCrae (1995), conscientiousness is associated with leadership, self-discipline, goal orientation, self-sufficiency, orderliness, a sense of mission, productivity, and determination, whereas agreeableness is described as being dependable, agreeable, straightforward, self-giving, and modest (Bono *et al.*, 2002). In line with the theoretical explanation, the researcher included the Big Five personality factors as variables moderating the impact of the intervention on Iraqi college students' MiL.

Finally, in this study, the researcher examined the effect of post-measured MiL on academic achievement and psychological adjustment. A large body of research has demonstrated that meaning in life is closely related to several psychosocial constructs that predict academic achievement and persistence, such as goal pursuit (McKnight & Kashdan, 2009), motivation, and social and academic engagement (Astin 1984; Kuh, 1995; Terenzini *et al.*, 1994) among college students, hence, in this study, the

researcher extended the investigation to a different context. Likewise, finding meaning in life will help students to make psychological adjustments to their life events and conditions. The presence of meaning in life offers a framework for understanding unforeseen and uncertain life events, which aids in regaining control and improving students' ability to cope with undesirable life changes (Park & Baumeister, 2017; Steger, 2012). Furthermore, research has shown that having a meaningful existence has positive effects on one's health (for a meta-analysis on this, see Czekierda *et al.*, 2017). Prior meaning in life aids individuals in managing the danger and uncertainty brought on by stress, increasing the likelihood that they will continue to be healthy and adaptable. Thus, there is a potential effect of post-measured meaning in life on improving students' psychological adjustment.

In conclusion, this integrated theoretical perspectives synthesizes unified conceptual framework to enhance Meaning in Life (MiL) among college students, emphasizing growth-oriented narratives, goal-pursuit phases, and prosocial actions, also the moderating influences of religiosity and personality traits. By fostering coherence-in-life narratives, aligning goals with authentic selves and prosocial actions, the intervention aimed to enrich college students' sense of meaning. The conceptual framework is shown in Figure 1.2.

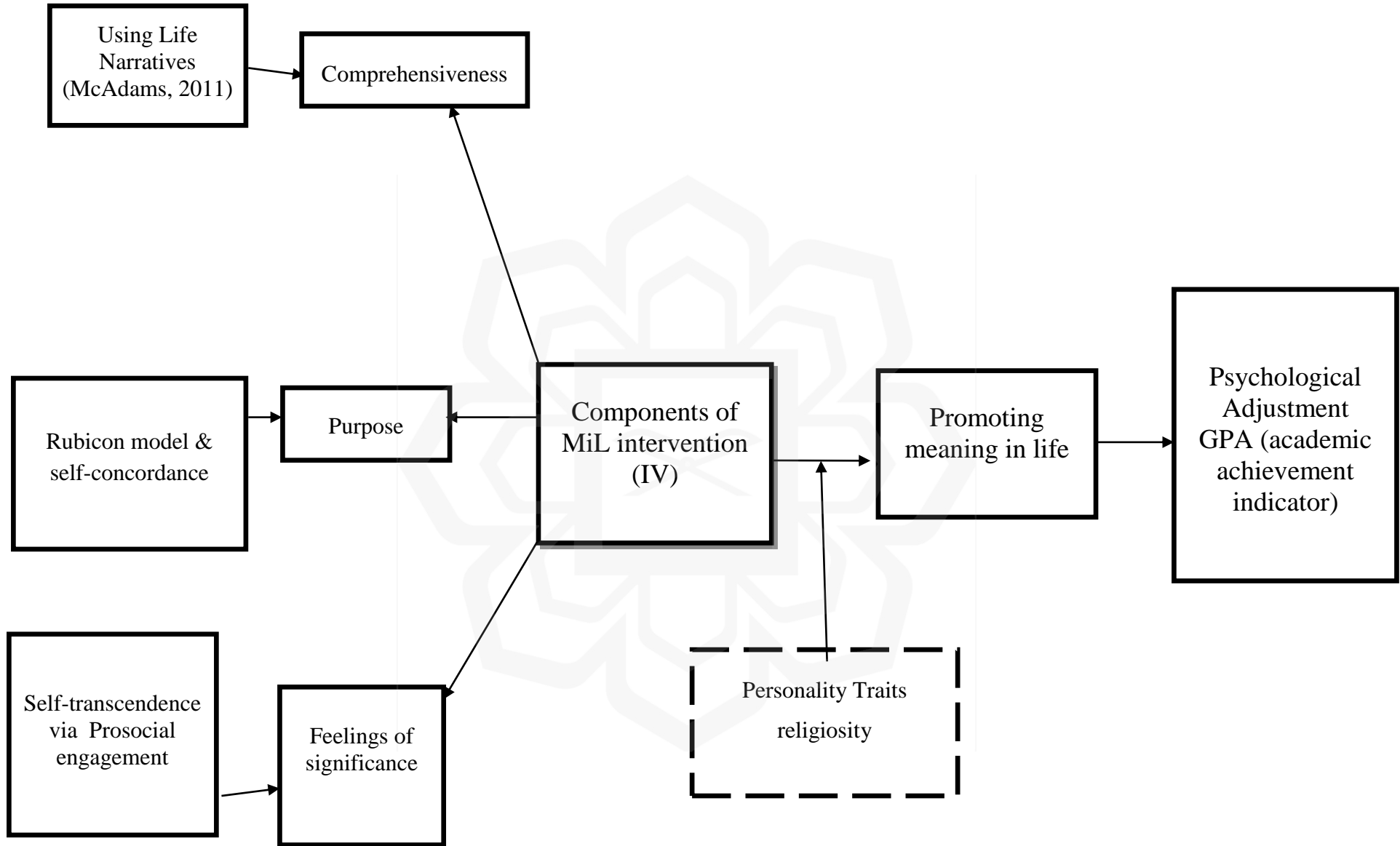


Figure 1.2 Conceptual Framework for the MiL Intervention

1.8 SIGNIFICANCE OF THE RESEARCH

This study brings forward significant theoretical and practical contributions to the field of Meaning in Life (MiL) research, particularly within educational and culturally diverse contexts. First, it introduces an innovative intervention specifically designed to enhance MiL based on the tripartite model, which conceptualizes meaning as comprising three distinct but interrelated dimensions: purpose (having direction and valued life goals), coherence (making sense of life experiences), and significance (feeling that life matters). This marks a major advancement in meaning-oriented interventions, as it shifts the focus from general well-being enhancement to a more targeted and structured approach. By providing practical tools, reflective exercises, and developmental strategies, the intervention equips educators, coaches, counselors, and students themselves with effective methods to foster MiL systematically and measurably, directly supporting psychological resilience, academic motivation, and overall life satisfaction.

Second, the study breaks new ground by applying the tripartite model as a measurement framework, allowing for a more comprehensive and fine-grained understanding of how meaning manifests in individuals. This model not only captures the multi-dimensional nature of MiL but also enables a more precise assessment of intervention outcomes. Importantly, the study goes beyond basic measurement by exploring the mechanisms of change that drive the intervention's effectiveness. Specifically, it identifies personality traits (such as openness and conscientiousness) and religiosity as meaningful moderators, highlighting the ways in which individual differences influence the development and sustainability of MiL. This layered insight adds depth to both theory and practice, offering policymakers and practitioners a framework for adapting interventions to align with the psychological and cultural profiles of diverse student populations.

Third, the study strengthens methodological rigor through the use of multilevel analysis, addressing key limitations in existing literature that often rely on cross-sectional or single-level models. By accounting for both intra-individual change over time and inter-group differences, the study provides robust evidence for the intervention's effectiveness, particularly in the context of real-world educational

settings. This methodological sophistication enhances the credibility and replicability of the findings and underscores the importance of longitudinal and context-sensitive approaches in psychological intervention research.

Fourth, the study contributes significantly to the field's understanding of cultural adaptation by examining how MiL interventions originally developed in Western, individualistic contexts can be effectively recontextualized for collectivist and religiously grounded societies, such as those in the Middle East. Drawing on empirical and theoretical insights from the Muslim community, the research addresses the often-neglected cultural dimensions of meaning-making. It emphasizes the role of community, family, faith, and moral obligation as foundational elements of meaning, offering a counterbalance to highly individual-centered conceptions of purpose and fulfillment. This cross-cultural lens broadens the applicability of MiL theory and provides guidance for practitioners working in multicultural or non-Western contexts.

Finally, a distinctive contribution of this study lies in its integration of Islamic principles, particularly through the lens of *Maqasid al-Shari'ah*—the higher objectives of Islamic law, which emphasize the preservation of faith, life, intellect, family, and community. By framing life meaning and value through these spiritual and moral objectives, the intervention aligns with students' cultural and religious worldviews, offering a spiritually meaningful framework for evaluating and pursuing life goals. This alignment enhances not only the relevance of the intervention but also its potential to foster existential depth, ethical reflection, and a deep sense of mattering rooted in both personal and transcendent values. In doing so, the study provides a blueprint for how religious and cultural traditions can be integrated into contemporary psychological interventions, offering a more holistic and inclusive understanding of human flourishing.

Taken together, these contributions offer a comprehensive and culturally responsive framework for enhancing MiL among university students. They advance theoretical understanding by validating an integrated model of meaning, contribute methodological rigor through longitudinal and multilevel analysis, and provide practical guidance for intervention design that is culturally and spiritually attuned. The study thus represents a significant step toward supporting students' personal

development, moral identity, and social contribution, ultimately enriching both individual well-being and communal resilience in a globalized educational landscape.

1.9 OPERATIONAL DEFINITIONS OF TERMS

Several constructs were used in the present study. In this section, the key constructs are theoretically and operationally defined.

a) Meaning in Life (MiL)

Based on Michael F. Steger (2021), the present study theoretically defines meaning in life as a “*set of subjective judgments people make that their lives are (a) worthwhile and significant, (b) comprehensible and make sense, and (c) marked by the embrace or pursuit of one or more highly valued, overarching purposes or missions*”. Operationally, in this study, MiL was measured in three dimensions, i.e., coherence (via four items), purpose (also via four items), and feeling of significance (via three items) (Martela & Steger, 2022).

b) Personality Traits

In this study, the construct “personality traits” is defined as the Big Five domains, which include assertiveness (extraversion), activity (extraversion), altruism (agreeableness), compliance (agreeableness), and order (conscientiousness) (Goldberg, 1990). Operationally, it was measured using the Big Five Inventory with 10 items (Soto & John, 2009).

c) Ppsychological Adjustment

Psychological adjustment refers to an individual's subjective sense of distress and ability to function normally in daily life. It is typically trans-theoretical and conceived to capture symptoms, well-being, and functioning within a single instrument (Kraus, Seligman, & Jordan, 2005). Psychological adjustment, in this study, was measured using the established six-item Brief Adjustment Scale (BASE-6) (Cruz, Peterson, Fagan, Black, & Cooper, 2020).

d) Religiosity

Religion is defined as one's awareness of and commitment to Islamic teachings, way of life, and worldview. Five factors based on the *Maqasid Shari'ah* were used to measure college students' religiosity, which included the preservation of religion, preservation of life, preservation of intellect, preservation of dignity and lineage, and preservation of wealth and resources. The instrument contained 29 items measuring students' religiosity (Abdullah, Nordin, Hussien, Alwi, & Rabe, 2023; Nordin, Hussien, Abd Hamid, & Hashim, 2022).

e) Academic achievement

It refers to the cumulative grade point average (GPA) attained by college students at the end of each semester. In this study, academic achievement was measured by students' overall GPAs, which were categorized as acceptable, good, very good, or excellent.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

In this chapter, the researcher presented the foundational concepts and theoretical frameworks essential to understanding the study's core variables, including meaning in life, personality, religiosity, and psychological adjustment. This chapter began by defining each construct and reviewing relevant measurement scales to provide clarity on how these variables have been operationalized in past research. Following this, related theories on meaning in life were discussed to situate the concept within broader psychological frameworks, examining perspectives that have shaped contemporary views on meaning in life. Finally, an empirical review, based on a systematic literature review (SLR), was conducted to synthesize findings from previous studies, highlighting trends, gaps, and key insights in the existing literature.

2.2 DEFINITION OF CONSTRUCTS

2.2.1 Meaning in Life

One of the challenges in studying "meaning in life" as a scholarly topic is the incredible range and diversity of how the term "meaning" is used in everyday language. The word appears in so many contexts that it can signify anything from a simple statistical concept (like "mean" as an average) to expressions of emotion (like calling someone "mean"). It can describe scarcity ("living in mean conditions"), convey financial implications ("living beyond your means"), or even justify actions ("the ends justify the means"). We use it in questions ("What do you mean?"), to show intensity ("Play it like you mean it"), and to express intentions ("I didn't mean to hurt you"). It serves as a tool for interpretation ("'Rosebud' meant innocence to Kane"), as a marker of identity ("Do you mean me?"), and as a gauge of importance or impact ("It doesn't mean anything" vs. "Their sacrifice means something"). Sometimes, it

hints at a hidden truth ("It has a deeper meaning") or addresses life's biggest question of all: What is the Meaning of Life?

While often used interchangeably in everyday language, the concepts of meaning in life and meaning of life are conceptually distinct, particularly within the disciplines of psychology, philosophy, and existential studies. This distinction is essential for clarifying the objectives of psychological interventions aimed at enhancing well-being and personal development. Meaning in life refers to the subjective experience that one's life is coherent, purposeful, and significant (Steger, 2012; Martela & Steger, 2016). It is increasingly understood as a tripartite construct comprising coherence (a cognitive sense that life makes sense), purpose (a motivational component involving direction and goals), and significance or mattering (an affective sense that one's life has value and importance) (George & Park, 2016; Heintzelman & King, 2014). These dimensions work together to help individuals experience life as meaningful and contribute to overall psychological well-being. Interventions that promote goal-striving, narrative coherence, and prosocial engagement typically target meaning *in* life.

In contrast, the meaning of life addresses a philosophical and metaphysical question about the ultimate purpose or justification of human existence. It explores whether life has an inherent or cosmic significance, often invoking religious, existential, or metaphysical frameworks (Metz, 2013; Seachris, 2013). Philosophers such as Metz argue that while such questions are valid, the more empirically grounded inquiry into *meaning in life*—focused on individual experience—is more relevant to applied psychological science. Importantly, as Haidt (2006) notes, individuals can experience a meaningful life *without necessarily resolving* the abstract question of the meaning of life. Thus, while the two constructs may be related at a conceptual level, they serve different purposes. Psychological research and interventions predominantly concern meaning in life, emphasizing how people construct personal narratives, pursue valued goals, and perceive their lives as mattering.

In exploring the topic of meaning in life in positive psychology literature, one common source of confusion is the interchangeable use of "meaning" and "purpose." However, "meaning" is a broader concept encompassing not only purpose but also two additional elements: comprehension and significance (Martella & Steger, 2016; Steger et al., 2006). While expressions like “the good life must include meaning and purpose” (or “meaning and significance”) may sound appealing, they are somewhat redundant, similar to saying “fall colors are beautiful in the United States and Minnesota” or “rainfall is common in Indonesia and Bali.” It’s not incorrect, but it lacks precision.

Over the years, researchers have offered various definitions of MiL, with many converging around a multifaceted conceptualization. MiL has traditionally been understood to encompass a sense of coherence, purpose, and significance, though there has been some debate over the exact nature and number of these dimensions (Battista & Almond, 1973; King et al., 2006; Reker & Wong, 1988; Steger et al., 2006). George and Park (2017) proposed a three-dimensional model of MiL, comprising coherence, purpose, and mattering, which has since gained traction. This trichotomy reflects a widely accepted view that MiL is not a monolithic construct but one that can be understood through separate yet interrelated facets.

The three-dimensional framework by George and Park (2016, 2017) draws a distinction between coherence and purpose, defining coherence as the degree to which life experiences make sense and purpose as the presence of goals that give life direction. However, the distinction between significance and mattering remains open to interpretation. George and Park (2016) define mattering as the degree to which individuals feel valued and relevant within a broader social context, while Martela and Steger (2016) suggest that significance, which relates to the sense that one’s life has lasting importance, may constitute a unique dimension of MiL. Recently, there has been widespread agreement on the conception of perceived meaning (Michael F. Steger, 2021), defining meaning in life as the subjective sense that one’s life is (a) understandable and coherent, (b) driven by value, overarching purposes or missions, and (c) worthwhile and significant, as discussed below:

a) Coherence: research on meaning in life has long emphasized that to find life meaningful, one has to be able to make sense of it and form a coherent mental framework of existence. Life cannot be a chaotic swirl of confusion; instead, it requires a level of predictability and consistency that enables us to develop a sense of identity, form connections with others, and navigate the world. This aspect of meaning, referred to as comprehension, reflects the cognitive need to view life as coherent and understandable (Steger, 2009; Steger et al., 2006). Whether facing confusing stimuli (Heine, Proulx, & Vohs, 2006) or experiencing trauma (Park, 2010; Steger & Park, 2012), people show a strong drive to make sense of their experiences (Steger, 2012a). As Baumeister and Vohs (2002) put it, “the essence of meaning is connection” (p. 608). We continuously weave together themes, lessons, memories, patterns, and people in our lives into a story that feels consistent. Each life, in a way, becomes a personal War and Peace, filled with a vast cast of characters and events across landscapes and turning points, all connected by our unique interpretations and experiences.

b) Purpose: Every great story desires a plot to create drive and answer questions about what the characters are doing and what’s going to happen next. If comprehension provides the narrative framework of our life stories, then purpose serves as the plot. From the start, purpose has been central to meaning in life research. Frankl’s (1963) pioneering ideas emphasized that each individual can find strength and fulfillment through the pursuit of a unique purpose or overarching life aim, one that enables them to make a meaningful contribution to others or the world. In this sense, meaning involves striving toward one’s most valued life goals (Crumbaugh & Maholick, 1964; Klinger, 1977, 1998; Ryff & Singer, 1998). However, purpose is not just a collection of important goals; it is a higher-order set of intentions that brings consistency and adaptability in working toward desired outcomes (Klinger, 1998; McKnight & Kashdan, 2009; Steger, 2009). An intriguing aspect of purpose is that it can—and perhaps should—include pursuits that may never be fully attainable within a set timeframe. For instance, some people see their purpose as “being a good parent,” “becoming a better person,” or “reducing others’ suffering.” Parenting and self-growth are lifelong endeavors, and it is unlikely anyone believes suffering can be eradicated completely. In this way, purpose is the drive to commit to and work toward high-level

aspirations, even with obstacles, knowing that the full realization of purpose might remain open-ended and ongoing.

c) Significance: formal definitions of meaning in life have rarely incorporated people's perception that their lives are worth living or inherently valuable. Recently, researchers such as Michael F. Steger (2021) defined meaning as "the extent to which people comprehend, make sense of, or see significance in their lives," along with perceiving a purpose or overarching life aim (Steger, 2009, p. 682). Initially, researchers grouped "significance" under comprehension, but in later work, they argued that significance should stand on its own, as a belief that life matters (Steger, 2012b, p. 177), aligning with King et al. (2006). Similarly, George and Park (2016) emphasized that a life perceived as meaningful must also be seen as having worth. After all, how could one consider their life meaningful if they feel it lacks value and doesn't matter? Thus, meaning in life would be the subjective judgment that life matters and is significant—a kind of intuitive, evaluative "gut feeling" that life is meaningful.

In short, these perspectives on meaning in life together call for a unified model—one that unites the search for and experience of meaning, the recognition of its sources in a person's life, and the individual's approach to meaning, whether through fleeting, immediate feelings or through a transcendent, lasting sense of purpose. Hence, meaning in life has been defined with cognitive, motivational, and emotional elements, similar to other psychological constructs. In this study, the researcher adopted Michael F. Steger's (2021) theoretical definition of meaning in life: a "set of subjective judgments people make that their lives are (a) worthwhile and significant, (b) comprehensible and make sense, and (c) marked by the embrace or pursuit of one or more highly valued, overarching purposes or missions.

2.2.2 Measuring Meaning in Life

The history of efforts to measure "meaning in life" (MiL) has evolved considerably. Early instruments aimed to measure "purpose" specifically—a concept that is now seen in the psychological literature as only one component of MiL. Among these, the Purpose in Life (PIL) test (Crumbaugh & Maholick, 1964; Bronk, 2014) has been the most widely used tool in empirical research. Despite extensive study (Crumbaugh, 1968; Pinquart, 2002), the PIL test has faced consistent criticism, often leading to calls for the development of new measures. Critics argue that many PIL items seem to gauge life satisfaction or general enthusiasm rather than purpose itself, with statements like “My life is: empty, filled only with despair” vs. “overflowing with exciting things” or “I am usually: bored” vs. “enthusiastic.” Steger, Frazier, Oishi, and Kaler (2006) have noted that items such as “I feel really good about my life” could reflect various constructs besides MiL, including mood (p. 81). Similarly, Damon, Menon, and Bronk (2003) criticize the PIL for treating “meaning” and “purpose” as synonymous, a distinction that newer measures continue to maintain (George & Park, 2017; Michael F. Steger, 2021).

Furthermore, the inclusion of a PIL item about suicide’s attractiveness seems tangential to assessing purpose (Steger et al., 2006, p. 81). Yalom (1980) offered a notable critique of the PIL, commenting that “life satisfaction or consideration of suicide, for instance, may relate to meaning in life, but they are even more clearly associated with other psychological states—notably, depression” (p. 456). Yalom found the PIL conceptually confusing, methodologically unclear, and vague in its terminology, though he reluctantly conceded that, at the time, it was “the only game in town” (p. 457).

Ebersole and Quiring (1989) later confirmed a modest correlation between PIL scores and social desirability, aligning with other reviews (Domino, 1972; Yalom, 1980), though they remained neutral on whether this correlation compromised PIL’s results (Ebersole & Quiring, p. 306). Dyck (1987) critiqued the PIL’s design, questioning the independence of its two main criteria—existential relevance and patient discriminability. These criteria, derived from Crumbaugh and Maholick’s existential literature readings, aimed to distinguish patients from non-patients (1964, p. 201). However, the PIL’s scores correlated strongly with the absence of depression

(Frazier, Oishi & Steger, 2003, p. 257), complicating its foundation in logotherapy, which views lack of purpose as a distinct pathology called “noogenic neurosis” (Crumbaugh & Maholick, 1964; Garfield, 1973).

Some studies have attempted to separate depression from low purpose as measured by the PIL, finding that they are not factorally independent (Dyck, 1986; Reker & Cousins, 1979). Early critiques, such as Braun (1972), questioned the PIL’s discriminant validity. Schulenberg (2004) found a strong negative correlation (-.70) between PIL scores and the Symptomatic Functioning subscale of the Outcome Questionnaire, which measures anxiety, depression, and substance abuse symptoms, thus suggesting that PIL may overlap with broader psychological distress measures.

The PIL’s cross-cultural consistency has also been questioned. Garfield (1973) argued that its core concepts varied across diverse groups, causing “cultural contamination” (p. 403) and raising doubts about item consistency across subcultures (p. 405). Confusing language in item anchors likely adds to respondent confusion (Bronk, 2014, p. 25; Schulenberg, 2004, p. 480). Opposing anchors, such as “wanting nine more lives just like this one” vs. “preferring never to have been born” (Edwards, 2007, p. 49), further complicate the instrument’s structure.

Over the last 40 years, critiques like Yalom’s have persisted, and new instruments with similar aims have appeared. Crumbaugh himself created the Seeking of Noetic Goals (SONG) test as a PIL companion to assess the search for meaning rather than its presence. However, SONG scores did not consistently show an inverse relationship with PIL scores (Bronk, 2014) and faced criticism for conceptual inconsistency, further blurring the line between neurogenic neurosis and depression (Dyck, 1987). Research now suggests that the relationship between the presence and absence of perceived meaning is more complex than Crumbaugh originally proposed (Schulenberg, 2014, p. 695). Heintzelman and King, for instance, argue that if MiL is a fundamental human need, searching for it can coexist with an already present sense of meaning. They write, “If meaning in life is a central human motivation, then even with meaning already present, the desire for meaning might persist” (Heintzelman & King, 2014b, p. 570).

Despite interest in combining PIL and SONG in research (Reker & Cousins, 1979), serious criticisms remain, and SONG has seen limited use (Steger et al., 2006, p. 81); Reker & Peacock (1981) argued that PIL and SONG together reflect a multidimensional life attitude construct, later incorporated into the Life Attitude Profile (LAP), which consolidated these ideas into a single scale. The LAP, like the PIL and SONG, measures constructs related but not identical to perceived MiL (Frazier et al., 2003, p. 260), focusing on themes like death anxiety and boredom rather than exclusively on MiL. Heintzelman and King (2014b) have demonstrated that “natural regularity and routines” and “mundane habits” bring meaning to many, challenging a bias toward excitement and novelty in much MiL research. Earlier measures tended to overlook these factors, implying that only “profound” or “vivid” experiences convey meaning. The Life Regard Index (Heintzelman & King, 2014b) emerged as an effort to address PIL’s perceived value biases and limitations, representing another step in refining MiL’s understanding and measurement.

As a result, George and Park (2017) published the Multidimensional Existential Meaning Scale (MEMS) to capture these distinct dimensions of MiL and aimed to empirically validate the three-dimensional model of MiL by examining coherence, purpose, and mattering as separate dimensions. Through factor analysis, they found evidence supporting the distinctiveness of these dimensions, with each demonstrating unique correlation patterns with constructs theoretically related to them. This work provided empirical backing for the view that MiL is composed of separate yet related elements, a step forward from previous measures that treated MiL as a unidimensional construct.

Similarly, Costin and Vignoles (2020) developed a measure that differentiated between comprehension, purpose, and mattering. Their findings echoed those of George and Park, with factor analytic support indicating that the three dimensions of MiL could be kept distinct. Costin and Vignoles observed stronger correlations among retests of the same subscale compared to other subscales, further supporting the idea that these dimensions represent independent aspects of MiL. Interestingly, their research suggested that mattering might have a greater influence on overall MiL than the other two dimensions over time, pointing to its potential centrality in the MiL construct.

Despite the advances represented by MEMS and similar tools, critiques have been raised concerning the design and psychometric properties of these measures. One notable limitation of the MEMS is its lack of balance between positively and negatively phrased items. This imbalance could introduce a bias due to the tendency of individuals to agree with positively phrased items, a phenomenon known as acquiescent response bias (Winkler, Kanouse, & Ware, 1982). This bias can obscure the true relationships among constructs by inflating positive correlations, thus limiting the measure's ability to accurately assess distinct dimensions of MiL.

Another substantial limitation in current MiL measures is the absence of an independent scale for significance, as distinct from mattering. Although George and Park (2016) propose mattering as one of the three main dimensions of MiL, Martela and Steger (2016) argue that significance may be a distinct construct, deserving of separate measurement. Without an empirical scale for significance, the relationships between this dimension and other MiL components remain unexplored, leaving a gap in our understanding of how each dimension contributes to an individual's sense of meaning. Developing a scale specifically for significance and examining its correlation with coherence, purpose, and mattering could advance MiL research by clarifying these constructs' unique contributions. To address these concerns, Martela and Steger (2023) aimed to enhance the measurement of coherence, purpose, mattering, and MiL judgments by incorporating a balanced proportion of reverse-phrased items. This approach seeks to mitigate response bias and improve the reliability and validity of the scale. Hence, in the present study, MiL was measured across three dimensions: coherence (four items), purpose (four items), and significance (three items) (Martela & Steger, 2023).

2.2.3 Personality Trait

It is defined as a relatively stable characteristic or quality that influences an individual's behaviors, thoughts, and emotions across various situations and over time (McCrae & Costa, 1999). Traits are lasting tendencies in how people think, feel, and act, setting each person apart from others. According to trait theory, traits are

measurable and can be organized into a hierarchy, with broad traits encompassing narrower sub-traits or facets (McCrae & Costa, 1999).

Personality traits allow for predictions about an individual's behavior and their interactions with their environment (Funder, 2001). They provide a framework for understanding human differences in response tendencies and are typically organized within established models, such as the Big Five or Five-Factor Model. This model identifies five key domains of personality—Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism—that capture the essential variations in personality (Goldberg, 1990; McCrae & John, 1992).

Over the past few decades, the domain of personality traits has seen a substantial transformation, largely due to the widespread adoption of the Big Five taxonomy (Goldberg, 1993). This model classifies traits into five broad categories: extraversion (assertive and sociable vs. introverted), agreeableness (warm and kind vs. harsh), conscientiousness (industrious and reliable vs. negligent), emotional stability (calm and relaxed vs. anxious), and openness to experience (creative and intellectual vs. closed-minded). A key aspect of the Big Five model is its breadth and inclusivity, though this can sometimes be overlooked in quick assessments. Rather than being completely separate and distinct dimensions, the Big Five traits are more like interconnected clusters of overlapping facets (Condon & Mroczek, 2016).

The Big Five model has had a transformative impact on personality psychology, driving researchers to critically assess whether proposed traits are truly distinct or simply facets of established traits. A recent example is the concept of “grit” (Duckworth et al., 2007), which initially appeared novel but was later identified as closely aligned with conscientiousness, essentially representing a subcomponent of that broader trait (Credé et al., 2017).

Moreover, organizing traits within the Big Five framework has clarified connections between personality traits and key life outcomes, significantly advancing the field (Roberts et al., 2007; Soto, 2019). This structure has also facilitated interdisciplinary work, especially in clinical psychology, where the Big Five aligns closely with new personality disorder models, such as the DSM-5's Personality

Inventory (PID-5) and the Hierarchical Taxonomy of Psychopathology (HiTOP) (Krueger & Markon, 2014).

However, debates about personality structure continue, as not all researchers agree that the Big Five alone are sufficient (Möttus et al., 2020). Some advocate for an additional “honesty” dimension, which consistently appears across diverse cultures and has shown unique predictive relevance (Ashton & Lee, 2020; Thalmayer & Saucier, 2014; Zettler et al., 2020). Traits from the Dark Triad—narcissism, psychopathy, and Machiavellianism—have also been proposed as potentially distinct dimensions, though their differentiation from the Big Five or a potential “Big Six” remains unresolved (Jonason et al., 2013). In this study, the researcher adopted Big Five domains, which include assertiveness (extraversion), activity (extraversion), altruism (agreeableness), compliance (agreeableness), and order (conscientiousness) (Goldberg, 1990).

2.2.4 Personality Trait Measurement

The measurement of personality traits has been one of the most central issues in personality psychology. Among the various models that have been proposed, the Big Five framework has emerged as the most widely accepted taxonomy for describing individual differences (John & Srivastava, 1999; McCrae & Costa, 1999). This model organizes personality variance into five broad domains—Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience—each of which further encompasses a hierarchy of more specific facets. For instance, Extraversion includes facets such as sociability, assertiveness, and activity level, which can be expressed in narrower traits like being talkative or energetic. This hierarchical structure allows researchers to study personality at different levels of specificity, while maintaining a coherent overarching framework (McCrae & Costa, 1999). Despite its broad adoption, the Big Five model has not gone without critique, most notably from Block (1995), who argued that the approach oversimplifies personality and may omit important dimensions. Nonetheless, the model continues to serve as the dominant paradigm in personality research.

To operationalize the Big Five, a variety of self-report instruments have been developed that differ in length, scope, and psychometric precision. At the most comprehensive end is the Revised NEO Personality Inventory (NEO-PI-R), which consists of 240 items and provides domain scores as well as facet-level scores for six facets within each domain (Costa & McCrae, 1992). While offering excellent coverage and reliability, the NEO-PI-R requires approximately 45 minutes to complete, making it impractical in many applied contexts, particularly when personality is not the sole focus of a study. To address this limitation, shorter forms have been developed, such as the NEO Five-Factor Inventory (NEO-FFI) with 60 items, the Big Five Inventory (BFI-44) with 44 items, and Goldberg's (1992) 100-item adjective-based markers, which typically take between 5 and 15 minutes to administer (Benet-Martínez & John, 1998; John & Srivastava, 1999). These scales balance breadth of coverage with reduced time requirements, allowing researchers to incorporate robust personality assessment into larger research designs.

The pursuit of even greater efficiency has led to the development of short and ultra-short forms. Saucier (1994), for example, created a 40-item version of Goldberg's adjective markers, while Soto and John (2009) introduced the BFI-10, which allows personality assessment at the domain level in only 1–2 minutes. Such instruments represent an important trend toward brevity in psychological measurement, reflecting practical needs in diverse research environments.

The value of brief measures extends beyond convenience. They can reduce redundancy in item content, alleviate participant fatigue, and minimize the frustration that sometimes arises when answering multiple items that appear similar (Robins, Hendin, & Trzesniewski, 2001). Burisch's (1984, 1997) classic studies further demonstrated that shorter scales, such as a 9-item depression inventory, could achieve levels of validity comparable to those of longer instruments. These findings suggest that, under certain conditions, long measures do not necessarily confer substantial psychometric advantages over well-constructed short ones. Thus, while the general rule is that reliability increases with the number of items, the incremental benefits of length are not always sufficient to justify the additional participant burden.

Nevertheless, the use of short and ultra-short measures is not without cost. Compared to multi-item scales, brief instruments typically have lower internal consistency reliability because each domain is measured with fewer indicators. They also fail to capture the facet-level richness of personality, restricting inferences to broad domains rather than more nuanced traits. Additionally, correlations with external variables can be attenuated due to increased measurement error and reduced variance. For this reason, scholars generally caution that while short measures may be adequate for large-scale surveys or exploratory research, they may be less appropriate when fine-grained personality assessment is the central focus (John & Srivastava, 1999; McCrae & Costa, 1999). Researchers must therefore carefully weigh the trade-offs between efficiency and psychometric robustness in light of their specific study goals.

In sum, personality psychologists operate under practical constraints that often force trade-offs between depth and feasibility. Multi-item scales like the NEO-PI-R provide comprehensive and reliable assessments but are burdensome in contexts where time is limited or repeated measurement is required. Shorter scales, including the BFI-44, NEO-FFI, and adjective-based inventories, offer a balance of coverage and efficiency, while ultra-short scales such as the BFI-10 maximize feasibility at the cost of precision. For the purposes of the present study—where repeated assessments and participant retention are critical—the BFI-10 (Soto & John, 2009) was selected. This instrument enables the efficient measurement of the Big Five domains while minimizing participant fatigue, thereby preserving the feasibility of data collection.

2.2.5 Psychological Adjustment

Psychological adjustment refers to the degree of subjective distress together with the capacity to function effectively in daily life (Kraus, Seligman, & Jordan, 2005). In Measurement-Based Care (MBC), brief patient-reported outcome measures (PROMs) that can be administered frequently with minimal burden are preferred, as they facilitate ongoing monitoring and data-informed clinical decisions. The Brief Adjustment Scale–6 (BASE-6) was developed for this purpose as a concise indicator of general distress/adjustment suitable for repeated administration and routine

workflows. It is widely used in web-enabled Measurement Feedback Systems (MFS) and is available for use at no cost, which lowers barriers to adoption in both research and practice. Given its expanding use, careful attention to its psychometric performance and interpretability is essential.

Cruz, Peterson, Fagan, Black, and Cooper (2020) evaluated the BASE-6 across three samples—two nonclinical cohorts (Amazon Mechanical Turk participants and college students) and a clinical outpatient group—to examine structure, reliability, validity, and user acceptability. As expected for criterion validity, the clinical group reported higher levels of distress than nonclinical participants. Factor-analytic results supported a unidimensional structure, indicating that the items coherently index a single underlying factor and strengthening construct validity. Reliability evidence included internal consistency and test–retest estimates assessed against common guidelines (Mash & Hunsley, 2005; Portney & Watkins, 2000). Convergent validity was demonstrated via associations with established measures of distress and symptomatology, including the Outcome Questionnaire–45.2 (OQ-45.2), the Patient Health Questionnaire-9 (PHQ-9), and the Generalized Anxiety Disorder-7 (GAD-7). In the nonclinical samples, respondents evaluated the BASE-6 as more acceptable for frequent use than lengthier instruments such as the OQ-45.2, consistent with its emphasis on brevity and clarity (Cruz et al., 2020).

Within MBC, instruments like the OQ-45.2 and the Outcome Rating Scale (ORS) have long served as anchors because they integrate symptoms, well-being, and functional impairment, enabling continuous tracking across diverse clinical populations (Kraus et al., 2005; Overington & Ionita, 2012). This broad-band strategy aligns with evidence for a general psychopathology (p) factor that captures common variance across symptoms and supports transdiagnostic assessment goals (Caspi et al., 2014). The OQ-45.2 offers comprehensive coverage across Symptom Distress, Interpersonal Relations, and Social Role functioning and has accumulated extensive validation over more than two decades (Lambert et al., 2005; Lambert, 2015). However, length can undermine feasibility for weekly monitoring, with increased respondent burden and lower completion rates in routine care (Miller, Duncan, Brown, Sparks, & Claud, 2003). In busy workflows, tools requiring more than five minutes

are often judged impractical for repeated administration (Brown, Dreis, & Nace, 1999).

To mitigate burden, brief instruments have gained traction. The ORS—a four-item visual-analog measure within the Partners for Change Outcome Management System (PCOMS)—typically takes under one minute to complete and has shown markedly higher completion in routine settings relative to longer measures (Miller et al., 2003; Duncan & Reese, 2015). This efficiency, however, entails trade-offs: convergent validity with the OQ-45.2 is typically moderate (e.g., total-score correlations in the mid-.50s to .60s), and domain coverage is necessarily narrower than that of symptom-specific scales (Glasgow & Riley, 2013). Thus, instrument selection in MBC involves balancing breadth and depth of assessment against efficiency, respondent burden, and the likelihood of sustained completion.

Against this backdrop, the BASE-6 offers a brief, public-domain alternative intended to retain more clinical information than ultra-short global functioning indices while remaining easy to administer. It samples core aspects of general distress and functional impairment, has been integrated into digital platforms that support PROM libraries and progress dashboards, and can be paired with reliable-change metrics to flag potential “off-track” cases. In the present study, we therefore employ the BASE-6 (Cruz et al., 2020) as the primary indicator of psychological adjustment. This choice reflects the need for frequent, low-burden assessment in an MBC-aligned design; empirical support for unidimensional structure, reliability, and convergent validity with well-established.

2.2.6 Religiosity

Religiosity from an Islamic perspective involves capturing multiple dimensions that reflect the beliefs, practices, and spirituality essential to the Islamic faith. The researcher adapted *Maqāsid al-sharī'ah* to emphasize "one's awareness and commitment" within the Islamic worldview, where the foundational paradigm of *tawhīd*, or ultimate monotheism, underpins the Islamic creed (*‘aqīdah*), encompassing one's beliefs, knowledge, and practices. In addition to various forms of worship

(*‘ibādah*), the defense of Islam can manifest through writing, speaking, and other practical efforts (Afridi, 2016). A contented Muslim acknowledges that "God has a significant impact upon [him/her]" and recognizes that "[his/her] daily activities are parts of *‘ibādah*." Individuals living in a state of *sejahtera* actively participate in safeguarding their physical and emotional well-being, security, and lives. They take precautions to protect their environment from potential dangers, viewing themselves as "[being] responsible for protecting life," "avoiding harmful food or drink," and "ensuring that their surroundings are safe." Afridi (2016) notes, "It is important to recognize that, in general, saving one's life is required," but this should not be pursued at the expense of others' lives (p. 281). Those who steadfastly choose, implement, and cultivate their intellect (*qalb*) often attain high levels of *Sejahtera* existence, encompassing the cognitive, social, emotional, and spiritual dimensions infused with Islamic teachings. Responses to prompts indicating civic engagement highlight this aspect (Abdullah, Has-Yun Hashim, & Yusri, 2020).

The *Maqāṣid al-sharī'ah* provides a clear framework for understanding the structure, meaning, purpose, principles, and objectives of life (Afridi, 2016; Abdullah et al., 2020; Saladin et al., 2020). It recognizes *sejahtera* living as essential for Muslims and articulates five main objectives: preservation of faith (*al-Dīn*), life (*al-Nafs*), intellect (*al-'Aql*), property (*al-Māl*), and lineage (*al-Nasl*). These objectives are further classified into *darūriyyāt* (necessities), *hājīyyāt* (needs), and *taḥsīniyyāt* (embellishments). *Darūriyyāt* is fundamental for establishing welfare in this life and the hereafter; neglecting them disrupts coherence and order. *Hājīyyāt* facilitates life and alleviates hardships, while *taḥsīniyyāt* aims to beautify life and enhance ease and comfort.

Islam distinguishes itself from other faiths, with *tawhīd*—belief in the Oneness of God—serving as its core tenet. It is inherent to Islam that all thoughts, words, intentions, and actions must be directed toward the sake and pleasure of Allah (SWT), the singular Creator. A devout Muslim comprehends that all endeavors are performed for their own spiritual enrichment. Statements such as "happy with my personal relationships" and "satisfied with the Islamic environment" reflect one's wisdom in daily living. In this regard, Afridi (2016) argues that "Allah S.W.T. has commanded the preservation of this precious gift by utilizing the intellect for the benefit of all,

rather than for malicious purposes or anything that may lead to destruction. To this end, Islam grants its adherents the freedom to express their opinions and tolerates diverse viewpoints. Nonetheless, such expressions must align with the moral and ethical values prescribed by the Qur'an and Sunnah” (p. 282). Protecting one’s dignity involves respecting privacy, refraining from disclosing others' faults, acting responsibly in gender relations, and making fair judgments in familial matters, including marriage and divorce (Afridi, 2016; Mohamed Sidik, Ishak, Saper, & Mohd Daud, 2019). This aligns with the Islamic principle emphasizing every individual's right to dignity, nobility, and respect (Husna, Ab Manan, Rafeah, Amiratul, & Mohd Hafiz, 2021). Sejahtera living is affirmed by one’s responses, such as “comfortable talking to/working with people of the opposite gender” and “prepared to be a good parent to my children,” illustrating sejahtera lifestyles related to dignity evaluated in this study.

The *Maqāṣid al-sharī'ah* also pertains to how individuals gather, utilize, safeguard, distribute, and purify their resources, including time, wealth, and abilities, in a fair and beneficial manner (Zailani, Mohd Satar, & Zakaria, 2022). A Muslim who effectively manages wealth and resources is likely to minimize waste, contribute to charity, pay zakat, and respect their time. This dimension reflects the Islamic view that wealth and resources should aid individuals in meeting their fundamental needs, ultimately enhancing their Sejahtera.

Therefore, in this study, the researchers define Religiosity as one’s awareness of and commitment to Islamic teachings, way of life, and worldview. Five factors based on the *Maqasid Shari'ah* were used to measure college students’ religiosity, which included the preservation of religion, preservation of life, preservation of intellect, preservation of dignity and lineage, and preservation of wealth and resources. The instrument contained 29 items measuring students’ religiosity (Abdullah et al., 2023; Nordin et al., 2022).

2.3 THEORIES RELATED TO MEANING IN LIFE

2.3.1 Positive Psychology Perspective

The theoretical foundation for understanding "meaning in life" (MiL) through positive psychology, often positive affect associated with happiness and contentment, intersects with a sense of purpose and significance. Positive psychology, which emphasizes human strengths, resilience, and virtues, posits that positive emotions are a key component of well-being and may play a significant role in the experience of meaning itself (Ebersole, 1998).

Meaning in life, a construct encompassing purpose, coherence, and a sense of worth, has been consistently associated with positive affect, suggesting that moments of joy and contentment can enhance one's sense of MiL and serve as a buffer against life's challenges. Early research found that people often relate their positive emotions to a sense of purpose and connection, indicating that emotions play an integral role alongside cognitive components in shaping meaning. Studies reveal a robust positive correlation between positive affect and MiL, showing that happiness, cheerfulness, and enjoyment frequently amplify one's perception of a meaningful life (Chu et al., 2019; Hicks et al., 2012; King et al., 2006; Miao & Gan, 2019; Tov & Lee, 2016). The relation between positive emotions and MiL appears to be stable, even when participants are encouraged to carefully consider their responses rather than using mood as a quick heuristic (Trent & King, 2010). This finding suggests that positive affect itself, rather than just a fleeting mood, has a profound impact on MiL.

Furthermore, positive affect enhances MiL through diverse interventions that promote joyful states. For example, experimental studies show that listening to happy music, recalling a positive memory, or reading a humorous article significantly increases feelings of MiL (Hicks et al., 2010; King et al., 2006; Ward & King, 2016). A daily diary status over five days, positive mood consistently predicted retrospective MiL ratings better than daily MiL ratings did, indicating that mood itself can be a powerful factor in one's overall sense of meaning (King et al., 2006). This suggests that even creative experiences can profoundly shape perceptions of life's meaningfulness, serving as a form of emotional reinforcement.

In terms of psychological frameworks, positive psychology often distinguishes between hedonic well-being (pleasure and happiness) and eudaimonic well-being (purpose and fulfillment). Positive affect, emblematic of hedonic well-being, has traditionally been seen as separate from the deeper fulfillment associated with eudaimonia. Yet, the strong relation between positive affect and MiL challenges this distinction, suggesting that pleasure and purpose may be more interconnected than previously thought (Kahneman et al., 1999; Huta & Waterman, 2014; Ryff & Singer, 2008). Positive affect serves as an indicator that life is going well, motivating individuals to engage in meaningful activities and reinforcing their connection to what they value most.

Additionally, MiL's relationship with age illustrates the dynamic nature of positive affect in sustaining meaning. Research indicates a curvilinear association between MiL and age, with MiL increasing in later years (Steger et al., 2009; Krause & Rainville, 2020). The connection between positive affect and MiL also appears to strengthen with age, as older adults often derive greater MiL from low-activation positive emotions, such as contentment. This finding aligns with socioemotional selectivity theory, which posits that as people age, they prioritize emotionally meaningful experiences, thus amplifying the role of positive affect in fostering MiL (Carstensen et al., 1999; Chu et al., 2019).

Positive affect's ability to support MiL evening circumstances highlights its resilience-building function. For instance, experiencing awe—an emotion that mixes both positive and negative reactions like fear—can promote MiL. Awe often evokes feelings of smallness in the face of vast experiences, which could potentially decrease MiL, but studies show that the positive affect elicited by awe compensates for any negative feelings, ultimately enhancing MiL (Rivera et al., 2020). This resilience function underscores how positive emotions have a meaningful outlook even in complex or difficult situations, allowing individuals to find value amidst hardship.

Last but not least, positive psychology underscores the importance of positive affect as a significant contributor to MiL, complementing the eudaimonic pursuits central to a meaningful life. The synergy between hedonic pleasure and eudaimonic fulfillment reflects that positive affect and MiL are not only interlinked but mutually reinforcing. This framework suggests that the experience of meaning can be enriched by both pleasure and feeling matter, making positive affect an essential ingredient in the pursuit of a fulfilling life.

2.3.2 Cognitive Perspective

Within the cognitive perspective, narrative identity conceptualizes meaning in life as an internalized, evolving life story through which individuals organize experience, interpret affect, and construe personal growth (D. McAdams, 1985). This model, theorized extensively by Dan McAdams, posits that individuals don't merely experience life in a passive sequence of events but actively create narratives that shape their sense of self and purpose. As individuals construct these personal narratives, they engage in a process of self-reflection that not only gives coherence to their lives but also aligns with broader cultural expectations and values. (D. P. McADAMS, 2013). Through narrative identity, people integrate their past experiences with their aspirations for the future, weaving together a storyline that imbues their lives with a sense of unity and coherence (McAdams, 2006b).

The narrative identity model highlights that personality development consists of multiple levels. Dispositional traits such as the Big Five personality traits represent one layer, while characteristic adaptations—comprising goals, motives, and values—form another. However, narrative identity is the third and most complex layer, bringing these elements together in a cohesive life story. According to D. McAdams (1985), this narrative is an "internalized and evolving story" that reconstructs one's past and imagines possible futures, all while aiming to provide life with unity and coherence. By creating this story, individuals answer profound questions: How did I come to be who I am? What does my life mean? Where do I see myself going in the future? In addressing these questions, narrative identity becomes a source of

existential coherence, integrating one's unique experiences with a broader cultural and social context (McAdams, 2008).

One of the distinctive aspects of narrative identity is how it allows people to see their lives in causal sequences, connecting events and their meanings over time. Habermas and Bluck (2000) found that adolescents begin to develop the cognitive skills required to construct such narratives, gradually learning to connect various life events and derive themes that characterize their identities. This process requires the cognitive development of formal operational thought, as described by Piaget, which enables adolescents to engage in hypothetico-deductive reasoning and reflect on their own lives in a more systematic way (Breger, 1974; McAdams, 1985). Such reflection allows for sophisticated autobiographical reasoning, whereby individuals not only recount events but also explore their significance, combining personal memories in a way that portrays a coherent self. By late adolescence and young adulthood, individuals can weave these events into an integrated storyline that explains not only who they are but why their experiences matter, creating a narrative that sustains a meaningful sense of identity.

Social and cultural factors play a critical role in shaping narrative identity, as these external expectations prompt young adults to engage in self-reflection and life planning. Erikson's concept of identity formation emphasizes that society expects young adults to examine various life opportunities, ranging from occupational choices to interpersonal relationships, and to begin envisioning an adult life. This period, which Erikson calls a "psychosocial moratorium," allows young people to explore their identities without the pressure of immediate commitment, ultimately leading them to find their own unique niche within society. As Erikson (1959) explains, this period allows the individual to develop a sense of "inner continuity and social sameness," bridging past experiences with future aspirations. The narrative identity that emerges from this period is thus not only a personal story but also a response to societal and cultural expectations, embedding the self within a broader community and cultural heritage.

A particularly meaningful aspect of narrative identity is the way it enables individuals to derive meaning from suffering and adversity, a process that has been closely studied by researchers interested in personal growth and psychological resilience. As Pals (2006) suggests, creating meaning from negative life events involves a two-step process. In the first step, the individual explores the negative experience in-depth, reflecting on its causes, implications, and emotional impact. This exploration stage is critical, as it prevents the individual from glossing over painful experiences in a way that would diminish their significance. Instead, this deep engagement allows for a fuller understanding of the role that adversity plays in one's overall sense of self. The second step involves resolving the event with a positive meaning, which might manifest as personal growth, increased empathy, or resilience. Studies have shown that this two-step process is associated with higher levels of psychological maturity, as individuals who can make sense of negative events tend to develop a richer, more integrated sense of identity (King et al., 2000; King & Raspin, 2004).

The capacity to turn adversity into a source of meaning is particularly evident in what McAdams (2006b) calls the "redemptive self" narrative, a common life story pattern among highly generative adults who view their lives as redemptive journeys from suffering to triumph. This narrative theme has roots in American cultural traditions, drawing on stories of atonement, emancipation, recovery, and self-fulfillment. Adults who construct redemptive narratives often see themselves as having a special mission to improve the world for future generations. They recount stories where they have overcome hardships, emerging with a renewed sense of coherence that drives their generative meaning. This pattern of redemption serves to reinforce the belief that life's challenges can lead to personal growth and social contribution, thus offering a template for a meaningful life in the face of adversity (McAdams, Diamond, de St. Aubin, & Mansfield, 1997).

Finally, narrative identity is intrinsically tied to one's quest for meaning. As Baumeister (1991) notes, individuals seek meaning through four core needs: purpose, efficacy, value, and self-worth. Narrative identity enables people to fulfill these needs by creating a coherent story that not only connects past and future but also aligns with personal values and beliefs. The sense of purpose comes from understanding how

current actions and experiences relate to broader life goals, while efficacy is reinforced as individuals see themselves as capable of making a difference in their own lives and in the lives of others. Value and self-worth are also supported by narratives that position the self as morally justifiable and worthy, attributes that become particularly important as people recount stories of their successes, failures, and lessons learned (Baumeister & Newman, 1994).

Narrative identity, therefore, is not merely a psychological construct; it is an ongoing project that gives structure and depth to the human experience. By constructing and refining their life stories, individuals find a way to answer profound questions about the meaning of life and the role they play in the larger social and cultural landscape. Through this process, narrative identity becomes a primary source of meaning in life, an anchor that not only connects the self to past experiences and future aspirations but also integrates it within a broader community and cultural context, thereby emphasizing the coherence of past experiences among students. Therefore, helping people to create growth-oriented narratives develops coherence for the past experiences of students.

2.3.3 Existential Perspective

The existential perspective on meaning in life, particularly articulated through Viktor Frankl's seminal ideas, holds that individuals are inherently motivated by a "will to meaning." This concept reflects an essential drive to seek purpose, a coherent understanding of life circumstances, and a sense of meaningful direction (Frankl, 1959/2006). Unlike other frameworks that might focus on achieving a state of contentment or pleasure, Frankl emphasizes that true fulfillment arises from striving toward a worthwhile goal. He suggests that meaning is both a directional force, steering one's actions toward goals, and a framework for making sense of one's life conditions, especially in the face of adversity. In this regard, Frankl's logotherapy, an existential therapeutic approach, is designed to help individuals find meaning, particularly those who feel lost or demotivated (Frankl, 1963).

Frankl identifies three primary sources for constructing meaning: (1) creativity and significant contributions, (2) valued experiences of art, beauty, or nature, and (3) one's attitude toward unavoidable suffering (Frankl, 1963). He highlights that meaning is not derived solely from pleasurable pursuits but also from meaningful engagement, purposeful creativity, and profound interactions with the beauty of life. For example, the experience of creating art, achieving professional success, or caring for others represents avenues of self-transcendence, where individuals find meaning by contributing beyond themselves. Furthermore, he acknowledges the profound role that suffering can play in shaping one's sense of purpose. Rather than evading suffering, he argues that individuals can find purpose in enduring challenges with dignity and resilience, thereby transforming suffering into a meaningful part of their life narrative (Frankl, 1959/2006).

In addition to goal-directed meaning, Frankl's existential perspective emphasizes the importance of making sense of life's circumstances, particularly suffering. He posits that individuals need to be able to reconcile or make sense of their experiences, which fosters a coherent understanding of their place in the world. This existential meaning-making is critical for psychological health. For instance, in facing adversity, one may find meaning through reframing personal setbacks as part of a larger, purposeful journey. Frankl contends that this approach allows individuals to maintain a positive self-concept, fostering resilience against existential frustration, a condition he describes as arising when the will to meaning is thwarted (Frankl, 1959/2006).

Existential frustration occurs when individuals feel they lack a meaningful direction, leading them to question life's value and even their own significance (Frankl, 1959/2006). According to Frankl, healthy functioning individuals have satisfied this will meaning by finding compelling reasons for living. In contrast, those experiencing existential frustration often grapple with feelings of emptiness, despair, and insignificance, which he associates with what he terms "existential mattering" (EM). In Frankl's view, questions of EM emerge prominently in the lives of individuals who struggle to find reasons for living or who cannot make sense of their life circumstances. Such individuals may doubt the worthiness of life and wonder if their lives truly matter. For Frankl, EM represents a key dimension of existential

meaning, as the absence or frustration of this sense of mattering is often what drives individuals into an existential crisis (Frankl, 1959/2006).

Therefore, the concept of the "will to meaning" is central to understanding existential psychology's role in mental health. Frankl argues that when individuals successfully satisfy this inner drive, they feel purposeful and resilient. They can derive meaning from even the most challenging aspects of existence, viewing setbacks as integral parts of their larger story. Conversely, those unable to achieve this sense of purpose are more susceptible to psychological distress, as they lack the interpretive tools needed to view life's difficulties in a constructive, meaningful way. Hence, the existential perspective, particularly as it relates to EM, underscores the significance of finding meaning to counter existential frustration and foster a sense of worth, purpose, and resilience in one's life (Frankl, 1959/2006).

Traditional existential psychology, rooted in the works of philosophers such as Kierkegaard, Heidegger, and Sartre and popularized in clinical practice by scholars like Irvin Yalom and Viktor Frankl, emphasizes the human experience of confronting existential concerns, including mortality, freedom, isolation, and the potential for meaninglessness (Yalom, 1980). This approach highlights the importance of individual responsibility, authenticity, and making meaningful choices in the face of life's inherent uncertainties. Frankl's logotherapy, for example, centers on the "will to meaning," encouraging individuals to find purpose even amid suffering (Frankl, 1946/1985). However, while existential psychology recognizes the significance of self-transcendence—the capacity to go beyond oneself by committing to causes larger than the individual—it traditionally frames meaning primarily as an inward, reflective process. Self-transcendence often plays a secondary or implicit role, as the focus remains on personal autonomy, self-awareness, and navigating existential anxiety (Schneider, 2008).

The theoretical significance of self-transcendence in PP 2.0 lies in its capacity to integrate the three widely accepted dimensions of meaning: purpose (direction toward valued goals), significance (a sense that one's life matters), and coherence (a cognitive sense of life's intelligibility) (Martela & Steger, 2016). By embracing self-transcendent values and behaviors, individuals not only find motivation and purpose that surpass immediate self-interest but also experience a heightened sense of significance through connection to communal, cultural, or spiritual narratives that transcend their individual existence (Wong, 2020). This process of expanding one's locus of concern aligns with research showing that prosocial behaviors—such as altruism, volunteering, and caregiving—enhance perceived meaning in life by fostering a sense of belonging and mattering within a wider social context (Hofmann et al., 2014; Lambert, Passmore, & Holder, 2010).

Moreover, PP 2.0 posits that the acceptance of suffering and the integration of self-transcendence are essential to flourishing in a realistic and culturally sensitive manner. Unlike positive psychology's earlier models that emphasized positive emotions and personal achievement, PP 2.0 acknowledges the dialectical nature of human existence, where joy and suffering coexist and together shape the meaning-making process (Wong, 2011). This existential dialectic enables individuals to cultivate resilience and well-being not by avoiding pain but by transforming it through engagement with transcendent values and purpose-driven action. Consequently, PP 2.0 provides a richer theoretical foundation for interventions that promote meaning and mattering by encouraging self-transcendent perspectives, helping individuals reframe their life narratives toward interconnectedness, moral commitment, and contribution to the collective good (Wong, 2020).

In summary, Existential Positive Psychology (PP 2.0) extends the traditional existential emphasis on personal meaning by placing self-transcendence at the heart of the meaning-making process. It advances a more comprehensive, culturally attuned, and practically applicable model that underscores how sustainable meaning arises not only from personal authenticity and choice but through active engagement with values, relationships, and causes that exceed the self. This paradigm shift holds promise for enhancing well-being, resilience, and a deep sense of mattering in diverse populations facing life's inherent challenges.

2.3.4 Motivational Theory

Understanding how people cultivate a sense of purpose in life requires exploring the psychological processes that guide how individuals choose, commit to, and pursue their goals. Life purpose, by its nature, is not formed through isolated moments of clarity, but rather through an ongoing interaction between self-reflection, intentional decision-making, and sustained engagement with meaningful pursuits. In this regard, two influential theoretical models—Gollwitzer’s Rubicon Model of Action Phases and Sheldon’s Self-Concordance Theory—offer powerful insights into the mechanisms that support purposeful living (P. Gollwitzer, 2012; Gollwitzer, 1990b; Kennon M Sheldon, 2014; K. M. Sheldon, Jose, Kashdan, & Jarden, 2015; Kennon M Sheldon et al., 2019). When integrated, these frameworks reveal how individuals can align their daily actions with their inner values, thereby creating a coherent and authentic sense of meaning over time. Each theory contributes uniquely: the Rubicon Model offers a structured account of the cognitive stages involved in goal pursuit, while Self-Concordance Theory emphasizes the motivational depth and authenticity of the goals selected.

One influential framework that sheds light on this process is the Rubicon Model of Action Phases, developed by Gollwitzer (1990; 2012). This model outlines a sequence of cognitive and motivational stages that individuals move through when engaging in goal-directed behavior, beginning with pre-decisional deliberation and culminating in post-actional evaluation.

The Rubicon Model takes its name from the historical metaphor of Julius Caesar’s irreversible decision to cross the Rubicon River, symbolizing the shift from consideration to commitment (Gollwitzer (2012)). Psychologically, crossing the Rubicon reflects the moment when an individual decides to pursue a particular goal and moves from deliberation to implementation. The pre-decisional or deliberative phase is characterized by an open-minded mindset in which individuals evaluate various goal options, weighing their feasibility, desirability, and relevance to one’s broader life values. This phase is crucial for fostering reflective decision-making, as it encourages individuals to pause and ask not only *what* they want to pursue but also *why*. It allows for the consideration of long-term implications, internal desires, and the authenticity of one’s choices before commitment occurs.

Following this reflective stage, once a decision is made, individuals enter the post-decisional implemental phase, which is marked by a cognitive shift toward action planning and goal protection. The implemental mindset is narrower in focus, more optimistic, and oriented toward practical problem-solving and persistence. This phase supports the execution of plans and helps maintain motivation, especially when faced with obstacles or setbacks. The Rubicon Model thus provides a comprehensive account of how individuals transition from thought to action, highlighting the importance of mindset in sustaining meaningful engagement with life goals.

While the Rubicon Model explains how individuals move through the phases of goal pursuit, it does not directly address the quality or content of the goals themselves. This is where Self-Concordance Theory (Sheldon & Elliot, 1999; Sheldon et al., 2019) offers a critical complement. Self-Concordance Theory focuses on the motivational alignment between a person's goals and their underlying values, interests, and identity. It proposes that individuals experience greater well-being, engagement, and meaning when they pursue self-concordant goals—those that are freely chosen and rooted in the authentic self. These goals contrast with externally regulated or controlled goals, which may be driven by external rewards, pressure, or obligation, and tend to offer less in terms of psychological fulfillment.

Self-Concordance Theory is particularly important during the deliberative phase of the Rubicon Model. In this reflective stage—before any action is taken or commitment made—individuals are ideally positioned to assess whether the goals they are considering truly align with their personal values, interests, and deeper sense of identity. This phase offers the cognitive space for individuals to filter out goals that are driven by external expectations and to prioritize those that feel intrinsically meaningful. By applying the principles of self-concordance at this stage, individuals are more likely to select goals that reflect their authentic motivations, increasing the likelihood that the pursuit will lead not only to goal attainment but also to a stronger sense of life purpose and fulfillment.

Once a self-concordant goal is selected, the implemental phase of the Rubicon Model becomes the vehicle for turning purpose into action. The focused and determined mindset of this phase enhances follow-through, protects the goal from distraction, and sustains effort over time. Importantly, when the goal is self-concordant, individuals are more likely to remain motivated, even in the face of setbacks, because the pursuit itself feels inherently valuable. Thus, the Rubicon Model ensures cognitive and motivational structure, while Self-Concordance Theory ensures motivational quality and authenticity—together, they create a synergistic process through which individuals not only act but also act in a way that feels meaningful and true to the self.

In conclusion, the Rubicon Model of Action Phases and Self-Concordance Theory, when considered together, offer a powerful framework for understanding how individuals develop and sustain a sense of life purpose. The deliberative mindset invites critical reflection and meaningful choice, while self-concordance ensures that these choices are rooted in personal authenticity. Once goals are chosen, the implemental mindset fosters the resilience and focus needed to bring them to life. Through this integration, purpose is not treated as a fixed trait or abstract idea, but as a dynamic, lived process—built step by step through thoughtful intention and motivated action. This perspective suggests that cultivating purpose is less about discovering a singular life mission and more about consistently choosing and acting on goals that reflect who we truly are.

2.4 PERSONALITY AS A MODERATOR IN MEANING IN LIFE INTERVENTIONS

A substantial literature indicates that basic personality dispositions systematically condition the efficacy of meaning-in-life (MiL) interventions by shaping epistemic engagement, affective regulation, and self-regulatory enactment of therapeutic tasks (McCrae & Costa, 1997; John, Naumann, & Soto, 2008). Because MiL programs typically rely on structured reflection (e.g., values clarification, narrative writing), sustained practice (e.g., journaling, prosocial actions), and tolerance for existential ambiguity, traits that foster curiosity, stability, and disciplined follow-through tend to

potentiate gains, whereas traits associated with rumination or threat sensitivity can attenuate them (Steger et al., 2006; Wong, 2012). Openness to experience—encompassing intellectual curiosity and a preference for complexity—facilitates deeper engagement with meaning-making exercises that require perspective-taking and autobiographical reconstruction, thereby strengthening improvements in coherence and purpose (McCrae & Costa, 1997; Steger, Kashdan, Sullivan, & Lorentz, 2008). Conscientiousness supports adherence to intervention structure and the translation of insights into daily routines; by enhancing practice frequency and goal-consistent behavior, it is associated with larger and more durable gains, particularly in components that prescribe regular reflective or prosocial activities. By contrast, elevated neuroticism (i.e., low emotional stability) introduces vulnerability to avoidance and dysregulated rumination when confronting existential themes. In minimally scaffolded formats this can blunt benefits. With adequate affect-regulation supports and therapist guidance, however, heightened reactivity can be channeled into corrective emotional processing, attenuating the moderation effect (Hicks & King, 2009; Lavigne, Vallerand, & Crevier-Braud, 2013). Dispositions implicated in socio-affective engagement also matter when MiL content is delivered in groups, extraversion (positive affect, sociability) and agreeableness (empathy, prosociality) amplify discussion, mutual support, and shared purpose, broadening thought–action repertoires and consolidating interpersonal meaning (Fredrickson, 2001; King, Hicks, Krull, & Gaiso, 2006). Beyond the Big Five, hardiness—commitment, control, and challenge—functions as a resilience-oriented trait that facilitates the reappraisal of adversity as meaningful challenge; when interventions emphasize cognitive reframing, legacy building, or life review, higher hardiness magnifies perceived significance and agentic meaning (Kobasa, 1979; Maddi, 2004). Taken together, trait-level moderation is expected to follow a principled pattern: openness enhances reflective learning; conscientiousness augments adherence-dependent gains; extraversion and agreeableness strengthen group-based effects; and neuroticism dampens outcomes unless buffered by explicit emotion-regulation scaffolds. In sum, trait dispositions systematically shape who benefits most from meaning-in-life interventions and under what conditions. By assessing core traits at baseline, practitioners can enhance both the magnitude and durability of gains in purpose, coherence, and significance.

2.5 RELIGIOSITY AS A MODERATING FACTOR IN MEANING IN LIFE INTERVENTIONS

In the growing field of meaning-centered interventions, increasing attention is being given to individual difference variables that may moderate the effectiveness of such interventions. Among these, religiosity is a particularly salient and theoretically grounded moderator. Given its deep entwinement with existential meaning, religious belief systems have the potential to enhance, filter, or even constrain the psychological outcomes of interventions aimed at enhancing meaning in life (MiL). This is especially relevant in contexts where religion plays a central role in personal and collective identity, as is the case in many cultural settings, including the Middle East, South Asia, and parts of the United States.

From a theoretical perspective, Park's (2005) meaning-making model provides a useful lens for understanding how religiosity operates as a moderating factor. According to this model, global meaning systems—of which religion is a primary example—shape how individuals appraise and interpret life events. During stressful or disorienting experiences, individuals engage in a process of meaning-making to reconcile discrepancies between situational meaning and global meaning. Here, religiosity can moderate this process by providing interpretive resources, rituals, and existential narratives that facilitate positive reappraisal, especially of suffering and mortality (Park, 2005; George & Park, 2016). Therefore, in MiL interventions, individuals with higher levels of religiosity may be more receptive to the intervention's content, as it resonates with their pre-existing spiritual or theological frameworks.

Empirical research supports this view. For instance, Steger and Frazier (2005) demonstrated that meaning in life mediates the relationship between religiosity and well-being, suggesting that religiosity amplifies the psychological benefits of meaning. Similarly, Krause (2003) found that religious meaning moderates the effect of stressful life events on depressive symptoms in older adults, indicating a buffering effect. These findings imply that religiosity may intensify the intervention's impact by reinforcing the salience and accessibility of meaningful constructs already rooted in the individual's worldview.

In the context of experimental designs, religiosity can be hypothesized to moderate both between-group and within-group differences in intervention outcomes. For example, religious participants in the experimental group may show greater gains in MiL scores over time compared to their nonreligious counterparts, due to their readiness to integrate meaning-based material into a pre-existing spiritual schema. Conversely, in individuals with low religiosity or secular worldviews, meaning-making may require more cognitive effort or abstract reflection, potentially leading to more modest improvements.

Moreover, the content and framing of the intervention may interact with religiosity in complex ways. Interventions that incorporate existential themes such as suffering, death, or purpose may resonate differently based on the individual's religious orientation. Those with a strong belief in a divine plan or afterlife may find such themes affirming and spiritually congruent, thus experiencing heightened effects. On the other hand, nonreligious participants may prefer secular, value-driven approaches to meaning, highlighting the need for cultural and spiritual adaptability in intervention design (Wong, 2012; Schnell, 2009).

Religiosity may also moderate the sustainability of intervention effects. The structured routines and communal practices often associated with religious life—such as prayer, fasting, or communal worship—can reinforce and stabilize the psychological gains made during the intervention. These practices provide not only daily reminders of one's existential framework but also social reinforcement through shared rituals and beliefs (Heintzelman & King, 2019; Norton & Gino, 2014). In this way, religiosity may enhance the long-term integration of meaningful insights into one's life narrative.

In summary, religiosity functions as a critical moderating variable in meaning in life interventions, influencing both the magnitude and trajectory of intervention outcomes. It does so by shaping the interpretive lens through which individuals engage with meaning-related content, modulating emotional receptivity, and reinforcing behavioral follow-through. Recognizing and accounting for religiosity in the design and evaluation of MiL interventions is therefore essential for enhancing cultural sensitivity, clinical efficacy, and theoretical precision.

2.6 UTILIZE THE *MAQASID SHARI'AH* FRAMEWORK TO EVALUATE MEANING IN LIFE

Individuals have to decide for themselves what constitutes a meaningful life to them, so the meaning they attach to life is inherently subjective. Their decisions may be entirely influenced by how they perceive themselves and the world (P. Wong, 2012). Hence, it is possible for someone to find meaning in life in ways that abuse or harm others, such as in the case of a tyrant or a serial killer, a point highlighted by Stager (2018), who asserted that not everyone attains good meaning in life. There are people who find MiL in vice and harmful acts. Taking this into account, the study recognized the need for an objective framework to help people live their lives meaningfully while balancing their individual needs with community interests, and this research gap is yet to be addressed in the psychology literature. Accordingly, for Muslims, there is no other framework to shape the foundation of their MiL than the *Maqasid Shari'ah* itself.

Maqasid Shari'ah (the objectives or goals of Islamic law) provides a framework grounded in core principles that seek to promote human welfare, justice, and ethics. These principles aim to protect five essential values: *faith, life, intellect, lineage, and property* (Kamali, 2008). *Maqasid Shari'ah* seeks a balanced, holistic approach to human development, considering spiritual, intellectual, social, and moral dimensions. Each dimension of *Maqasid Shari'ah* can contribute to evaluating the students' MiL:

1. Faith (*Hifz al-Din*)

Faith, or *din*, represents a connection to the divine. This dimension emphasizes spirituality, devotion, and practices that strengthen one's bond with God (Kamali, 2008).

2. Life (*Hifz al-Nafs*)

Protecting life underscores the significance of health, safety, and quality of life, which are vital to one's well-being (*Maqasid Shari'ah* encourages the protection and

enhancement of life, advocating for actions that promote physical health and personal safety (Kamali, 2008).

3. Intellect (*Hifz al-'Aql*)

Maqasid Shari'ah promotes intellectual growth, considering it an essential part of human dignity and purpose (Kamali, 2008). Islam highly values the pursuit of knowledge, seeing it as a means of understanding oneself and contributing to society.

4. Lineage/Family (*Hifz al-Nasl*)

Family and social bonds are central in *Maqasid Shari'ah*, emphasizing the importance of nurturing relationships and building a legacy (Kamali, 2008). This dimension highlights the value of maintaining familial ties and supporting one's community.

5. Property (*Hifz al-Mal*)

Protecting property in *Maqasid Shari'ah* promotes ethical wealth management, urging people to use resources responsibly and share with others (Auda, 2008). Islam emphasizes that wealth is a trust from God, encouraging its use for personal stability and the welfare of society.

In summary, *Maqasid Shari'ah* offers a comprehensive framework for Muslims to evaluate their Meaning in Life (MiL) and assess how well their life's meaningful aligns with the core objectives of Islamic law. By using *Maqasid Shari'ah* as a guiding model, Muslims gain an objective framework to direct them toward a balanced MiL that not only fulfills personal, social, and intellectual goals but also aligns with spiritual principles aimed at success in this life and the hereafter. This approach provides a structured, culturally resonant model that integrates worldly success both here and in the life to come.

2.7 SYSTEMATIC LITERATURE REVIEW (SLR)

The purpose of the present systematic review is to provide a comprehensive evaluation of the theories used to develop interventions that promote Meaning in Life (MiL) among non-clinical populations. Additionally, the review examines various experimental designs employed in past research, the different scales used to measure MiL, and the justifications for choosing specific theories, designs, and scales. The review concludes with a discussion of the findings. To summarize, the review aims to answer six main questions, which are as follows:

1. What types of theories have been used in past research?
2. What different types of experimental designs have been employed in previous studies?
3. What measurement scales have been used to assess MiL?
4. What types of populations have been targeted for MiL in previous research?
5. Do positive psychology interventions enhance MiL among non-clinical populations?
6. Are there differences in the results obtained from different research designs?

2.8 METHODS OF THE REVIEW

This review followed the procedures recommended by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Page *et al.*, 2021).

2.8.1 Inclusion criteria

The criteria for inclusion were empirical studies that: (1) tested an intervention aiming to enhance meaning in life; (2) included participants exclusively from non-clinical populations; (4) were published in peer-reviewed journals; (5) were written in English; (6) were indexed in the Web of Science or SCOPUS or Psych (INFO); (7) used any type of experimental design (including quasi-experimental and pre-experimental designs); and (8) were published after the year 2000 as meaning in life studies have only matured within the last two decades.

2.8.2 Exclusion criteria

The exclusion criteria were: (1) articles with titles or abstracts that did not investigate a potential outcome of interest or not include positive psychology intervention as independent variables; (2) studies with participants from the clinical populations; (3) articles published before the year 2000; (4) articles not published in English, and (5) meta-analytic, systematic, or narrative reviews, book chapters, and conference papers; and (6) articles/research that did not use an experimental design.

2.8.3 Search Strategies

The initial search process started in March 2020 and was later updated at the end of July 2020. In the first stage, studies were identified by searching three main sources of electronic databases, i.e., the Web of Science, Scopus, and PsycInfo. A series of search strings were used by combining the keywords “meaning in life”, “meaning of life”, “meaning-making”, “meaningfulness of life”, “meaningfulness in life”, “purpose in life”, “purpose of life”, “purpose making”, with one of the following terms, namely “intervention”, “therapy”, “treatment”, “spiritual therapies”, “psychotherapy”, “program”. With this strategy, 2983 articles were identified.

In the second stage, filtering was performed, where duplicates were removed, leaving the study with 1247 articles. After examining the titles and abstracts, 1169 articles were further omitted because they were irrelevant to the research questions or did not use an experimental design. For example, a study by Kernes and Kinnier (2007) was excluded from this review. The study aimed to examine psychologists' beliefs of meaning in life but did not include any type of intervention. It employed two meaning in life scales and an existential crisis in careers scale, which were administered at a single time point. These features, therefore, disqualified the study from being included in this review. Additional non-empirical articles were also filtered out (i.e., systematic reviews or meta-analyses). After a thorough reading of the remaining 78 articles, the study further excluded articles that did not include the intended variable, which is meaning in life, but instead measured other unrelated variables, such as life satisfaction and quality of life. The study also excluded research that was done on a clinical sample or population. At this stage, articles that utilized a qualitative approach or solely consisted of theoretical discussions and intervention protocols, without reporting any empirical findings, were also discarded. By this stage of the review, only 25 articles remained. The process is shown as a flow diagram in Figure 2.1.

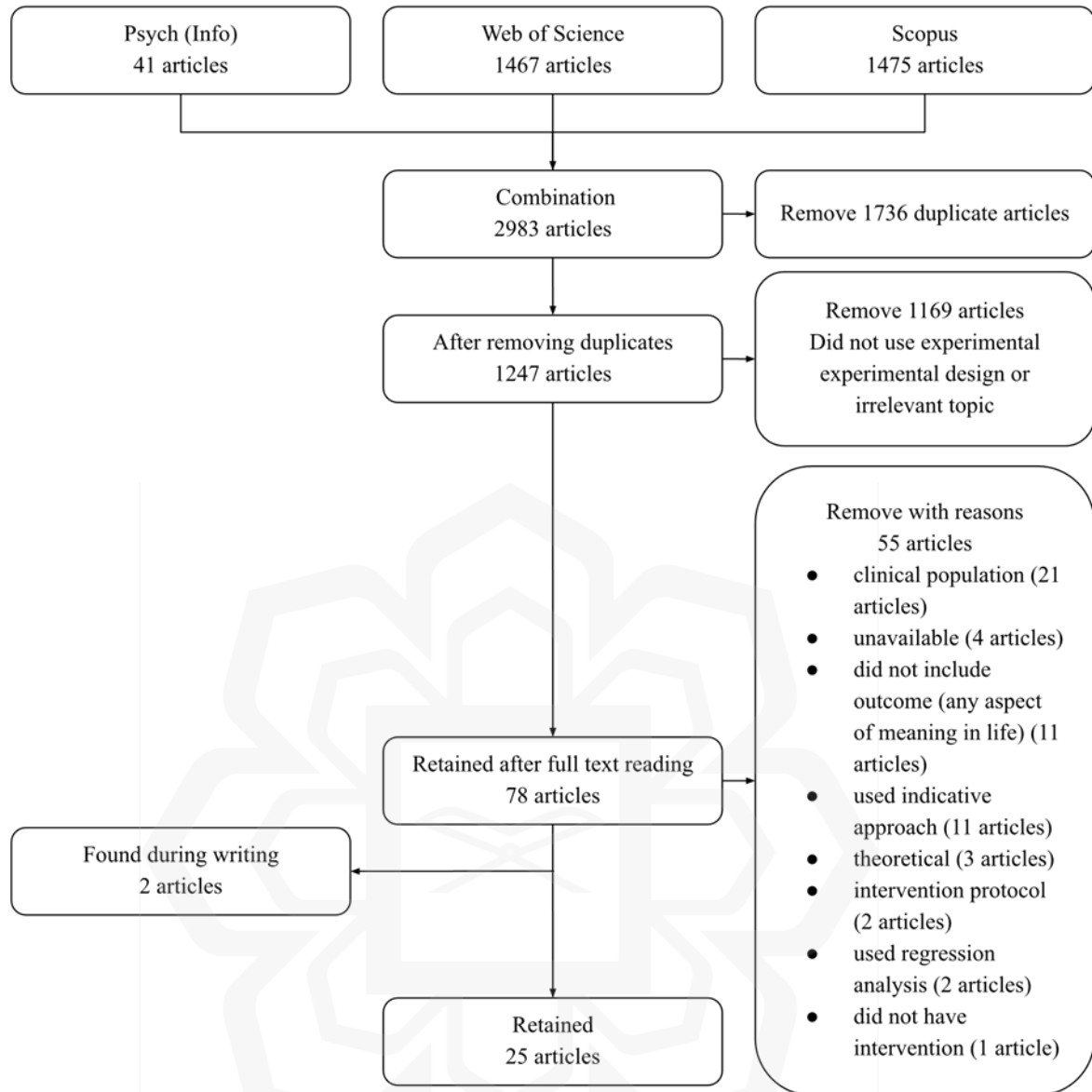


Figure 2.1 The Systematic Review Procedure

The review went through a rigorous process of article selection and discussion with the researcher’s supervisory committee. The rigor was exercised to ensure the suitability of each article in addressing the research objectives and questions. Any disagreements between the research and supervisory committee were resolved through discussion. However, during the review phase, two new articles that met both the inclusion and exclusion criteria were made available online. Both articles by Van Zyl *et al.* (2020) and Spitzenstätter and Schnell (2020) were included in this review, bringing the total number of articles reported in this chapter to 25.

2.9 RESULTS OF THE REVIEW

2.9.1 Types of Theories Used in Previous Research

The study classified the theoretical foundations underpinning MiL into three categories: existential, cognitive, and positive perspectives, as presented in Table 2.1, with supporting empirical evidence. The existential psychology perspective plays a big role in the design of MiL interventions, especially logotherapy, which has been established to help people who are struggling to find meaning in life. Frankl (1963) suggested three basic sources of making meaning: 1) creativity/significant contributions, 2) valued experiences of art and beauty, and 3) attitude toward unavoidable suffering. Thus, several studies used logotherapy in educational settings in various formats, for example, a study by Da Luz et al. (2017) implemented a program for adolescents based on logotherapy. The intervention aimed to protect students from the existential vacuum and promote meaning in life. Meanwhile, changing students' minds and attitudes toward life by involving them in overseas volunteering programs represents a different format of intervention. This practical application of logotherapy aims to assess to what extent meaning in life is transformed as one of the key outcomes among college students (E. H. Park & Park, 2016).

Similarly, a psycho-educational stress management program has been used to help nursing students reduce negative emotions such as compassion fatigue and burnout, while also improving compassion satisfaction and meaning in life (Mason & Nel, 2015). In contrast, Wong and Fry (1998) integrated logotherapy with positive psychology to develop a meaning-centered approach (MCA). Based on MCA, a psycho-educational group intervention was provided to college students to enhance their psychological well-being and foster positive meaning in life (Cheng *et al.*, 2015). Kasler and his colleagues (2013) conducted a study to evaluate the effectiveness of MiL programs among primary schools drawn from the integration of Frankel's philosophy with the individual commitment principle introduced by Damon (2009), based on his experience to find life's purpose. This study found that the programs only worked with Arabic school students, while Jewish school students showed no improvement in their level of meaning in life.

Although logotherapy has been adapted or adopted by several researchers, it has also faced several criticisms. Firstly, logotherapy was originally designed for people who are under adverse life conditions, such as traumatic or chronic diseases. As such, they focus on meaning in life as a coping mechanism for stress. This is not the same as finding meaning in life under normal life circumstances. Furthermore, Frankl's logotherapy was not designed to enhance specific skills and techniques for helping people to develop their meaning in life (Shin & Steger, 2014). As a result, many studies prefer to design their MiL interventions based on the cognitive perspective.

Regarding the cognitive perspective, four studies used different cognitive theories to enhance meaning in life. One of these studies was conducted by Bundick (2011) using the goal-setting theory for purpose development and its relation to psychological well-being. Next, Pizzolato et al. (2011) who used the control theory, which focused on improving the internal control that improved students' sense of purpose and academic success. In addition to that, a Polit study was conducted by using Photography based on Commitment Therapy (ACT)(M. F. Steger et al., 2014). Also, a single-session intervention based on hope theory focused on combining agency and pathways thinking to help students pursue their goals was also conducted (Feldman & Dreher, 2012). Cumulatively, all these interventions treated the MiL construct as being just about coherence or purpose, neglecting the third dimension of MiL, which is the sense of mattering or significance (i.e., feelings matter). Moreover, most previous interventions did not specifically target meaning in life as their primary outcome. As a result, it is unclear whether the observed improvements in meaning in life are due to the interventions themselves or influenced by other contributing factors.

Finally, a few interventions drew on positive psychology, such as Wong *et al.* (2017), who evaluated the Gratitude Group Program. Situated within the positive psychology framework, this program examined its potential effects on various mental health indicators, including psychological distress, life satisfaction, and meaning in life. Meanwhile, Bloch (2017) implemented a classroom meditation based on Buddhist meditation and modernity to enhance students' mindfulness and meaning in life. Despite their efforts, the researcher found that these interventions merely aimed to improve psychological well-being or quality of life, rather than MiL, with few

expectations of meaning in life as a direct outcome. This provides limited insight into whether these interventions specifically influence the development of meaning in life.

Several theories and models have been used in educational settings to promote Meaning in Life (MiL) as discussed in the aforementioned studies. However, these studies have certain limitations. According to Steger *et al.* (2021), although many researchers have aimed to enhance meaning in life (MiL), their efforts have been hampered by the lack of concrete dimensions and a clear conceptualization of MiL in the literature. Comprehensive meaning-making interventions remain untested in college-aged populations. In lieu of this gap, the present study combined several psychological models to create a concrete intervention to enhance the tripartite model of MiL. To the best of the researcher's knowledge, this study is the first to test a tripartite MiL intervention by utilizing the life narratives model (McAdams, 2011) to establish coherence, the Action Phases model (Gollwitzer, 2012) and the self-concordance model (Milyavskaya *et al.*, 2014; Sheldon, 2014; Sheldon *et al.*, 2019) for the purpose domain, and self-transcendence through prosocial actions to increase the sense of mattering (Wong, 1998). Additionally, these theories, often derived from Western contexts, may undermine cultural values in non-Western nations. The theory of MiL emphasizes the importance of MiL for human well-being, derived from Aristotelian notions of the good life (Ryff & Singer, 1998). Hofstede's cultural dimensions classify nations on power distance, masculinity, uncertainty avoidance, and individualism. Iraq, with a score of 26, is considered a collectivistic society, where loyalty to the member group is paramount (Hofstede, 2001).

Culture significantly influences self-concepts along a continuum from interdependent (collectivistic) to independent (individualistic) (Markus & Kitayama, 1991; Triandis, 1989). Individualistic cultures see the self as an independent agent, improving self-image, while collectivist cultures view the individual as part of a community network, often criticizing self-image (Heine *et al.*, 1999). MiL is linked to self-perception (Baumeister, 1991), and individuals' attitudes, expectations, and wants may be influenced by their culture (Markus & Kitayama, 1991). People from independent cultures focus on establishing and improving the feeling that their lives have meaning, while those from interdependent cultures value effort and self-improvement over success and self-enhancement (Heine *et al.*, 1999; Oishi & Diener,

2003). Researchers are encouraged to investigate MiL interventions in different cultural contexts (Shin & Steger, 2014). It is largely unknown whether MiL interventions work similarly in non-Western cultures, especially in Muslim contexts; hence, the need to extend the examination of the proposed tripartite MiL intervention in a non-Western context. Table 2.1 provides a summary of the prevalent theories used in MiL and related research methodology aspects.

Table 2.1 Summary of Different Types of Theories in MiL Research in the Education Setting

Authors	Purpose of Study		Theoretical Perspective			Methodology		Context
	Overall, Happiness / Well-being	MiL	E	C	PP	Experimental design/level of analysis	Measurement Mil	Country
1) (Bundick, 2011)		+		+		NRCD/ single level/	Unidimensional	USA
2) (Pizzolato et al., 2011)	+				+	RCT/ single level	Unidimensional	USA
3) (Kasler et al., 2013)		+	+			NRCT/single level	Unidimensional	USA
4) (Feldman & Dreher, 2012)	+				+	RCT/single level	Unidimensional	Palestine
5) (M. F. Steger et al., 2014)		+			+	NRCT/single level	Two-dimensional	USA
6) (Mason & Nel, 2015)	+		+			NRCT/ single level	Unidimensional	Japan
7) (Cheng et al., 2015)	+		+			RCT/HLM	Two-dimensional	China
8) (E. H. Park & Park, 2016)	+		+			NRCT/single level	Two-dimensional	Korea
9) (Da Luz et al., 2017)		+	+			NRCT/single level	Two-dimensional	Brazil
10) (Y. J. Wong et al., 2017)	+				+	NRCT/ single level	Two-dimensional	USA
11) (Bloch et al., 2017)	+				+	NRCT/ HLM	Two-dimensional	USA

Note: E = Existential; C = Cognitive; PP = Positive Psychology.

2.9.2 Types of Experimental Designs Employed in Previous Studies

Twenty-nine (29) studies were reviewed for their experimental design types and levels of analysis, the results of which are tabulated in Table 2.2.

Table 2.2 Experimental Design Types and Levels of Analysis in Previous Studies

Type of Experimental Design	Level of Analysis		Total
	Single	Multilevel	
Pre-experimental	6 (20.7%)	1 (3.4%)	6 (20.7%)
True experimental	10 (34.5%)	4 (13.8%)	15 (51.7%)
Quasi-experimental	6 (20.7%)	0 (0.0%)	6 (20.7%)
Within-subjects	0 (0.0%)	2 (6.9%)	2 (6.9%)
Total	22 (75.9%)	7 (24.1%)	29 (100.0%)

Table 2.2 shows that 15 studies (51.7%) employed a true experimental design in contrast to only six (20.7%) that used a quasi-experimental design and another six (20.7%) that employed a pre-experimental design. Only two studies (6.9%) used a within-subject design. Regarding the level of analysis, Table 2 shows that over 75% of the studies applied a single-level analysis, while the rest applied a multilevel paradigm (e.g., measurement time points nested within individuals) (Spitzenstätter & Schnell, 2020).

Therefore, most of the interventions mentioned above used non-randomized control trials (NRCTs), with only a few studies employing randomized control trials (RCTs). These RCTs often faced issues related to small sample sizes and short intervention durations, such as one-off interview sessions (Bundick, 2011; Cheng *et al.*, 2015; Feldman & Dreher, 2012). Consequently, many variables that could not be controlled, such as the influence of researchers on participants, might have affected the objectivity of these studies. Additionally, only two studies utilized a multilevel analysis in their research (Bloch *et al.*, 2017; Cheng *et al.*, 2015), indicating the need for advanced statistical methods to address this gap. Thus, the present study decided to

use a factorial experimental design to test the intervention effects within and between subjects simultaneously, aiming to provide more robust and comprehensive findings.

2.9.3 Measurement Scales Used to Assess MiL in Previous Studies

As shown in Table 2.3, the most frequently used instrument in previous studies was the Meaning-in-Life Questionnaire (MLQ-P) (Steger *et al.*, 2006), followed by the Purpose-in-Life test (Crumbaugh & Maholick, 1964; 1969). While most instruments were previously validated measures, two studies used an ad-hoc measure of the perceived meaning of events (Waytz *et al.*, 2015).

Table 2.3 Instruments Used in Previous Studies

Name of Instrument	Source	Number of Studies (%)
1) Meaning in Life Questionnaire – Presence subscale (MLQ-P)	Steger <i>et al.</i> (2006)	14 (48.3%)
2) Purpose in life test -PIL.T	Crumbaugh & Maholick (1964; 1969)	7 (24.1%)
3) Functional Assessment of Chronic Illness Therapy-Spiritual FACIT-SP	Peterman (2002)	1 (3.4%)
4) Ad-hoc measure of the perceived meaning of events	Waytz <i>et al.</i> (2015)	2 (6.9%)
5) SoMe questionnaire	LeBe & Schnell (2007; 2014)	1 (3.4%)
6) Life purpose Questionnaire (LPQ)	Hutzell (1989)	1 (3.4%)
7) Meaning in Life Questionnaire (MiLQ)	Krause (2004; 2007)	1 (3.4%)
8) Meaning in life (PPMS)	Wong (1998)	1 (3.4%)
9) Experience meaning in life scale (EMIL)	Heisel (2009)	1 (3.4%)

In summary, most measurements focused on one or two dimensions of Meaning in Life (MiL), such as coherence and purpose, without considering a tripartite perspective. No previous studies have used instruments that included all three dimensions: coherence, purpose, and feeling of matter. In addressing this research gap, the present study proposed a unified model that incorporated these dimensions to be tested in an experimental study using the repeated measures design (George & Park, 2016; King & Hicks, 2021; Martela & Steger, 2016; Steger, 2018). This study employed instruments reflecting the use of the unified tripartite model adapted from Martela and Steger (2022). Thus, it is imperative to empirically substantiate the efficacy of the proposed tripartite MiL model.

2.9.4 Target Populations of MiL and Related Research in Previous Studies

Table 2.4 shows that most studies were conducted in Asia, followed by South and North America. Europe and Africa each conducted two studies, whereas Australia and cross-country studies were limited to only one each.

Table 2.4 Continents and Countries Where MiL and Related Research Have Been Conducted

Target Sample	Continent							Total
	North America	South America	Europe	Australia	Asia	Africa	Cross	
Education	6 (20.7%)	1 (3.4%)	1 (3.4%)	-	4 (13.9%)	1 (3.4%)	-	13 (44.9%)
Organization		1 (3.4%)	-	-	1 (3.4%)	1 (3.4%)	-	3 (10.2%)
Family	-		-	-	2 (6.8%)	-	-	2 (6.8%)
Other sectors		5 (17.3%)	1 (3.4%)	1 (3.4%)	3 (10.5%)	-	1 (3.4%)	11 (37.9%)
Total	6 (20.7%)	7 (24.1%)	2 (6.8%)	1 (3.4%)	11 (34.6%)	2 (6.8%)	1 (3.4%)	29 (100%)

Van Zyl *et al.* (2020) recruited their participants through various social media platforms, which allowed them to have a diverse sample consisting of people from multiple countries. Out of all the reviewed studies, 44.9% were conducted in the education sector, with the majority focused on tertiary-level education (i.e., involving college and university students) and only one study each for the secondary (e.g., high school) and primary levels (e.g., primary or elementary school). In comparison, only 10.2% were conducted in the organizational sector, and 6.8% used family units, involving only heterosexual ones.

In this review, two interventions were conducted among families targeted married couples referred to counseling (Jafari *et al.*, 2020) and wives of drug-addicted husbands referred to rehabilitation institutions (Khodabakhshi-Koolae *et al.*, 2017). Other studies (37.9%) recruited samples from various sectors, as shown in Table 2.4. For example, in Study 1, Waytz *et al.* (2015) recruited participants through convenience sampling by emailing individuals from the population of interest with an online questionnaire. In contrast, for Study 2, they utilized Amazon Mechanical Turk (MTurk), an online recruitment platform.

2.9.5 Overall Effectiveness of Positive Psychology Interventions in Promoting MiL among Non-Clinical Populations

In general, the causal effect of positive psychology interventions on improving meaning in life was supported in 24 studies out of 29 (79.3%), with an additional two studies (6.9%) showing a positive effect within certain circumstances (Kasler *et al.*, 2013; Lan *et al.*, 2019). Kasler *et al.* (2013) found significant effects in meaning in life programs only for Arabic students but not for Jewish students. The authors explained that Jewish schools may not have accepted the intervention because it was not rooted in Jewish traditions. Meanwhile, Lan *et al.* (2019) only found a significant improvement in meaning in life when comparing the pre-test and post-test results for the experimental group, but found no significant difference between the experimental and control groups in MiL levels. The authors suggested that the non-significant findings could be explained by their small sample size or by their participants' characteristics—Chinese adults who traditionally express collectivistic cultural values

may be more resistant to meaning in life inductions. Only three studies (10.3%) found no effect of their respective intervention on meaning in life. This suggests that positive psychology interventions generally promote meaning in life among non-clinical populations.

2.9.6 Overall Effectiveness of MiL Interventions by Psychological Approach

The psychological interventions reported in previous studies were classified according to psychological approaches, resulting in four distinct categories: (1) cognitive, (2) cognitive-behavioral, (3) existential, and (4) positive psychology approaches. Although many interventions have been shown to improve meaning in life, only a few have explicitly incorporated research on specific cognitive, cognitive-behavioral, existential, and positive psychology approaches that are effective in enhancing meaning in life. As shown in Table 5, most of the studies designed their interventions based on the existential approach, while only a few could be classified as cognitive-behavioral, cognitive, and positive psychology approaches.

Existential approaches tend to focus on universal, ultimate concerns (such as death, freedom, isolation, and meaning) (Yalom, 1980). As such, the identified existential interventions directly targeted the assessment of purpose and meaning in life (e.g., Bundick, 2011; Pizzolato *et al.*, 2011), as well as thinking and accepting one's own death (Hwang *et al.*, 2005; Spitzenstätter & Schnell, 2020). In contrast, the cognitive approach placed an emphasis on developing alternative ways of thinking about the self and the world. For instance, in all five interventions conducted in the Mental Simulation in Meaning in Life intervention series (Waytz *et al.*, 2015), participants were induced to think about multiple situations, such as the past or the future, specifically or generally, and an alternate spatial location or present location.

Next is the cognitive-behavioral approach, which combines the need to change one's dysfunctional thoughts and develop new coping behavior. A good example of this would be the Meaningful-Moments Intervention by Van Zyl *et al.* (2020), in which the participants were asked to collect photographs throughout the week and reflect upon them afterward. The same technique was used by Steger *et al.* (2014) in

their auto-photography intervention program. Additionally, Kim and Kang (2013) used color therapy to develop participants' coping behaviors.

Positive psychology focuses on strengths, virtues, and factors that contribute to human flourishing, emphasizing a well-being approach that is closely associated with the enhancement of meaning, purpose, and life satisfaction (Seligman & Csikszentmihalyi, 2000). This review included three interventions that employed positive psychology in their approaches, and among them, the hope intervention by Feldman and Dreher (2012) and the Psychoeducational Gratitude Program by Wong *et al.* (2017) stand out. The Hope Intervention focuses on fostering meaning in life as a crucial aspect of positive psychology, aiming to enhance individuals' belief in their ability to achieve goals and overcome obstacles. Similarly, Khodabakhshi-Koolae *et al.* (2017) utilized hope therapy, which is based on the positive psychological approach that places emphasis on harnessing individuals' strengths rather than solely dwelling on human weaknesses, recognizing and nurturing their capabilities and potential. Additionally, the Psychoeducational Gratitude program emphasizes the cultivation of gratitude as a means of enhancing meaning in life. These studies collectively underscore the importance of incorporating hope and gratitude into intervention approaches to promote meaning in life among individuals. Finally, the Rudimentary Life-Review (Keisari & Palgi, 2016) and Life Review (Lan *et al.*, 2018) interventions encourage participants to reflect on their past experiences and reframe those experiences from a new and more positive perspective.

Table 2.5 Interventions Categorized by Approach

Approach	Intervention	Impact on Meaning in Life		
		Increased	No difference	Worsened
Cognitive (8) (27.6%)	Classroom-based Meditation Intervention (Bloch <i>et al.</i> , 2017); Mindfulness Practice with Metacognitive Reflections (Calia <i>et al.</i> , 2018); Mental Simulation (Studies 2-6 in Waytz <i>et al.</i> , 2015);	7	1	0
Positive Psychology (3) (10.34 %)	Hope Intervention (Feldman & Dreher, 2012); Psychoeducational Gratitude Program (Wong <i>et al.</i> , 2017) Hope Therapy (Khodabakhshi-Koolaei <i>et al.</i> , 2017);	3	0	0
Cognitive- Behavioral (4) (13.79 %)	Meaningful-Moments Intervention (Van Zyl <i>et al.</i> , 2020); Auto-photography (Steger <i>et al.</i> , 2014) Fictional vs Non-Fictional (Poerio & Totterdell, 2020); Colour Therapy (Kim & Kang, 2013);	3	1	0
Existential (13) (44.83 %)	Life and Death Studies Course (Hwang <i>et al.</i> , 2005), Promote Purpose Development and Internal Control (Pizzolato <i>et al.</i> , 2011); Deep Reflection and Discussion on One's Purpose in Life (Bundick, 2011); Promoting Meaning in Life (Da Luz <i>et al.</i> , 2017); Meaning-centered Men's Group (Heisel <i>et al.</i> , 2020);	9	4	0

Mortality Awareness (Spitzenstätter & Schnell, 2020);
 Meaning in Life Program (Kasler *et al.*, 2013);
 Meaning-centered Approach (Cheng *et al.*, 2015);
 Psycho-educational Stress Management Program (Mason & Nel, 2015);
 Short-term Educational Intervention to Reduce Meaninglessness (Morita *et al.*, 2014);
 Existential-Humanistic Psychotherapy (Jafari *et al.*, 2020)
 Overseas Volunteering Programme (Park & Park, 2016)
 Nostalgia by Music (Routledge *et al.*, 2011);

Other
 (2)(6.8%)

Rudimentary Life-Review (Keisari & Palgi, 2016);
 Life Review (Lan *et al.*, 2018)

1 1 0

2.9.7 Intervention Results by Research Design and Data Analysis Procedure

The final review question focuses on research designs and levels of analysis. Our review indicates that while many studies have employed true experimental designs (see Table 2.6), there remains a lack of evidence for the use of multilevel designs. As pertains to research design, true experimental studies tend to produce superior results. To illustrate, in 11 out of 15 studies using a true experimental design (73.3%), the intervention group exhibited an increase in MiL compared to the control group, while one out of the 15 studies (0.07%) showed a significant effect within a certain condition. As an example, Spitzenstätter and Schnell (2020) demonstrated a significant decrease in MiL among secular participants over time. However, no significant impact was observed on religious participants throughout the course of the study. In contrast, three out of 15 studies (20.0%) indicated no significant effect of the positive psychology intervention on improving the participants' level of meaning in life.

Table 2.6 Research Designs and Levels of Analysis

Experimental Design Type	Level of Analysis & Outcomes			
	Single	Significant increase in MiL	Multilevel	Significant increase in MiL
Pre-experimental	5 (17.2%)	4 (13.8%)	1 (3.4%)	1 (3.4%)
True experimental	11 (37.9%)	10 (34.5%)	4 (13.8%)	2 (6.9%)
Quasi-experimental	6 (20.7%)	5 (17.24%)	-	-
Within-subjects	-	-	2 (6.9%)	2 (6.9%)
Total	22 (75.9%)	18 (62.1%)	7 (24.1%)	5 (17.2%)

The remaining studies using alternative causally sensitive designs showed a similar pattern of findings. In the six studies using a quasi-experimental design, five (83.3%) produced a significant effect between the two groups on fostering meaning in life. Thus, 83.3% of studies support the effectiveness of the interventions. Only two studies used a within-persons design, and both of these studies found a significant effect of the intervention on MiL. Finally, five out of six studies (83.3%) using pre-experimental designs indicated that the intervention significantly enhanced meaning in life. One study showed a significant improvement in the MiL level of Arab students, while showing no improvement for Jewish students (Kasler *et al.*, 2013). Hence, only 83.3% of the studies illustrated the effectiveness of the MiL intervention.

In exploring the levels of analysis, the review findings show that there have been more studies conducted using a single-level analysis compared to a multilevel analysis. These studies have shown some differences in their results. Of the 29 studies, only seven (24.1%) applied a multilevel design. Of these, only three (10.3%) confirmed the causal effect of the interventions in increasing the MiL level of participants. Meanwhile, 22 studies (75.9%) utilized a single-level analysis, out of which 11 (37.9%) confirmed the causal effect of their MiL interventions, thus limiting the generalizability of the findings.

2.10 CONCLUSION

There are several questions that this systematic literature review aims to address. The review addresses these questions by evaluating both the overall effectiveness of MiL interventions and their effectiveness when classified by psychological approaches. It also examines whether differences exist between the results obtained from various research designs and analytical procedures. Twenty-nine articles (29) were selected based on the predetermined inclusion criteria and were reviewed thoroughly. The articles were categorized into four main theories: cognitive (8 articles), cognitive-behavioral (4 articles), existential (13 articles), positive psychology approaches (3 articles), and finally, there is a study that used a different theoretical foundation.

It can be concluded that generally, only a small percentage of meaning-in-life interventions showed no significant effect. The current study's focus on non-clinical populations represents a valuable extension of prior research that has been conducted on clinical populations (Guerrero-Torrelles *et al.*, 2017; Park *et al.*, 2019). By demonstrating the effectiveness of MiL interventions in individuals without diagnosed psychological or physiological abnormalities, the study broadens the generalizability of the positive outcomes. This suggests that these MiL interventions are applicable not only in clinical settings but also to a broader demographic.

The majority of the interventions utilized cognitive and existential approaches, while only a few utilized cognitive-behavioral and positive psychology approaches. Chu and Mak (2020) investigated the effectiveness of mindfulness interventions and found that such interventions were effective in increasing participants' meaning in life. Mindfulness interventions apply the concepts of decentering, authentic self-awareness, and attention to positive experience, which are emphasized in the cognitive approach. Lim and Kang (2018) investigated the effectiveness of logotherapy and similarly found it to be effective in increasing meaning in life. Logotherapy applies the concepts of pain, death, purpose of life, and choice, which are emphasized in the existential approach.

The results of this systematic literature review supported both Chu and Mak's (2020) study, which proved the effectiveness of cognitive-based interventions, and Lim and Kang's (2018) research, which proved the effectiveness of interventions based on the existential approach. This was attributable to the mechanisms established by these approaches, which contributed to increased meaning in life among participants. Cognitive interventions worked as it helped individuals to reframe negative thoughts and cultivate gratitude within themselves, leading to a more positive and meaningful outlook on life. Meanwhile, existential interventions helped individuals confront mortality and find purpose in their suffering, leading to a deeper sense of meaning.

The lower number of interventions from other approaches may be stemmed from the limitations of each of these approaches itself in addressing meaning in life. The cognitive-behavioral approach, for instance, predominantly concentrates on recognizing and altering detrimental thought patterns while concurrently affecting changes in the targeted behavior. While this approach proves pragmatic, it may not inherently attend to the concept of meaning in life itself, which predominantly involves affective and cognitive dimensions rather than behavioral aspects (Chmielewski *et al.*, 2023; Hajibabaei *et al.*, 2020; Jahangiri *et al.*, 2023).

By far, existential-based interventions have the highest number of ineffective outcomes, while cognitive-behavioral-based approaches produce no ineffective interventions. Given the widespread use of interventions based on existential principles to enhance meaning in life, there is a significant opportunity to assess the effectiveness of existential interventions. This differs from cognitive-behavioral interventions, which have been less commonly employed, with only a limited number of interventions conducted.

Conclusively, the review has identified multiple key trends or patterns in MiL research and interventions. Previous studies have focused mainly on specific research designs such as randomized controlled trials (Chu & Mak, 2020; Park *et al.*, 2019) and quasi-experiments (Lim & Kang, 2018). As a result, the present study chose to examine the effectiveness of meaning in life interventions across designs and levels of analysis. The review found that the majority of the studies examined in this chapter utilized true experimental designs, while only a small percentage utilized the other three designs, i.e., pre-experimental, quasi-experimental, and within-subjects designs. The prevalence of true experimental designs in MiL research and interventions may reflect the current state of progress in meaning-in-life studies. Researchers may gravitate towards designs with established methodological rigor, and the dominance of true experimental designs may be indicative of the evolving standards and preferences within the field. Regardless of the design, most of the interventions have shown a significant increase in meaning in life, which is consistent with the previous literature (Chu & Mak, 2020; Lim & Kang, 2018; Park *et al.*, 2019).

The review also indicated that while many studies employed true experimental designs, there remains a gap in evidence for multilevel designs. Nonetheless, across varying levels of analysis, most interventions demonstrated significant effectiveness. The consistent positive findings of increased meaning in life suggest robustness in the interventions' impact. This trend across diverse research designs enhances the generalizability of the positive outcomes associated with meaning-in-life interventions. The strength of the present study lies in its ability to address a significant research gap by evaluating meaning-in-life interventions among non-clinical populations. Apart from that, it also classifies interventions based on key psychological approaches (i.e., the cognitive, cognitive-behavioral, existential, and positive psychology approaches). This classification allows for the identification of the underpinning theories, facilitating comparisons between approaches to guide future intervention development. Additionally, analyzing diverse research designs strengthens the generalizability of findings regarding the impact of meaning-in-life interventions on non-clinical populations. However, since MiL research is still in its early stages, it is important to consider how sources of MiL may vary across different cultural contexts, which is a very understudied area.

The current review has captured studies using diverse measures and intervention tasks, often drawn from single-study articles using a broad range of sample sizes. All in all, the findings of this review have meaningful implications for practitioners seeking effective interventions to enhance meaning in life for individuals. Although this review focused on participants not diagnosed with any clinical disorders, practitioners can still utilize the findings to support individuals in need of interventions aimed at preventing the onset of mental health issues. By using interventions classified according to distinct approaches, practitioners can tailor their interventions to specific individual needs, beliefs, and values, offering more personalized and effective treatments for their clients. Furthermore, the findings have informed practitioners about the latest trends and developments in MiL research, thereby helping them to incorporate evidence-based practices into their work. Not only does this benefit practitioners, but it also informs individuals in making wise choices regarding which interventions they may need to enhance their MiL and, hence, quality of life.

CHAPTER THREE

METHODOLOGY

3.1 INTRODUCTION

This chapter first describes the research design and the reasoning for choosing an experiment over other methods of data collection, followed by the population characteristics and how sampling was done for the experimental study. The chapter then explains the procedures of estimating the sample size and the materials used to conduct the MiL intervention. Finally, it explains the measures used to assess all the constructs and variables and addresses the validity and reliability of the measures. The chapter ends with an explanation of the data analysis procedures.

3.2 RESEARCH PARADIGM: AN OVERVIEW

A research paradigm is described as the “fundamental belief systems or world view that guides the researcher” (Guba & Lincoln, 1994). The positivist paradigm assumes that researchers are objective observers whose values, opinions, and prejudices do not influence the findings of their studies (Guba & Lincoln, 1994). In light of this, proponents of the positivist paradigm believe that theories need to be established and verified by research and that the world is a discernible reality. As a result, rather than using their knowledge and experience to evaluate research problems, researchers start asking logical questions to get rigorous and reliable information. Within this framework, knowledge is considered valid only if it is observable, quantifiable, and verifiable through experimentation. As such, positivist approaches have significantly influenced the development of quantitative research, favoring hypothesis testing, statistical analysis, and the search for generalizable laws governing human behavior. Nonetheless, positivism remains a valuable and rigorous approach when applied thoughtfully, especially in studies that seek to test well-defined interventions or measure specific outcomes. In this regard, hypotheses are proposed and deduced from the theories in use and are verified statistically. Following this tradition, the present

study, therefore, adopted the positivist paradigm and developed the MiL intervention based on the integration of selected theories and models.

3.3 RESEARCH DESIGN

The present study used a true experimental factorial design with repeated measures, aimed at evaluating the effectiveness of a MiL intervention among university students. The design incorporated both between-subjects and within-subjects factors to enable the examination of main effects, interaction effects, and potential moderating variables.

Participants were randomly assigned to one of two groups: the experimental group, which received the MiL intervention, and the control group, which did not receive any intervention. In other words, the study simultaneously investigated the effect of the proposed MiL intervention on the experimental and control groups, comparing its degrees of effectiveness between them, as well as across five time points within each group. Apart from that, the study examined the interaction effect across time and groups. Given what the study aimed to do, a factorial design was deemed most appropriate to generate the results it needed to explain MiL as the main outcome of the effect of the proposed intervention and time. This design provides a robust methodological framework to evaluate not only the efficacy of the MiL intervention but also the conditions under which it is most effective, contributing to both theoretical and practical understandings of meaning enhancement interventions in diverse populations (Kazdin, 2021; Vogt & Johnson, 2011). Figure 3.1 is the schematic design showing the process of using a 2 x 5 factorial design that included two independent variables, the first one being the two groups being tested upon (i.e., the experimental and control groups), and the second variable being the five time points. “R” in the schematic design indicates “randomization”, that is, the groups were randomly assigned to their respective treatment conditions.

Table 3.1 Factorial Design of the Study

Experimental	R	O ₁	X ₁ O ₂	X ₂ O ₃	X ₃ O ₄	X ₄ O ₅
Control		O ₁	O ₂	O ₃	O ₄	O ₅

O: Observation, X intervention.

3.4 THREATS TO VALIDITY

Threats are factors or reasons that make our inferences (based on the results of our experiment) erroneous. They are due to covariance, causation structures, or to whether the causal connection holds across variations in people, settings, interventions, and outputs (Cook, Campbell, & Shadish, 2002). Several serious threats may occur in an experimental study to undermine the internal and external validity of the results. First, threats to internal validity, which are defined as challenges with determining if the presence of covariation (i.e., the difference in one variable relates to the variation in the other variable) between the result and the claimed intervention variable reflects a causal relationship (Cook *et al.*, 2002). Threats to internal validity are classified into two categories, i.e., those related to the participants and those related to the procedures of the study.

In this study, however, the majority of the problems related to internal validity were properly addressed or eliminated as the researcher had used randomization in assigning the participants to the treatment groups. A major threat to internal validity was reduced through group equivalence or randomization (Creswell, 2012). The researcher addressed internal validity threats related to the participants (e.g., history and maturation), which may influence the internal validity of the study's conclusions. In regard to the history, in an experimental research context, this means that events occurring between the pretest and posttest (i.e., in the experimental duration) may influence the results. Hence, to guard against this, the researcher ensured that, aside from the intervention, the activities done in both the control and experimental groups were the same. While maturation refers to the natural development or changes the subjects undergo during the experiment. Therefore, the researcher carefully selected subjects who were likely to mature or develop in similar ways.

The second threat is related to the procedure of conducting the MiL intervention. The main concern is the order effect or learning effect, as noted by Cozby *et al.* (2012). Hence, in this study, which utilized the repeated measures design, the researcher devised a procedure in which the intervals between conditions were long enough to minimize the influence of the first condition on the second (Cozby, Bates, Krageloh, Lacherez, & Van Rooy, 2012). This was achieved by administering the intervention weekly, ensuring a pause of at least seven days between the first and second conditions. The 7-day interval between conditions was considered sufficient to minimize the effect of the preceding treatment. In addition, the researcher tested the effect of the intervention between groups, further enhancing the internal validity of the results and conclusions drawn.

3.5 POPULATION

The study's ideal population was the undergraduate students of Salahuddin University, a public university in Iraq located in the region of Kurdistan. Students from several schools of the university (e.g., Education, Science, and Art) were involved in the intervention. More specifically, the target population was undergraduate students in their first and second years enrolled in the Department of Psychology at the School of Education. They ranged in age from 18 to 20 years, with 50 females and 145 males, and were mostly Arabic in origin. The reason for choosing first- and second-year undergraduate students was that the majority of critical psychological development transitions occur during these years (Astin *et al.*, 2010). Being in such transition stages, the majority of students tend to begin seeking meaning in their lives at this point.

3.6 SUBJECTS AND SAMPLING

3.6.1 Sample size determination

There are several methods for estimating the sample size. The present study decided to use power analysis for a number of reasons. First, it will correct type I and type II

errors. Second, the use of power analysis lowers the cost of data collection (Verma & Verma, 2020). In estimating the sample size, three parameters must first be fixed, namely alpha, power analysis, and effect size (Kazdin, 2021). As recommended by several scholars, the study set its power analysis at 80%, which is the minimum standard commonly used in social sciences for testing hypotheses (Cohen, 1965; Murphy *et al.*, 2014). Similarly, the alpha value was set at 0.05, while the effect size (ES) was estimated at 0.37, as obtained from Park *et al.* (2019), who reported an ES of 0.37 for psychosocial interventions on meaning in life. In addition to these parameters, this study employed two groups and five time points of measurement, with a correlation of 0.5 between the points of measurement (Verma & Verma, 2020). As shown in Figure 3.1, the estimation of sample size is based on the G*power application.

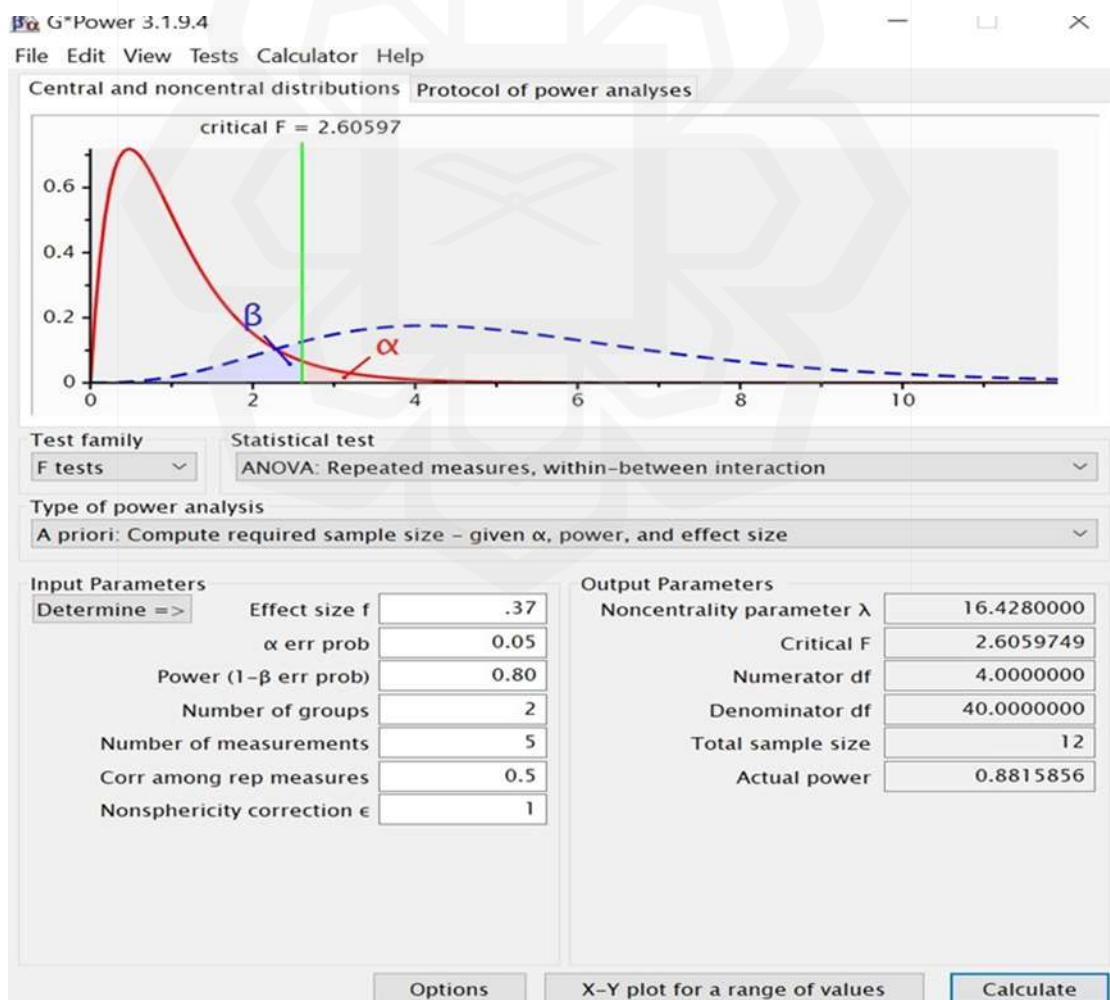


Figure 3.1 G Power for Sample Size Estimation

Taking all of the aforementioned criteria into account, the minimum sample size for each group should be 12 students, but to prevent attrition during any of the intervention phases, the study recruited a total of 72 students, with 42 assigned to the experimental group and 30 to the control group.

3.6.2 Characteristics of the Subjects

The study selected undergraduate students from the School of Education, all of whom were from the Psychology department. The subjects were first- and second-year psychology students at Salahuddin University in Iraq, with ages ranging from 18 to 20. The students were all Muslim and of Arabic descent. The majority of the students came from middle-class backgrounds and lived at home with their parents, who worked in non-government jobs. Additionally, most families did not have a high level of education.

3.7 INTERVENTION PROCEDURES

The study used a factorial design with two groups, one experimental and one control, with five measurement points over a month to investigate the effect of the tripartite MiL intervention on Iraqi undergraduate students' MiL levels. It was implemented in two distinct stages: (1) First Phase: Recruiting Students, and (2) Second Phase: Five Weeks of MiL Intervention.

First Phase: The researcher recruited voluntary participants from undergraduate students in the School of Education and the Department of Psychology. A class link was sent to the students, which included a brief description of the study and consent information. During the consent process, participants were informed that the study would examine the effects of a novel intervention combining various sources of personal knowledge.

The participants signed an online consent form indicating their willingness to participate in the study. They were given an ID code once they had completed the consent form. The researcher then randomly assigned participants to treatment groups

based on their student ID numbers, where students with odd ID numbers were placed in the experimental group, while those with even ID numbers were placed in the control group.

Second Phase: The researcher then randomly assigned the subjects to two groups, namely the experimental and control groups. Participants in the experimental group received the MiL intervention, while those in the control group were placed on a waiting list and received emails with survey questionnaires at each measurement point. All participants completed the intervention activities and surveys as part of the study.

3.8 MATERIALS

3.8.1 Intervention Procedures

Treatment Group

The treatment group participated in the intervention in a face-to-face format that was rolled out in two phases. Phase 1 involved signing up for the study, completing the consent form, and filling out initial surveys, which took approximately 20 minutes. Phase 2 consisted of a 5-week face-to-face intervention, with each session lasting 40 minutes, for a total of 200 minutes. Participants also completed surveys during this phase. In total, the treatment group spent 220 minutes on the study, including both phases.

3.8.2 Contents of the Intervention

The researcher used Gitlin and Czaja's (2015) guidelines to design and test the MiL intervention, focusing on three key aspects, i.e., evaluation, implementation, and sustainability of the intervention. In this study, the intervention had a 5-week time frame with 40 minutes per week. It was divided into five modules as follows: 1) Introduction; 2) Comprehensiveness; 3) Determining Purpose; 4) Feelings Matter; and 5) Wrapping Up. Table 3.2 shows the components and major activities for each week.

Week 1 Module 1: Introduction

In the first week, the researcher explained the intervention to the participants and conducted some icebreaker exercises. The participants then completed a questionnaire on meaning in life, personality traits, and religiosity.

Week 2 Module 2: Comprehensiveness

In this module, participants were invited to engage in a reflective exercise designed to deepen their awareness of personal growth and meaning. They were asked to recall and examine two specific life episodes in which they had experienced meaningful development, such as moments that led to increased self-awareness, more adaptive ways of thinking, or positive transformations in their character or worldview. These reflections encouraged participants to recognize how they had changed over time, whether through overcoming adversity, achieving personal insight, or shifting toward more mature perspectives. To ground their reflections, participants were instructed to provide concrete examples from their own lives that demonstrated these areas of growth. Following this, they were asked to construct a short vignette envisioning a future scenario in which further growth might occur, thereby fostering a sense of direction and continued development (Shin & Steger, 2014b). To conclude the session, participants completed the Meaning in Life (MiL) scale and were invited to consider their personal goals for the upcoming semester, connecting past growth with future aspirations.

Week 3 Module 3: Determining Purpose

This module was designed around the Rubicon Model of Action Phases (Gollwitzer, 2012) in combination with Self-Concordance Theory (Sheldon et al., 2019). The Rubicon Model outlines four sequential phases of goal pursuit: (1) pre-decisional (deliberation), (2) pre-actional (planning), (3) action, and (4) post-actional (evaluation). Each phase presents unique cognitive and motivational challenges that influence successful goal setting and achievement. Integrated with this framework,

Self-Concordance Theory emphasizes the importance of pursuing goals aligned with intrinsic values and personal identity. The intervention used these theoretical insights to guide participants through a structured, reflective process aimed at enhancing goal clarity, personal motivation, and a sense of life purpose. The activities described below were implemented over multiple sessions.

Activity 1: Goal Reflection and Self-Concordance Assessment (Pre-decisional Phase)

Objective: Support participants in identifying personally meaningful and realistic goals for the semester.

Procedure:

Participants were first asked to brainstorm a list of potential academic or personal goals they hoped to achieve by the end of the semester. They were then guided to evaluate each goal using a self-concordance assessment scale adapted from Sheldon et al. (2019), which required reflecting on their motivation for each goal based on four categories:

- external motivation: “Because someone else wants me to,” or “To receive rewards or avoid punishment.”
- introjected motivation: “Because I would feel guilty, anxious, or ashamed if I didn’t.”
- identified motivation: “Because I personally believe this is an important goal.”
- intrinsic motivation: “Because I enjoy it or find it stimulating.”

Instruction: For each goal, participants selected and briefly explained the motivation that most accurately reflected why they might pursue it.

Follow-up Task: After assessing each goal, participants selected 1–2 self-concordant goals—those motivated by identified or intrinsic reasons—that they felt were both meaningful and important. They were then asked to evaluate the feasibility of these goals, answering questions such as:

“Do I have the skills or resources to achieve this?”

“Is this something I can realistically work toward given my current circumstances?”

Activity 2: Implementation Planning (Pre-actional Phase)

Objective: Help participants develop concrete, realistic action plans for pursuing their selected goals.

Procedure:

Participants were guided through a structured planning activity to translate their self-concordant goals into actionable steps. Prompts included:

Planning first steps: “If I decide to do it, I will first... and then...”

Breaking goals into strategies: “What are three specific actions I can take to make progress on this goal?”

Resource identification: “What resources, support, or skills do I need? How can I access or develop them?”

Barrier anticipation: “What internal or external obstacles might get in the way? How will I handle them?”

Follow-up Task: Each participant completed a personal goal implementation worksheet, detailing their plan of action and identifying supports and strategies for overcoming obstacles.

Activity 3: Self-Monitoring and Reflection (Action Phase)

Objective: Encourage self-regulation and ongoing evaluation of goal progress.

Procedure:

As participants began to act on their plans, they were invited to regularly reflect on their progress. For each selected goal, they were asked to rate their level of progress and respond to two guiding prompts:

Progress made: “What has helped you move forward with this goal?”

Challenges encountered: “What obstacles have prevented further progress?”

Follow-up Task: Participants wrote a short weekly reflection journal, identifying successful strategies and areas needing further attention or support.

Activity 4: Goal Review and Adjustment (Post-actional Phase)

Objective: Help participants evaluate outcomes and revise goals or plans based on experience.

Procedure:

At the end of the intervention, participants engaged in a goal review session. They were asked to consider whether their goals had been achieved, partially met, or needed further attention. They reflected on their overall progress and responded to the following perspective-taking prompt:

“Imagine a close friend sees you as the wisest and most capable person they know. What advice would you give them in your situation?”

Follow-up Task: Based on their evaluation, participants either revised their action plans, recommitted to their current goals, or adjusted them to better reflect their evolving interests or capacities. At the end of the session, participants filled out the MiL scale.

Table 3.2 Content and Activities of the Tripartite MiL Intervention by Session

Session	Format	Intervention Activities	Materials Needed
Session 1 Week 1 Module 1	Face-to-face	Ice-breaking activities <ul style="list-style-type: none"> – Introduction to the intervention – Filling up the MiL questionnaire with information on personality traits, and religiosity – Giving participants their ID numbers. 	Script Roadmap of intervention
Session 2 Week 2 Module 2	Face-to-face	<ul style="list-style-type: none"> – Identifying two areas in which participants had experienced growth (e.g., where they gained a newer, more adaptive, and mature self-awareness, insight, or positive self-transformation). – Participants were asked to anchor the areas with specific life examples and propose a vignette exemplifying the future. – Participants completed the MiL questionnaire. 	Paper and pen
Session 3 Week 3 Module 3	Face-to-face	<ul style="list-style-type: none"> – Participants followed the five steps of the Rubicon model of action phases integrated with the self-concordance model. – They completed the MiL questionnaire at the end of the session. 	Paper and pen
Session 4 Week 4 Module 4	Face-to-face	<ul style="list-style-type: none"> – Participants wrote a reflection on the topic of “Why I Matter” – Participants completed a checklist reflecting their experiences over the past month. In the benevolence condition, this exercise was designed to prime benevolent values by exposing participants to a list of benevolent actions. The checklist included behaviors related to helpfulness and 	Paper and pen

		<p>kindness, such as offering advice, providing emotional support, giving gifts, and offering help—actions that many people engage in regularly.</p> <ul style="list-style-type: none"> – Participants completed the MiL questionnaire at the end of the session. 	
Wrapping Up Week 5	Face-to-face	<ul style="list-style-type: none"> – Participants put together what they had learned and evaluate their work based on the tenets of the <i>Maqasid Shari'ah</i>. – Participants completed the MiL questionnaire. 	Paper and pen
Week 6		<ul style="list-style-type: none"> – Participants measured their MiL and psychological adjustment levels. 	Paper and pen

Week 4 Module 4: Sense of Mattering (Feelings Matter)

The primary goal of this session was to enhance participants' sense of mattering, defined as the subjective experience that one's existence is significant and valued by others. By facilitating internal reflection on personal value and social impact.

Structure and Activities

1. Reflective Writing Exercise – “Why I Matter”

Participants were invited to engage in a guided reflective writing activity titled “Why I Matter.” This exercise encouraged individuals to explore and articulate the unique ways in which they contribute meaningfully to the lives of others, their communities, or society at large. Through this self-reflective process, participants were supported in identifying personal sources of significance and value.

2. Checklist of Benevolent Actions (Values Priming Activity)

Following the reflective writing, participants completed a structured checklist designed to prime benevolence values by drawing attention to their recent prosocial behaviors. The checklist included activities such as “Providing emotional support to a friend or family member”, “Helping someone solve a problem”, “Offering advice or encouragement”, “Donating time, effort, or resources to someone in need”, and “Engaging in a random act of kindness”

By recognizing these everyday acts of kindness and support, participants were encouraged to reinforce their sense of social connectedness and contribution, thereby deepening their experience of meaning. Participants completed the MiL questionnaire at the end of the session.

Week 5 Module 5: Wrapping Up

In the concluding week of the intervention, participants were guided to synthesize and integrate their evolving understanding of the three key dimensions of meaning in life—comprehension, purpose, and sense of mattering. To facilitate this integration, they were tasked with composing a “*final speech*” addressed to their students, prompted by the reflective question:

“Hypothetically, if you were going to die, what would you say to your students? What final message would you want them to remember about you and your life?”

Participants wrote a brief draft of this speech, encouraging deep reflection on their life narrative, values, and the legacy they wished to impart.

Following this, participants revisited their personal mission statement originally developed in the third session. They were asked to refine and revise this statement by adding new insights or removing elements that no longer resonated with their emerging sense of meaning and identity.

As a culturally and spiritually grounded evaluative step, participants then assessed their refined mission statements through the framework of the *Maqasid Shari'ah*—the objectives of Islamic law, which emphasize the preservation and promotion of essential human values such as faith, life, intellect, progeny, and wealth. This step helped participants contextualize their personal meaning within broader ethical and spiritual principles, thereby deepening the relevance and coherence of their life purpose.

Figure 3.2 presents the task analysis outlining the components and flow of this tripartite meaning in life (MiL) intervention, illustrating how the sessions interconnect to foster holistic personal meaning development.

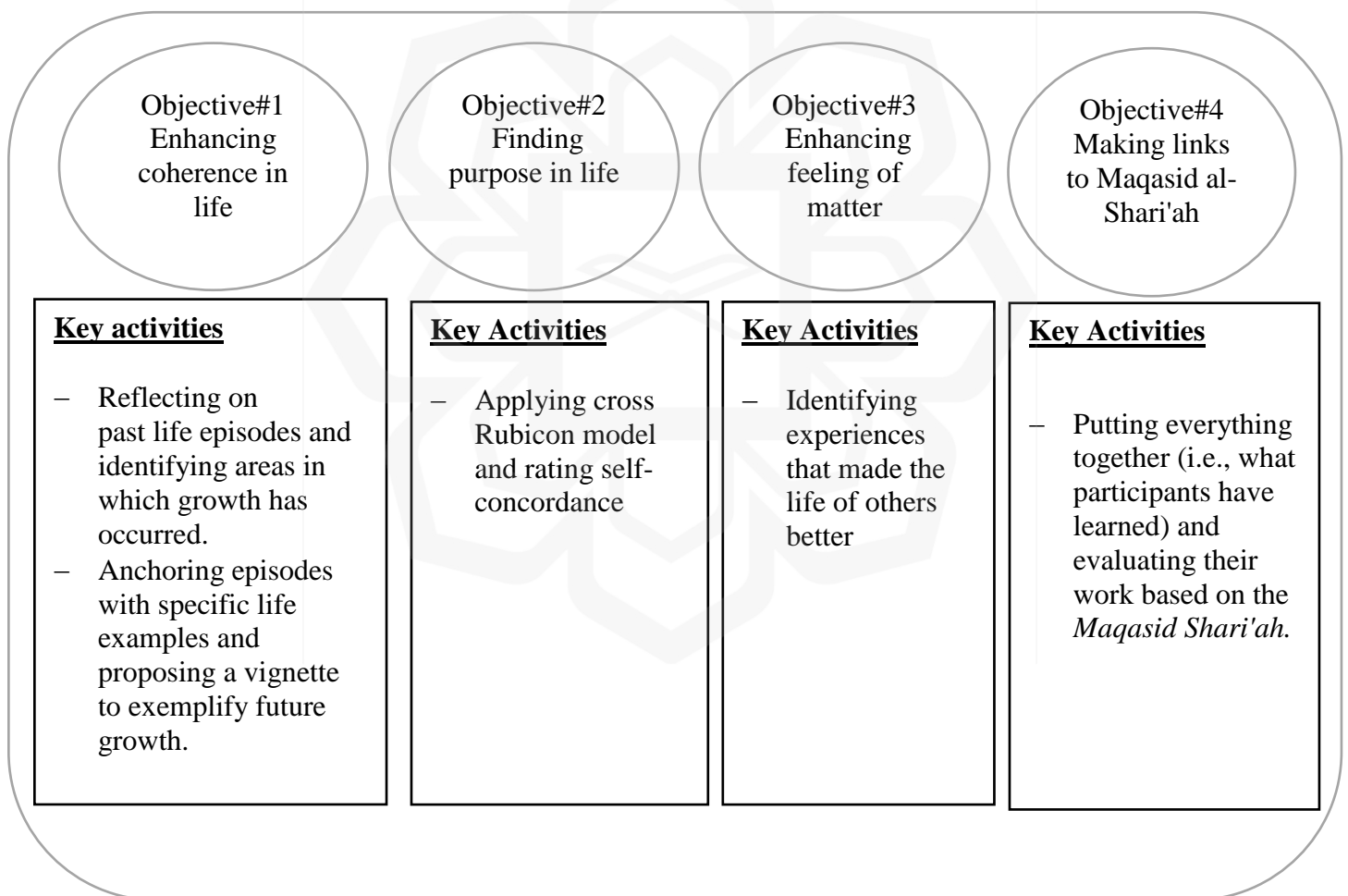


Figure 3.2 Task Analysis of the Tripartite MiL Intervention

3.9 MEASURES

Several instruments were used to measure the primary and secondary outcomes of the study, as well as its moderator variables. The measures are described below:

3.9.1 Meaning in Life (Primary Outcome)

MiL was the study's primary construct, measured using 11 items with three sub-scales adopted from Martela and Steger (2022) and comprised the following dimensions: (1) **Coherence** (e.g., “*Most things happening in my life do make sense*” and “*I can comprehend what my life is all about.*”); (2) **Purpose** (e.g., “*I pursue one or more big purposes in my life*” and “*I am highly committed to certain core goals in my life.*”); and (3) **Significance** (e.g., “*My life is full of value*” and “*My personal existence is significant*”). The reliability estimates of the sub-scales ranged from $\alpha = .70$ to $\alpha = .85$. The items were rated on a 7-point Likert-type scale, ranging from ‘1’ (Not At All True) to ‘5’ (Very True). This measure is well-established and has adequate psychometric properties (Martela & Steger, 2022). Table 3.3 summarizes how the MiL subconstructs were measured in the study by the number of items.

Table 3.3 MiL Dimensions and Their Measurement by Number of Items

MiL Dimensions	Number of Items
1) Coherence	4
2) Purpose	4
3) Significance	3

3.9.2 Psychological Adjustment (Secondary Outcome)

PA was assessed using the Brief Adjustment Scale-6 (BASE-6), which is a six-item self-report measure designed to assess general psychological adjustment. The BASE-6 is unidimensional and asks questions on emotional well-being, distress, and functioning in the following manner (Table 3.4):

Table 3.4 BASE-6 Items

Items	Scale
1) To what extent have you felt irritable, angry, and/or resentful this week?	
2) To what extent have you felt tense, anxious, and/or afraid this week?	
3) To what extent have you felt unhappy, discouraged, and/or depressed this week?	1 (Not At All) 2 3
4) How much has emotional distress interfered with feeling good about yourself this week?	4 (Somewhat) 5 6
5) How much has emotional distress interfered with your relationships this week?	7 (Extremely)
6) How much has emotional distress interfered with your ability to perform at work, school, etc., this week?	

Participants rated their adjustment on a 7-point Likert scale from 1 (Not At All) to 7 (Extremely), with a maximum total score of 42 points, obtained by adding the raw scores of the six items. Evidence for the BASE-6's psychometric properties can be found in (Cruz et al., 2020).

3.9.3 Academic Achievement (Secondary Outcome)

In this study, CGPA was used to evaluate students' academic Achievement. Table 3.5 summarizes the measures of secondary outcomes used in the study.

Table 3.5 Measures of the Study's Secondary Outcomes

Construct	Measure
1) Psychological Adjustment	6 items of BASE-6
2) Academic Achievement	CGPA

3.9.4 Personality Traits (Moderator Variable)

Personality traits was measured using the short version of the 10-Item Personality Inventory or TIPI (Soto & John, 2009), consisting of five dimensions (i.e., the Big Five), namely (1) Extraversion (e.g., “I feel myself extraverted, enthusiastic”) ($\alpha = .77$); (2) Agreeableness (e.g., “I feel myself sympathetic, warm”) ($\alpha = .71$); (3) Conscientiousness (e.g., “I feel myself dependable, self-disciplined”) ($\alpha = .76$); (4) Emotional Stability (“I feel myself calm, emotionally stable”) ($\alpha = .70$); and (5) Openness to Experiences (e.g., “I feel myself open to new experiences, complex”) ($\alpha = .62$). The ten items were rated on a 5-point scale ranging from 1 (Disagree Strongly) to 5 (Agree Strongly).

3.9.5 Religiosity (Moderator Variable)

Twenty-nine (29) items of the *Sejahtera* living scale (Sahari *et al.*, 2022) were used to measure religiosity. The scale consists of five subscales, namely (1) **Faith** (Aldin) (e.g., “*God has a significant impact on my life*” and “*I realize that my daily activities are part of ibadah*”); ($\alpha = .76$); (2) **Life** (al-Nafs) (e.g., “*I am responsible for protecting life*”) ($\alpha = .92$); (3) **Intellect** (al-Aql’) (e.g., “*I am satisfied with my achievement in my work*” and “*I avoid harmful food or drinks*”) ($\alpha = .90$); (4) **Property** (al-Mal) (e.g., “*I contribute to the community through obligatory zakat & sadaqah*” and “*I adhere to safety procedures*”) ($\alpha = .81$); and (5) Progeny (al Nasl) (e.g., “*I have the positive attributes to lead my family*” and “*I am happy with my personal relationships*”) ($\alpha = .74$). Likewise, a five-point Likert scale ranging from 1 (Disagree Strongly) to 5 (Agree Strongly) was used to rate students' religiosity. Table 3.6 shows these measures as used in the study.

Table 3.6 Measures of the Study's Moderator Variables

Construct	Dimensions	Number of Items
Personality traits		
	Extraversion	2
	Agreeableness	2
	Conscientiousness	2
	Openness to Experiences	2
	Emotional Stability	2
Religiosity		
	Faith (<i>al-din</i>)	4
	Life (<i>al-nafs</i>)	9
	Intellect (<i>al-aql'</i>)	8
	Property (<i>al-mal</i>)	4
	Progeny (<i>al nasl</i>)	4

3.10 PILOT STUDY

A pilot study was conducted to assess the reliability of all scales used in the study. A total of 30 participants were chosen from the School of Education at Salahuddin University in Iraq to respond to the questionnaire items. The Cronbach's alpha values of the pilot data ranged from $\alpha = .74$ to $\alpha = .88$, as shown in Table 3.7. Nunnally (1978) considers alpha values equal to or greater than 0.70 to be a sufficient condition for the reliability or internal consistency of the measures. The pilot results enabled the study to conclude that the measures used were sufficiently reliable.

Table 3.7 Reliability Estimates of the Measures

No	Constructs		Number of Items	Cronbach's Alpha
1	Meaning in life	Coherence	4	.88
		Purpose	4	.80
		Significance	3	.74
2	Personality traits	Extraversion	2	.85
		Agreeableness	2	.77
		Conscientiousness	2	.74
		Openness to Experiences	2	.76
		Emotional Stability	2	.78
3	Religiosity	Faith (<i>aldin</i>)	4	.78
		Life (<i>al-nafs</i>)	9	.88
		Intellect (<i>al-aql'</i>)	8	.85
		Property (<i>al-mal</i>)	4	.74
		Progeny (<i>al nasl</i>)	4	.74
5	Psychological adjustment		6	.83

3.11 ETHICAL CONSIDERATIONS

Ethical considerations are of utmost importance in any research involving human subjects. In keeping with research ethics, particularly in conducting an experimental study of a factorial design, the researcher undertook the following measures:

- 1) **Research Approval:** A formal request was sent to Salahuddin University in Iraq to conduct the MiL intervention study among its undergraduates. A formal research approval was obtained from the university.

- 2) **Informed Consent for Study Participation:** All participants provided informed consent prior to their involvement in the study. The purpose, procedures, potential risks, and benefits of the study were clearly explained to them. Participants were also informed of their right to withdraw from the study at any time, without any negative consequences.
- 3) **Voluntary Participation:** Participation in the study was entirely voluntary. Participants were informed that they could decline or withdraw from the study at any time without facing any negative consequences.
- 4) **Privacy and Confidentiality:** The researcher ensured the privacy and confidentiality of participants. All personal information collected was securely stored and anonymized. No sensitive information was shared without explicit consent, and this was duly informed to the participants.
- 5) **Accurate Reporting of Results:** The researcher took every measure to report the results accurately and avoided selective reporting of data that could distort the overall findings or mislead other researchers.

3.12 DATA ANALYSIS

Prior to conducting the main analyses, the raw data were screened to ensure quality, completeness, and appropriateness for statistical testing. The following procedures were conducted in line with established methodological guidelines (Field, 2018; Tabachnick & Fidell, 2019).

3.12.1 Data Screening and Cleaning

Data Entry Accuracy: All data entries were cross-verified with the original response files to identify and correct any input errors. Frequency distributions and descriptive statistics were examined to detect out-of-range values or logically inconsistent responses.

Missing Data: The extent and pattern of missing data were assessed. Cases with more than 20% missing data on key variables were excluded from the dataset. For the remaining cases, missing data were handled using expectation-maximization (EM) imputation where data met the assumption of missing at random (MAR).

Outlier Detection: Univariate outliers were identified exclusively using boxplots. This method provided a visual representation of the data distribution, allowing for the identification of extreme values located outside the whiskers of the plot. This approach offered a clear and practical means for detecting outliers without relying on statistical thresholds.

3.12.2 Assumptions Underlying Statistical Analyses

Normality: the distribution of meaning in life (MiL) scores at each time point and within each group (experimental and control) was examined to assess the assumption of normality. Skewness and kurtosis values were calculated, with values within the range of ± 2 considered acceptable indicators of univariate normality (George & Mallery, 2010; Tabachnick & Fidell, 2019)

Sphericity: The assumption of sphericity was evaluated because the within-subjects factor (time) included more than two levels. Sphericity refers to the equality of variances of the differences between all possible pairs of within-subject conditions. Mauchly's Test of Sphericity was conducted to assess whether this assumption was met. In the event that the assumption of sphericity was violated, adjustments to the degrees of freedom were applied using the Greenhouse–Geisser or Huynh–Feldt corrections, as recommended by Field (2018) and Tabachnick and Fidell (2019).

Homogeneity of Variances: Levene's test was conducted to assess the equality of variances between the experimental and control groups at each time point. This test was used to determine whether the assumption of equal variances for between-group comparisons was satisfied.

Independence of Observations: The assumption of independence was addressed through the study design. Participants were randomly and independently assigned to either the experimental or control group, and data were collected individually to minimize the potential for interaction or bias among participants.

3.12.3 Statistical Techniques

To generate the results that would appropriately address the research objectives and questions, the researcher utilized a combination of statistical methods and specialized software. The data was analyzed using version 29 of the Statistical Package for the Social Sciences SPSS. The analysis tested the first two research questions (i.e., "*Is there a statistically significant difference in Iraqi university students' levels of meaning in life between and within the experimental and control groups?*") and "*Is there any interaction effect between groups and across time that statistically impacts the levels of MiL among Iraqi university students?*") by employing a Two-Way Repeated Measures Analysis of Variance (Mixed ANOVA). This analysis was chosen due to the repeated measures nature of the research design, where the same subjects were exposed to different treatment conditions across two factors, which indicates two levels of analysis. The first level is time (within-subjects), and the second level is individual differences (between-groups). In other words, mixed ANOVA and HLM can sometimes be used interchangeably, particularly in repeated measures contexts where there are hierarchies in the data, such as time points nested within individuals. The assumptions of sphericity were assessed using Mauchly's test, and if violated, the Greenhouse-Geisser correction was applied.

The third research question— “*Do religiosity and personality traits moderate the effect of the Meaning in Life (MiL) intervention on the MiL levels of Iraqi university students?*”—was addressed using the MEMORE moderation macro analysis. This analysis estimated moderation models in a treatment condition with repeated measures (Montoya, 2019) and was based on the assumptions underlying moderation analysis. To analyze the fourth and final research question— “*Does post-intervention meaning in life improve Iraqi university students' psychological adjustment and academic achievement?*”—a simple regression analysis was conducted to explore the predictive relationships between the variables. Table 3.8 summarizes the data analysis procedures undertaken in the study.

Table 3.8 Statistical Techniques by Research Question

Research Question	Statistical Technique
1) Is there a statistically significant difference in Iraqi university students' levels of meaning in life between and within the experimental and control groups?	Two-way Repeated Mixed Measure ANOVA
Is there any interaction effect between groups and across time that statistically impacts the levels of MiL among Iraqi university students?	(Mixed ANOVA)
Do religiosity and personality traits moderate the effect of the Meaning in Life (MiL) intervention on the MiL levels of Iraqi university students?	Multiple Regression using MEMORE Macro (Model 2)
Does post-intervention meaning in life improve Iraqi university students' psychological adjustment and academic achievement?	Simple Regression Analysis (SLR)

CHAPTER FOUR

RESULTS OF THE STUDY

4.1 INTRODUCTION

The reporting of the results in this chapter is divided into four sections. The first section describes the data checking process, which included data screening and cleaning. The second section presents the subjects' or participants' demographics, while the third section explains the testing of assumptions for repeated measures Mixed ANOVA. The final section lays out the outcomes of the five-week MiL intervention and hypothesis testing.

To analyze the data, the study used a two-way repeated-measure Mixed ANOVA and MEMORE (Mediation and Moderation for Repeated-Measures Data), which is a statistical macro for estimating moderation and mediation models in studies involving repeated-measures designs (i.e., studies that collect data at multiple time points, such as in pre- and post-interventions). Finally, the study employed simple regression analysis, the results of which are reported in the last section of the chapter.

4.2 SECTION ONE: DATA SCREENING AND CLEANING

This section outlines the four data screening and cleaning procedures employed in the study to ensure the accuracy of the data and the reliability of the results derived from it. Data screening needs to be performed prior to a statistical analysis to detect and remove errors, outliers, and suspicious patterns in the data set, as well as to identify and correct missing data. This process is necessary to ensure that the data is accurate, complete, and ready for analysis.

4.3 TYPES AND PROCEDURES OF DATA CLEANING

4.3.1 Data Error

In statistical analysis, “error” refers to outlier values (i.e., values that fall outside the expected range) based on the standardized format of the instrument, such as tests or survey questionnaires. In this context, for the Meaning in Life and Psychological Adjustment scales, values greater than 7 or below 1 are considered errors. Similarly, for the religiosity and personality trait instruments, values above 5 or below 1 are classified as errors. After reviewing the frequency table for each item, no errors were found in the data.

4.3.2 Missing Data

In the present study, data completeness was maintained throughout the data collection process. All participants submitted fully completed questionnaires, and no missing values were identified across the variables used in the analyses. This high level of data integrity can be attributed to careful survey design, clear instructions to participants, and close monitoring during administration. As a result, no imputation techniques (e.g., expectation-maximization, multiple imputation) or casewise deletion procedures were required. The absence of missing data strengthened the internal validity of the analyses and ensured that the statistical inferences drawn were not compromised by issues related to data incompleteness.

4.3.3 Attrition Analysis

A total of 72 students completed the consent form and initial survey. They were then randomly assigned to the intervention group ($n = 42$) and the control group ($n = 30$). However, in the first week, nine students in the control group dropped out, and 3 of the treatment group participants withdrew from the study. This left 21 participants in the control group and 39 in the intervention group, and these numbers remained unchanged throughout the five-week intervention period. The fact that participants had to complete the measures (i.e., the questionnaires) over the full six weeks of the study might have been the cause of the large reduction of 9 students in the control

group and 3 students in the treatment group may be attributed to the requirement that participants complete the measures over the full six weeks of the study. To ensure comparability, the study examined differences between the groups on their covariates to establish homogeneity, the results of which are presented in Section Three of this chapter.

4.3.4 Outliers

An outlier is a condition when one or more variables have extreme values (a univariate outlier) or an unexpected combination of scores (a multivariate outlier) that cause statistical results to be biased (Tabachnick *et al.*, 2018). This outlier can be identified or recognized by using box plots. Outliers need to be checked as they will have a significant effect on the data normality that causes the statistical results to be represented inaccurately (Hair, Black, Babin, Anderson, & Tatham, 2019). In this analysis, the box plots were examined, and no outliers were found (see Appendix 3).

4.3.5 Careless Responding

Careless responding (CR) refers to a “survey response set in which a person responds to items without sufficient regard to the content of the items and/or survey instructions” (Huang, Liu, & Bowling, 2015). Examining the standard deviation of replies for every single respondent is an excellent approach to determining whether or not respondent misconduct exists; any item with a standard deviation of less than 0.20 is subject to deletion because there is little to no diversity among the responses across the survey (Collier, 2020). After examining the responses, the study found no serious cases of careless responding in the data.

4.4 SECTION TWO: SUBJECTS' DEMOGRAPHICS

This section explains the characteristics of the subjects involved in the MiL intervention.

Subjects' Demographic Profile

The final number of subjects was 60 undergraduate students assigned to the experimental (n = 39) and control (n = 21) groups. Table 4.1 shows their demographic characteristics by gender, age, educational level, ethnicity, and religion.

Table 4.1 Demographic Profile of the Subjects (N = 60)

Variable	Category	Experimental Group		Control Group	
		N	%	N	%
Gender	Female	30	76.5	11	57.8
	Male	9	23.5	10	42.1
Age		M = 20		M = 19	
Level of Study	Level 1	15	38.5	14	73.7
	Level 2	24	61.5	5	26.3
Ethnicity	Arab	39	100	21	100
Religion	Islam	39	100	21	100

A majority of subjects in the experimental group were female (76.5%), while 23.5% were male. In contrast, the control group consisted of 57.8% females and 42.1% males. The sample for this study included students from the Department of Psychology at Salahuddin University in Iraq, enrolled in their first and second years in the spring of 2023. In the experimental group, 61.5% of the subjects were second-year students, with an average age of 21, whereas 73.7% of the control group were first-year students, with an average age of 20. All subjects in both groups identified as Arab and professed Islam as their religion.

4.5 SECTION THREE: TESTING OF ASSUMPTIONS

This section outlines the assumptions underlying the statistical analysis conducted in the study, followed by a discussion of the findings and their interpretations.

4.5.1 Assumptions of Repeated Measures ANOVA

Mixed ANOVA has three main assumptions for repeated-measures analysis, i.e., normality, homogeneity of variances, and sphericity (Leech *et al.*, 2014), all of which are discussed in this section.

4.5.1.1 Assumption of Normality

The first assumption of Mixed ANOVA concerns data normality. The analysis for normality involved examining the skewness and kurtosis values. According to Hair *et al.* (2019), normality helps determine if a distribution is excessively flat or peaked compared to a normal distribution. It also refers to how symmetrical a variable's distribution is around its mean. If the distribution appears as a mirror image, looking the same on both sides of the midpoint, it is considered symmetrical. , with values within the range of ± 2 considered acceptable indicators of univariate normality (George & Mallery, 2010; Tabachnick & Fidell, 2019). Table 4.2 lists all the constructs in this study along with their skewness and kurtosis values. All constructs show adequate normality, with values falling within the acceptable range.

Table 4.2 Normal Distribution

Construct	Kurtosis	Sskewness
1) Meaning in Life	0.34	-0.27
2) Religiosity	-0.83	-0.56
3) Personality Traits	1.10	-0.42
4) Psychological Adjustment	-0.58	-0.64

4.5.1.2 Assumption of Homogeneity of Variances

The second assumption is homogeneity of variances; the Levene's test was conducted to assess the equality of error variances for the MiL construct across five time points. The null hypothesis for this test states that the error variances of the dependent variable are equal across groups. The constructs MIL_1 to MIL_5 exhibit homogeneity of variances, as indicated by the p-values in Levene's test results (Table 4.3).

Table 4.3 Levene's Test Results

Construct	Levene's Test	Df1	Df2	P
MIL_1	3.134	1	58	.082
MIL_2	3.386	1	58	.071
MIL_3	1.593	1	58	.212
MIL_4	0.420	1	58	.520
MIL_5	5.207	1	58	.026

4.5.1.3 Assumption of Sphericity

The final assumption is sphericity; Mauchly's Test of Sphericity was performed to assess this assumption for the repeated measures ANOVA. The null hypothesis for this test states that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix. The results, summarized in Table 4.4, indicate a violation of the sphericity assumption ($p < .001$). Therefore, adjustments using the Greenhouse-Geisser corrections were applied to the degrees of freedom in the repeated measures ANOVA to correct for this violation (Tabachnick *et al.*, 2018).

Table 4.4 Mauchly's Test of Sphericity (For Within-Subjects Effect)

Mauchly's W	Approx. Chi-Square	df	P value	Epsilon (Greenhouse-Geisser)
.49	40.64	9	<.001	.70

4.6 SECTION FOUR: RESULTS

This section presents the results of the study after testing the assumptions for repeated measures mixed ANOVA. The results are organized according to the research questions they address.

Presentation of Results by Research Question

The study asks four research questions as follows: (1) Is there a statistically significant difference in Iraqi university students' levels of meaning in life (MiL) between and within the experimental and control groups? (2) Is there any interaction effect between groups and across time that statistically impacts the levels of MiL among Iraqi university students? (4) Do religiosity and personality traits moderate the effect of the MiL intervention on the MiL levels of Iraqi university students? (4) Does post-intervention meaning in life improve Iraqi university students' psychological adjustment and academic achievement? The answers to these four questions are presented next.

4.6.1 Differences in Students' Levels of MiL: Between-Group and Within-Group Analysis

To answer the first research question, the study used a two-way repeated-measure ANOVA (mixed ANOVA). Before conducting ANOVA on the data, the study performed a chi-square test for independence to examine whether there were statistically significant differences between the experimental and control groups in

regard to gender. Additionally, an independent samples t-test was run to compare the ages of both groups, ensuring homogeneity prior to implementing the intervention.

The chi-square results indicated no statistically significant gender differences between the groups before the intervention ($X^2 = 2.54, P > .05$), while the independent-sample t-test results suggested significant but negligible age differences between the two groups ($t = 4.6, P < .05$), with an effect size (ES) of 0.10, which is smaller than what is typically observed in social sciences, as shown in Table 4.5.

Table 4.5 Chi-Square and T-Test Results

Variable	Group		X ² (df)	P-value	Effect Size	
	Intervention	Control				
Gender	Male	9	9	2.54 (1)	P > .05	.20
	Female	12	30			
Age		20.6	19.5	4.6	P < .05	.10

4.6.2 Comparison of Baseline Outcomes for the Intervention and Control Groups

Next, the analysis compared the baseline outcomes for the intervention and control groups using an independent samples t-test. Table 4.6 shows no significant differences between the intervention ($M = 4.42, SD = .99$) and control ($M = 4.14, SD = .72$) groups at pre-intervention, $t(58) = 1.113, p > .05$.

Table 4.6 Baseline Outcomes at Pre-Intervention: Independent Samples T-Test Results

Main Outcome	Group	M	SD	t. value (df)	p-value
Meaning in Life (MiL)	Intervention	4.42	.99	1.113(58)	P > .05
	Control	4.14	.72		

Note: M = Mean; SD = Standard Deviation.

4.6.3 Main and interaction effect of time and groups on the level of Mil as outcome

A two-way repeated measures Mixed ANOVA was conducted to test the effect of the MiL intervention both within subjects and between groups. The Greenhouse-Geisser correction was applied to evaluate changes in the level of meaning in life (MiL) within subjects and between groups, as shown in Table 4.7.

Table 4.7 Results for Two-Way Repeated Measures ANOVA

Source	Type iii Sum of squares	df	Mean square	F	P value	η^2
Time	37.69	2.81	13.43	11.79	<0.001	0.17
Group	98.82	1	98.82	48.34	<0.001	0.50
Time*group	62.67	2.81	22.34	19.60	<0.001	0.25

The results indicate a statistically significant change in MiL levels within subjects over time, $F(2.81, 37.69) = 11.79, p < .001$, with an effect size larger than the typical values reported in previous studies (Cohen, 1988). Additionally, there was a statistically significant effect of the MiL intervention between the experimental and control groups, $F(1, 98.82) = 48.34, p < .001$, with an effect size of 0.5, considerably larger than the typical effect sizes recorded in prior research (Cohen, 1988). The difference across the time points, i.e., baseline (Time 1) and the end of the intervention (Time 5), is evident and substantial, as shown in Table 4.8. This indicates that participants in the experimental group significantly improved their levels of meaning in life compared to the control group.

Table 4.8 MiL Means and (SD) for the Experimental and Control Groups Across Time

Group/time	Time 1	Time 2	Time 3	Time 4	Time 5
Experimental	4.42(.99)	3.68(1.3)	3.5(1.2)	4.52(.83)	4.93(.70)
Control	4.14(.72)	3.02(1.0)	2.94(1.1)	2.88(.1.0)	2.05(.92)

Table 4.7 reveals a statistically significant interaction effect between time and group, $F(2.81, 62.67) = 19.60, p < .001$, with an effect size of 0.25, which is slightly larger than the typical value (Cohen, 1988). This indicates that the effect of the intervention on students' meaning in life (MiL) varied over time, depending on the group's members. Figure 4.1 illustrates the interaction effect, showing that the change level of MiL across all five time points for the subjects depends on the group types, e.g., treatment or control group.

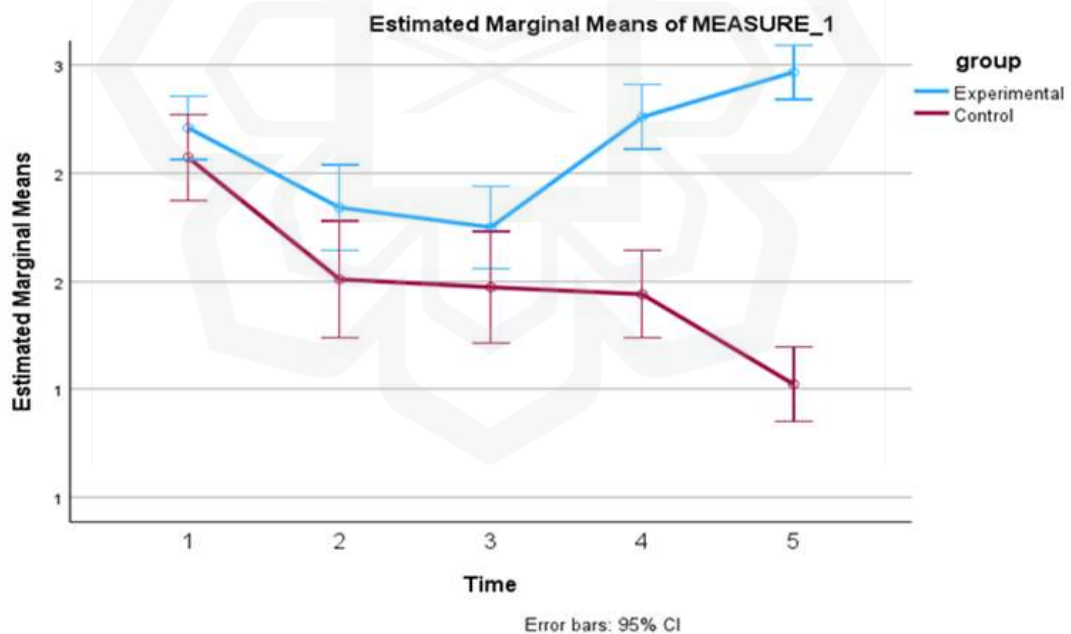


Figure 4.1 Interaction Effects of Time and Group

Furthermore, a repeated-measures ANOVA with polynomial contrasts was conducted to examine the effect of the within-subjects factor MiL (measured across four levels) and its interaction with group on the dependent variable.

The results of the trend analysis revealed several significant effects for the intervention on meaning in life (MiL) across time. A significant linear trend was observed, $F(1, 58) = 12.61, p < .001, \eta^2 = .179$, indicating a consistent directional change in MiL. Additionally, a significant quadratic trend, $F(1, 58) = 11.24, p = .001, \eta^2 = .162$, suggested a curvilinear (U-shaped or inverted-U) trajectory in responses. The cubic trend was also statistically significant and exhibited the largest effect size, $F(1, 58) = 17.53, p < .001, \eta^2 = .232$, reflecting a more complex, S-shaped change in MiL over time. In contrast, the quartic trend (fourth-order polynomial) was not significant, $F(1, 58) = 2.37, p = .129, \eta^2 = .04$, indicating no additional higher-order complexity. Importantly, a significant interaction between MiL and group was found for the linear trend, $F(1, 58) = 79.89, p < .001, \eta^2 = .58$, revealing that the pattern of linear change differed markedly between the intervention and control groups. A significant quadratic interaction also emerged, $F(1, 58) = 5.64, p = .021, \eta^2 = .09$, suggesting that the curvature of change over time varied across groups. However, the cubic interaction was not significant, $F(1, 58) = 0.86, p = .36, \eta^2 = .02$, and the quartic interaction did not reach statistical significance either, though it approached the threshold, $F(1, 58) = 3.68, p = .060, \eta^2 = .06$.

Table 4.9 Polynomial Within-Subjects Effects for Meaning in Life (MiL)

Source	Trend	F (1, 58)	p	Partial η^2
MiL	Linear	12.61	< 0.001	0.18
	Quadratic	11.24	.001	0.16
	Cubic	17.53	< 0.001	0.23
	Order 4	2.37	.129	0.04
MiL \times Group	Linear	79.89	< 0.001	0.58
	Quadratic	5.64	0.021	0.09
	Cubic	0.86	0.357	0.02
	Order 4	3.68	0.060	0.06

4.6.4 Simple Effects of Meaning in Life (MiL) Across Time Within Experimental and Control Groups

To examine differences in Meaning in Life scores over time between the experimental and control groups, the researcher conducted multivariate tests of mean differences, as summarized in Table 4.10. The F-tests revealed statistically significant multivariate simple effects of time within each group across the five measurement points, suggesting meaningful changes in MiL throughout the study for both groups.

For the experimental group, the effect of time was statistically significant, *Pillai's Trace* = 0.443, $F(4, 55) = 10.95$, $p < 0.001$, $\eta^2 = 0.44$. This large effect indicates that participants in the intervention condition experienced substantial changes in their levels of MiL over time. Similarly, for the control group, the multivariate effect of time was also statistically significant, *Pillai's Trace* = 0.569, $F(4, 55) = 18.17$, $p < 0.001$, $\eta^2 = 0.57$. This suggests that MiL levels also changed significantly in the control condition throughout the measurement period.

Although both groups demonstrated significant within-subjects effects of time, the magnitude and nature of these changes differed. The control group showed a slightly stronger multivariate effect size ($\eta^2 = 0.57$) compared to the experimental group ($\eta^2 = 0.44$); the significant interaction reflects distinct change trajectories in meaning in life across conditions. While the experimental group showed an initial decline followed by a notable recovery that exceeded baseline levels, the control group exhibited a steady and continuous decrease over time. These patterns suggest that the intervention promoted MiL enhancement, whereas the control condition was associated with a progressive loss of meaning.

Table 4.10 Simple effect

Groups	F test	P value	Effect size
Experimental	10.946	<0.001	0.44
Control	18.173	<0.001	0.57

4.6.5 Moderating Effects of Religiosity and Personality Traits on Students' MiL

The study examined the potential moderating effects of religiosity and personality traits, based on the Big Five factors, on the intervention group's MiL. Specifically, the study explored the moderating effect on the differences between Time 1 and Time 5. MEMORE (Montoya, 2019) was used to assess the moderation effects, as discussed in Chapter Three. First, the study examined whether the effect of the intervention on meaning in life differed based on students' levels of religiosity. Table 4.11 presents the effect of religiosity on the change in MiL.

Table 4.11 Regression Model Predicting Change in MiL from Religiosity (Centered)

Construct	Coefficient	SE	df	t-value	p value	LLCI	ULI
Constant	-.51	.16	37	-3.24	<.01	-0.83	-0.19
Religiosity	.72	.27	37	2.68	P<0.01	0.18	1.26

The overall model was statistically significant, $F(1, 37) = 7.19, p = 0.01$, with an R^2 of .16, indicating that Religiosity explained 16% of the variance in the change in MiL over time. The regression coefficient for religiosity was significant, $b = 0.72, SE = 0.27, t(37) = 2.68, p = .01, 95\% \text{ CI } [0.18, 1.26]$. This suggests that individuals with higher religiosity levels experienced smaller declines in MiL over time compared to those with lower levels.

Table 4.12 presents the probing of the interaction, which revealed that the change in MiL was statistically significant and negative at low (-1 SD) and average levels of religiosity. Specifically, at -1 SD , the change was $b = -0.94, SE = 0.23, t = -4.19, p < .001$, and at the mean, $b = -0.51, SE = 0.16, t = -3.24, p = .002$. However, at high levels of religiosity ($+1 \text{ SD}$), the change was not significant, $b = -0.08, SE = 0.23, t = -0.37, p = .71$. These results indicate that religiosity buffered the effect of the intervention on MiL, with individuals higher in religiosity demonstrating greater stability in meaning over time.

Table 4.12 Conditional Effects of Intervention at Low, Mean, and High Levels of Religiosity

Religiosity Level	Coefficient	SE	t-value	p value	LLCI	ULI
-1 SD (low)	-0.94	.23	-4.19	<0.001	-1.40	-0.49
Mean (0)	-0.51	.16	-3.24	<0.01	-0.83	-0.19
+1SD (high)	0.08	.23	-.37	>0.05	-0.54	0.37

Next, the study explored whether the effect of the intervention on students' meaning in life was moderated by personality traits. Table 4.13 presents the moderation effects across the five dimensions of personality.

The results indicated no significant interaction effects between the intervention and the personality traits of extraversion, agreeableness, or conscientiousness, suggesting that these traits did not moderate the change in meaning in life (MiL) over time. However, significant moderation effects were found for emotional stability and openness to experience.

For emotional stability, the regression constant was -0.51 , indicating that individuals with an average emotional stability level (mean-centered = 0) experienced a significant decline of 0.51 units in MiL from Time 1 to Time 5. The moderation effect was significant, $b = 0.41$, $t(37) = 2.20$, $p = .03$, 95% CI [0.03, 0.79], suggesting that for each unit increase in emotional stability, the decline in MiL was reduced by 0.41 units. This indicates that individuals with higher levels of emotional stability experienced smaller declines in MiL over time, or in some cases, maintained their levels, thus buffering the effect of time on MiL. Similarly, a significant moderation effect was found for openness to experience, $b = 0.33$, $t(37) = 2.11$, $p = .04$, 95% CI [0.01, 0.64]. The constant again was -0.51 , indicating that participants at the mean level of openness experienced a significant decline in MiL. However, for each unit increase in openness, the decline in MiL was reduced by 0.33 units. This suggests that higher levels of openness also buffered against decreases in MiL, and participants high in this trait were more likely to maintain their sense of meaning following the intervention.

Table 4.13 Moderation Effects of Personality Traits

Moderation	Constant	Coefficient	SE	df	t-value	P value	LLCI	ULI
Extraversion	-0.51	0.23	0.19	37	1.19	0.23	-0.16	0.62
Agreeableness	-0.50	0.30	0.18	37	1.63	0.11	-0.07	0.67
Conscientiousness	-0.51	0.32	0.18	37	1.79	0.08	0.-04	0.69
Emotional Stability	-0.51	0.41	0.19	37	2.20	0.03	0.03	0.79
Openness to Experiences	-0.51	0.33	0.15	37	2.11	0.04	0.01	0.64

Table 4.14 probing the significant interaction effects revealed important individual differences in how participants' levels of openness to experience and emotional stability shaped their response to the intervention over time. Specifically, participants who scored low on openness to experience (-1 SD) demonstrated a pronounced and statistically significant decline in their reported levels of meaning in life (MiL) from pre- to post-intervention, $b = -0.86$, $p < .001$. In contrast, those with high levels of openness ($+1$ SD) did not exhibit a statistically meaningful change, $b = -0.16$, $p = .49$. This pattern suggests that individuals who are more open to new experiences, ideas, and perspectives may be better equipped to maintain or integrate their sense of meaning, even as external or internal conditions shift. A similar moderation pattern was observed for emotional stability. Participants with low emotional stability (-1 SD) experienced a significant drop in MiL across the same time period, $b = -0.88$, $p < .001$, while those higher in this trait ($+1$ SD) maintained relatively stable levels of MiL, with the change failing to reach statistical significance, $b = -0.15$, $p = .52$. These findings are consistent with the theoretical understanding that individuals who are more emotionally stable—characterized by calmness, resilience, and lower reactivity to stress—may be better able to preserve a coherent sense of meaning in life, even amid psychological or situational fluctuations.

Taken together, the results indicate that both openness to experience and emotional stability served as protective psychological resources, moderating the adverse impact of intervention-related change on meaning in life. Individuals higher in these traits demonstrated greater psychological stability in their experience of meaning, underscoring the importance of personality characteristics in shaping how people adapt to reflective or potentially transformative interventions.

Table 4.14 Conditional Effects of Time on Meaning in Life at Levels of Openness to Experience and Emotional Stability

Moderator	Level Moderator	Coefficient	SE	t-value	p value	LLCI	ULI
Openness to Experience	-1 SD	-0.86	.23	-3.71	.000	-1.33	-0.39
	Mean	-0.51	0.16	-3.14	.000	-0.84	-0.18
	+1 SD	-0.16	0.23	-0.70	<.05	-0.64	0.31
Emotional Stability	-1 SD	-0.88	0.23	-3.78	.000	-1.35	-0.41
	Mean	-0.51	0.16	-3.16	.000	-0.84	-0.18
	+1SD	-0.15	0.23	-0.65	<.05	-0.62	0.32

4.6.6 Post-Intervention Influence of MiL on Psychological Adjustment

Simple regression analysis was employed to examine the influence of the post-measured meaning in life on students' psychological adjustment. The analysis produced no statistically significant influence of MiL on psychological adjustment, $F(51,37) = .33, P > .05$.

4.6.7 Post-Intervention Influence of MiL on Academic Achievement

The final goal of this study was to examine the influence of post-intervention meaning in life (MiL) on college students' academic achievement at the end of the semester. Simple linear regression was employed to assess the extent to which the MiL level, after completing the intervention, could influence or predict academic achievement.

The result shows that meaning in life was not a statistically significant predictor or influencer of students' academic achievement, $F(1,37) = .454, p > .05$.

Table 4.15 Presents a Summary of the Research Results

Hypotheses	Decision
H1: The MiL intervention has a positive causal effect on the MiL levels of Iraqi university students both within and between the experimental and control groups.	Supported
H2: There is an interaction effect between groups and time on the MiL levels of Iraqi university students.	Supported
H3: Religiosity and personality traits positively moderate the effect of the MiL intervention on Iraqi university students' levels of MiL.	Supported
H4: Iraqi university students' levels of post-intervention MiL will influence or predict their psychological adjustment and academic achievement.	Not supported

4.7 SUMMARY

In this chapter, the researcher analyzed the four research questions. Based on the results, the majority showed statistical significance, although the hypothesis for the final research question was not supported. Table 4.15 provides a summary of these research questions. The first research question indicates that the proposed intervention was effective both within and between groups, and there was a significant interaction effect between groups over time. Additionally, religiosity, emotional stability, and openness to experience demonstrated interactive effects with the intervention. However, post-intervention meaning in life did not show any significant influence on academic achievement or psychological adjustment.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

5.1 INTRODUCTION

The primary focus of this study was to examine the effects of an MiL intervention on changes in college students' meaning in life, both within subjects and between groups. Individual characteristics such as self-knowledge, goal progress, and self-transcendence (Gollwitzer, 2012; McAdams, 2011; Sheldon, 2014; Wong, 1998) were considered as potential factors influencing varied patterns of change among students. Additionally, the study assessed the interaction effects between groups and the time effect, seeking to explore how these dynamics influenced outcomes. The study further delved into the underlying mechanisms, specifically focusing on religiosity and dimensions of personality traits, to understand the conditions under which the proposed MiL intervention might be effective (Fairchild & MacKinnon, 2014). Finally, the investigation also looked at how the post-treatment levels of meaning in life could affect psychological adjustment and academic achievement.

5.2 DISCUSSION OF THE RESULTS

In this section, the study presents the discussion of the results based on the order of the research questions, combining the first two questions as they share a common theoretical foundation.

5.2.1 Differences in MiL Levels Between and Within Experimental and Control Groups: Interaction Effects of Time and Group

Students who participated in the intervention were expected to show a greater increase in MiL than the students who were in the control group. As predicted, the results were statistically significant and supported the notion, indicating that students in the intervention and control groups did show significantly different patterns of changes in

their meaning in life. The findings of this study align with previous research on various interventions aimed at enhancing meaning in life (MiL). Although several interventions have been tested in various educational settings, they did not focus primarily on meaning in life as their main outcome. Instead, these interventions are primarily aimed at enhancing two specific aspects of meaning in life, i.e., either coherence or purpose, or both (Bloch et al., 2017; Cheng et al., 2015; Feldman & Dreher, 2012; Mason & Nel, 2015; Pizzolato et al., 2011; M. F. Steger et al., 2014). Thus, this study contributes to the existing body of literature on MiL by testing a specific MiL intervention aimed at enhancing three--instead of just two like previous research--key aspects of meaning in life, i.e., coherence, purpose, and a sense of mattering. Unlike previous studies that focused on only two dimensions (coherence and purpose), this study broadens the scope by including the feeling of mattering as a core outcome. This comprehensive approach offers new insights into how MiL interventions can foster a deeper and more holistic sense of meaning in the lives of individuals. In the subsequent paragraphs, the researcher explains the intervention effects within the study's theoretical framework and compares them with other models used to enhance meaning in life. This comparison draws from existing models that focus on improving coherence, purpose, and other components of MiL, highlighting where the current intervention aligns with or diverges from these approaches.

The first important framework to consider is McAdams' (1985) model of narrative identity, which was the first detailed theoretical model explaining how narrative identity is constructed through personal storytelling and how the approach improves an individual's coherence. Narrative identity is the internalized and ongoing story of the self that a person develops to make sense and meaning of his or her existence (D. P. McAdams, 2011). It reconstructs the autobiographical past and imagines the future in order to create a sense of coherence, purpose, and meaning in a person's life. Singer (2004) defined narrative identity as the ability of a person to develop and internalize an evolving and integrated life story from the episodic particulars of autobiographical memory. According to D. P. McAdams (1993), narratives serve as an important part in determining how people make sense of their lives, develop a sense of self, and comprehend their prior experiences. Thus, a person's life story combines episodic experiences with desired outcomes, resulting in a

cohesive explanation of identity in time. Therefore, people use narrative identity to communicate to themselves and others who they are today, how they came to be, and where they believe their lives will go in the future. Similarly, Pals (2006) supported this approach and argued that storytelling encouraged students to engage in reflective learning by critically analyzing their past experiences, successes, failures, and lessons learned through narratives. In addition, students received insights into their personal development path and how they have grown over time as a result of this process.

Narrative identity theory posits that individuals construct internalized and evolving life stories to make sense of who they are and how they have become that way (McAdams, 1995; Singer, 2004). Within this framework, growth-oriented narratives—those that interpret life events as opportunities for development and positive transformation—play a crucial role in enhancing psychological coherence. In this study, participants engaged in guided reflection that emphasized personal growth, prompting them to reinterpret past experiences as evidence of adaptive self-awareness, resilience, or maturity. This reflective exercise facilitated a more coherent narrative identity by helping individuals connect past challenges with present strengths and future possibilities (Bauer & McAdams, 2010; Pals, 2006). Through the use of life narrative activities, participants were also encouraged to explore their individuality—including their values, abilities, limitations, and personal worldview—while situating themselves within broader social and cultural contexts. By weaving together their unique traits and roles with their perceived opportunities and constraints, they developed a more intelligible and integrated understanding of their lives (Steger, 2009). Ultimately, this process of constructing growth-oriented narratives supported the cognitive dimension of meaning in life, enhancing participants' ability to perceive their lives as coherent.

In this study, the integration of the Rubicon Model of Action Phases (Gollwitzer, 1990a, 2012) with Self-Concordance Theory (Sheldon, 2014; Sheldon, Prentice, & Osin, 2019) was used as a theoretical and practical foundation to enhance participants' development of purpose in life. The Rubicon Model outlines goal pursuit as a process consisting of four sequential phases—pre-decisional (deliberation), pre-actional (planning), actional (execution), and post-actional (evaluation)—each involving distinct cognitive and motivational demands (Gollwitzer, 2012). This model

emphasizes the critical psychological shift that occurs when an individual moves from deliberating among possible goals to committing to one and forming concrete plans. By structuring the intervention according to these phases, the study aimed to help participants not only clarify *how* to pursue goals but also engage in meaningful reflection on *why* those goals matter to them. This process-oriented approach supports existing literature suggesting that purpose is not simply discovered, but constructed through reflective and goal-directed behavior over time (Bronk, 2014; Damon, 2009).

A central feature of this study was the application of self-concordance assessment during the pre-decisional phase, before participants metaphorically “crossed the Rubicon.” Rather than selecting goals solely based on feasibility or external demands, participants were asked to evaluate the degree to which their goals reflected intrinsic or internalized motivations. This component of the intervention was guided by the work of Sheldon et al. (2019), who demonstrated that evaluating a goal’s self-concordance *prior* to commitment increases the likelihood that individuals will pursue goals aligned with their authentic interests and values. By anchoring goal selection in self-reflection and autonomy, the intervention sought to promote the formulation of goals that are both personally meaningful and motivationally sustainable. This is important because self-concordant goals have been consistently linked to greater psychological well-being, persistence, and a stronger sense of identity (Sheldon & Elliot, 1999; Deci & Ryan, 2000).

As participants transitioned from the deliberative to the implemental mindset, they moved into phases of planning, acting, and evaluating their goal progress. According to the Rubicon Model, this cognitive shift involves narrowing attention, increasing optimism, and shielding the chosen goal from distraction (Gollwitzer & Sheeran, 2006). In this study, participants engaged in planning activities, identified resources, and anticipated obstacles—all of which were grounded in the personal significance of their self-chosen goals. Importantly, research shows that when individuals pursue goals they perceive as self-concordant, they are more likely to remain committed and resilient in the face of challenges (Zhang, Chen, & Schlegel, 2018). The structured nature of the Rubicon phases, combined with the motivational clarity offered by self-concordant goal selection, appeared to support students’ ability to sustain purposeful engagement throughout the intervention.

Taken together, this theoretical integration provided a meaningful structure for guiding participants through the process of intentional and reflective goal pursuit. By combining the strategic sequencing of the Rubicon Model (Gollwitzer, 2012) with the motivational depth of Self-Concordance Theory (Sheldon, 2014), the intervention addressed both the how and the why of purpose development. Rather than treating goal pursuit as a purely cognitive or behavioral task, this approach emphasized its emotional and identity-based dimensions, suggesting that a sense of purpose emerges when individuals are both motivated by their values and supported by an actionable framework. These findings align with broader research emphasizing the role of value-driven action in fostering a sustained and adaptive sense of life purpose (Hill, Burrow, Brandenberger, Lapsley, & Quaranto, 2010).

Third, this study found that students developed a stronger sense of mattering through helping others, a process that can be better understood through the interplay of self-worth, social connection, and the self-transcendence model. At its core, feeling that one matters is closely tied to self-worth, a fundamental human need. When individuals engage in prosocial behaviors—such as offering advice, providing emotional support, or simply being kind—they often receive social validation and appreciation, which can significantly boost their self-esteem (Baumeister, 1991; Baumeister & Vohs, 2002). This validation reinforces the belief that they are valuable and have a meaningful role in their social circles.

From a social perspective, prosocial actions contribute to stronger, more meaningful relationships. Helping others is one of the most effective ways to build and maintain social bonds, which are essential for a sense of belonging and acceptance (Klein, 2017). Social acceptance, in turn, is a major contributor to self-worth and the feeling that one's life is important (Leary, 1999; Leary & Baumeister, 2000). People naturally seek to be recognized and valued by their communities, and prosocial behavior provides a clear path to achieving that.

Adding a deeper layer to this, the self-transcendence model (Wong, 1998) suggests that individuals find meaning in life by reaching beyond their own immediate needs and concerns to connect with something larger than themselves. This can be through acts of kindness, commitment to causes, or simply feeling part of a greater

whole. In this way, self-transcendence involves expanding one's focus beyond personal gain and embracing altruistic values and goals. When students engage in self-transcendent behaviors, they often experience a profound sense of connection and purpose, which reinforces their sense of mattering. This shift towards self-transcendence aligns closely with the intervention's strategy of reflective writing on "Why I Matter" and identifying benevolent actions, helping students internalize the importance of their positive contributions to others.

Furthermore, the cultural context plays a significant role in shaping how mattering is experienced. In collectivist societies, such as many Muslim communities, the emphasis on social harmony, community support, and interdependence means that helping others is not just a personal choice but a deeply valued social norm (Markus & Kitayama, 1991). Thus, prosocial behaviors and the resulting sense of mattering are intricately linked to cultural values that prioritize group wellbeing and mutual support.

Finally, the reflective exercises included in the intervention—such as completing checklists of benevolent actions and writing about personal contributions—serve as powerful tools for making these abstract concepts tangible. By reflecting on their own kindness and helpfulness, students can concretely recognize how their actions impact others, thereby reinforcing their self-concept as meaningful, valuable members of their communities. This process supports the development of a sustained and authentic sense of mattering, which is especially crucial during young adulthood, when individuals are actively exploring their identity and seeking purpose.

In conclusion, this study demonstrates that fostering prosocial behavior through the lens of self-transcendence not only enhances students' self-worth and social connections but also cultivates a deeper, more enduring sense that their lives matter. Encouraging young people to move beyond themselves and connect with others is a vital pathway to building meaningful and fulfilling lives.

In conclusion, the integration of the growth-oriented narrative, the Rubicon model of action phases, the self-concordance model, and the self-transcendence theory provides a robust and concrete framework for enhancing the tripartite dimensions of Meaning in Life—coherence, purpose, and mattering—among students. The growth-

oriented narrative concretely fosters coherence by enabling students to construct meaningful and progressive life stories that integrate past experiences with future aspirations, thus creating a coherent self-identity. The Rubicon model, combined with the self-concordance model, guides students through a deliberate and authentic goal-setting process, enhancing purpose by ensuring that the goals they pursue align with their core values and intrinsic motivations. Finally, self-transcendence theory emphasizes the role of prosocial and altruistic behaviors, which cultivate a sense of mattering by connecting students to something greater than themselves and affirming their social significance. Together, these theories form a comprehensive intervention model that addresses the fundamental aspects of MiL, facilitating deeper personal meaning, psychological well-being, and adaptive functioning in the college student population.

5.2.2 Moderating Effects of Religiosity and Personality Traits on Students' MiL

This study examined whether religiosity and personality traits moderate the effectiveness of a meaning-in-life (MiL) intervention among university students. MiL is widely conceptualized as a multidimensional construct comprising comprehension/coherence, purpose, and mattering/significance (George & Park, 2016; Martela & Steger, 2016). Building on this tripartite framework, we tested whether individual differences—in particular, religiosity and the Big Five traits—shape how participants engage with and benefit from structured MiL activities.

Results indicated that religiosity significantly moderated intervention effects; students reporting higher religious commitment showed greater gains in MiL. Theoretically, this aligns with models positioning religion as a primary global meaning system that guides appraisal, interpretation, and coping, thereby enhancing receptivity to meaning-focused content (Park, 2005; Paloutzian & Park, 2013). Religious belief systems provide coherent, transcendent narratives addressing suffering, mortality, and life purpose; such schemas can scaffold positive reappraisal and integration of intervention material (Pargament, 1997). In our protocol, students revised personal mission statements and reflected through *Maqāsid al-Sharī'ah* (objectives of Islamic law)—preservation of *dīn* (religion), *nafs* (life), *‘aql* (intellect),

nasl (lineage), and māl (wealth)—which likely increased conceptual resonance for religious participants. Classic and contemporary sources present these five *darūriyyāt* as core objectives, a point elaborated in Kamali’s primer and traced to al-Ghazālī’s *al-Mustasfā* in uṣūl al-fiqh.

Statistically, these findings are consistent with a moderation pattern in which religiosity strengthens the association between intervention participation and increases in MiL. Prior empirical work shows that MiL can mediate (and thus amplify) links from religiousness to well-being—suggesting that religious frameworks render meaning more salient and accessible during reflection (Steger & Frazier, 2005). More broadly, religious meaning has been associated with better adjustment in later life, supporting the view that sacred meaning resources bolster coping and valuation processes (Krause, 2003).

Personality also mattered. Two Big Five traits—openness to experience and emotional stability (low neuroticism)—emerged as significant moderators. Individuals high in openness, characterized by cognitive flexibility and receptivity to abstract ideas, derived greater benefit from reflective, value-integrative tasks (e.g., the “Why I Matter” exercise; the “Final Speech”). This is consistent with classic accounts of openness and its cognitive–affective profile (McCrae & Costa, 1997) and with evidence that positive, exploratory states facilitate meaning construction (King et al., 2006; Hicks & King, 2009). Students higher in emotional stability likewise showed stronger gains—plausibly because better affect regulation sustains engagement with existential themes without derailment by distress.

By contrast, extraversion, conscientiousness, and agreeableness did not significantly moderate outcomes in this sample. Taken together, the specificity of openness and emotional stability echoes prior work highlighting the roles of cognitive openness and affect regulation in meaning-making, and it coheres with integrative personality frameworks that locate intervention responsiveness at the intersection of basic traits, characteristic adaptations, and life narratives (McAdams & Pals, 2006).

In sum, the effectiveness of MiL interventions is not uniform; it varies as a function of participants’ religiosity and selected personality traits. These moderators appear to shape (a) the interpretive lens through which individuals process meaning

content, (b) emotional receptivity during engagement, and (c) behavioral follow-through after sessions. Designing MiL programs that are attuned to participants' spiritual frameworks (e.g., explicitly linking exercises to valued religious narratives when appropriate) and personality dispositions (e.g., scaffolding for those lower in openness or emotional stability) should enhance both cultural sensitivity and clinical efficacy (Wong, 2012).

5.2.3 Effects of Post-Intervention MiL on Academic Achievement and Psychological Adjustment

This study tested whether students' post-intervention levels of meaning in life (MiL) predicted changes in academic achievement and psychological adjustment. Contrary to hypotheses, post-intervention MiL did not show significant direct effects on either outcome. Given the study's sample size was small, statistical power to detect small-to-moderate effects was limited, elevating the risk of Type II error and widening confidence intervals (Cohen, 1988; Lakens, 2022). Although not immediately intuitive, this pattern is consistent with contemporary accounts of MiL as a multifaceted construct—comprising coherence/comprehension, purpose, and mattering/significance—whose influences often emerge through indirect and conditional pathways rather than simple direct relation (George & Park, 2016; Martela & Steger, 2016).

The MiL Level and academic achievement association is theoretically plausible but empirically contingent on mediating and moderating processes. MiL is frequently described as a motivational force that organizes goals and sustains persistence (Frankl, 1985; Steger, Frazier, Oishi, & Kaler, 2006), yet these influences are typically transmitted through goal self-concordance, intrinsic motivation, and self-regulated learning rather than directly improving grades (Sheldon & Elliot, 1999; Bronk, Hill, Lapsley, Talib, & Finch, 2009). For instance, a stronger sense of purpose may foster adaptive study habits, delay of gratification, and persistence in the face of setbacks—mechanisms that require time to translate into measurable performance and may not be fully captured within short follow-up windows (Bronk et al., 2009).

Contextual and personal factors further condition whether MiL translates into academic achievement. Differences in socioeconomic resources, academic self-efficacy, institutional support, and personality may impede the transition from deliberation (“setting meaningful goals”) to implementation (“acting on them”), a shift emphasized by the Rubicon model of action phases (Heckhausen & Gollwitzer, 1987). Even when students endorse meaningful aims, goal pursuit can be derailed by environmental constraints or weak volitional control, attenuating proximal relative to grades (Heckhausen & Gollwitzer, 1987).

The null findings for psychological adjustment likewise warrant contextualization. Extensive evidence links higher MiL to better well-being, lower depressive symptoms, and greater resilience, but leading reviews underscore that effects depend on the fit between global meaning systems and situational demands, as well as on coping and regulatory processes (Park, 2010; Wong, 2012). Thus, MiL gains produced by a brief intervention may not translate into near-term improvements in adjustment when parallel supports (e.g., stress-management skills, social support) are limited or when ongoing stressors (academic pressure, family demands) remain high (Park, 2010; Wong, 2012).

Moreover, MiL may operate jointly with other protective resources—such as religiosity, altruistic orientation, and value internalization—to shape adjustment. Empirical work indicates, for example, that MiL can mediate or strengthen the association between religious coping and well-being, suggesting that sacred meaning frameworks augment meaning-related benefits (Krok, 2015). Contemporary meaning-centered perspectives likewise argue that sustainable gains require pairing existential work with skills and resources that help individuals enact meaning amidst stress (Wong, 2020).

Taken together, these results recommend interpreting MiL not as a stand-alone determinant of performance or well-being, but as a central organizer that interacts dynamically with motivational, regulatory, and contextual systems. Practically, meaning-centered programs may yield stronger and more durable effects when supplemented with goal setting and implementation training, stress-management and emotion-regulation skills, and value-clarification exercises (Sheldon & Elliot, 1999;

Wong, 2020). In light of the small N in the present study, non-significant results should be interpreted cautiously as they may reflect insufficient power rather than true null effects (Cohen, 1988; Lakens, 2022). Future work should model indirect and conditional pathways explicitly, integrating MiL with motivational (e.g., self-concordance), regulatory (e.g., action-phase), and cultural-contextual variables to capture the complexity of meaning's role in students' lives (Heckhausen & Gollwitzer, 1987; Wong, 2012, 2020).

5.3 IMPLICATIONS OF THE STUDY

The study has important implications in the theoretical and practical domains. These are discussed under separate subsections.

5.3.1 Theoretical Implications

This study offers substantive theoretical contributions to the growing literature on meaning in life, particularly through the design and empirical evaluation of a novel intervention that integrates three influential psychological theories: Gollwitzer's (2012) Rubicon model of action phases, McAdams' (2011) narrative identity theory, and Sheldon's (2014) self-concordance model, along with Wong's (1998) existential and self-transcendence framework. This integrative approach is both innovative and impactful, as it provides a theoretically grounded structure that addresses the multifaceted nature of meaning. By relating action planning, identity development, and intrinsic motivation with the existential search for meaning, the intervention reflects a sophisticated synthesis that is rare in current meaning-centered research.

In doing so, the study extends prior conceptual work by providing a practical, structured intervention capable of enhancing the tripartite dimensions of meaning: coherence, purpose, and significance (Michael F. Steger et al., 2021). Empirical findings confirmed that the intervention significantly enhanced students' sense of meaning, thereby demonstrating the utility of combining narrative exploration, self-concordant goal alignment, and volitional strategies to promote MiL. This adds to the growing body of empirical support for theoretically derived interventions and offers a

replicable framework that can inform future program design in both educational and psychological contexts.

Moreover, the study advances theoretical understanding by empirically examining two critical individual difference variables—religiosity and personality traits—as moderators of the intervention’s effectiveness. Specifically, the study found a statistically significant interaction between religiosity and the MiL intervention, suggesting that students with higher religious commitment experienced more substantial gains in meaning. This finding supports prior literature asserting the moderating role of religiosity in enhancing MiL (Spitzenstätter & Schnell, 2022).

Religion can provide existential coherence, moral guidance, and community support, which integrates with meaning-focused interventions to create a more robust sense of purpose and direction. The implication is that interventions designed for religious populations—especially in culturally or spiritually attuned contexts—may benefit from explicitly integrating faith-based narratives, rituals, or values to strengthen their effectiveness.

In addition, personality traits—particularly openness to experience and emotional stability—emerged as critical psychological factors influencing the efficacy of the intervention. Students high in openness were more inclined to engage with the reflective and exploratory components of the intervention, such as life-narrative construction and purpose-setting activities. Similarly, those high in emotional stability were more resilient in the face of existential questioning and better equipped to integrate new perspectives into their self-concept. These findings corroborate existing theoretical models that suggest personality traits shape individuals' meaning-making capacities and responsiveness to psychological interventions. Thus, the study underscores the necessity of accounting for individual differences when tailoring meaning-centered interventions and adds empirical weight to the proposition that personality traits serve as enabling conditions for existential growth.

Significantly, the study also contributes to the theoretical advancement of the MiL construct within culturally relevant frameworks. It introduces and operationalizes an objective framework based on the Islamic paradigm of *Maqasid al-Shari'ah* (the higher objectives of Islamic law), offering a culturally sensitive lens through which

Muslim students can evaluate both the meaning in life. This theoretical expansion responds to a critical gap in the literature, as noted by scholars such as Wong (2012) and Steger (2021), who have emphasized the need for culturally and spiritually grounded conceptions of meaning, particularly in non-Western populations. By embedding the MiL construct within the *Maqasid* framework, this study makes a significant contribution to contextualizing meaning research in Islamic educational contexts and offers a valuable resource for future cross-cultural and interfaith comparative studies.

Finally, the study is also notable for being, to the best of the researcher's knowledge, the first experimental investigation to apply and evaluate the tripartite model of MiL using a validated scale that measures coherence, purpose, and significance separately (Martela & Steger, 2022). This methodological advancement addresses prior critiques of the MiL literature, which often relied on global or undifferentiated measures of meaning. By employing a multidimensional scale, the study enhances theoretical clarity and empirical precision, allowing researchers and practitioners to discern which components of meaning are most responsive to intervention and for whom. This opens pathways for more targeted interventions that address specific deficits or developmental needs in meaning construction.

In sum, the theoretical implications of this study are wide-ranging. It demonstrates how integrating motivational, narrative, and existential theories can produce an effective, evidence-based framework for fostering meaning. It highlights the moderating roles of religiosity and personality, offers a novel cultural framework based on *Maqasid Shari'ah*, and introduces a validated multidimensional approach to measuring meaning. Collectively, these contributions not only advance theoretical discourse but also provide actionable insights for designing culturally informed and psychologically grounded interventions in the field of positive psychology and educational development.

5.3.2 Practical Implications

The present study yields several important practical implications for stakeholders in the educational ecosystem, including counselors, teachers, parents, curriculum developers, and policymakers. By developing and empirically validating a meaning-in-life intervention grounded in a robust theoretical foundation, this research provides an applied framework for promoting students' psychological well-being, academic engagement, and holistic development.

5.3.2.1 Implications for Psychological and Career Counseling

One of the most direct applications of the MiL intervention is in the domain of psychological counseling. School counselors and university mental health professionals can utilize meaning-centered interventions as part of broader efforts to support student well-being. Research consistently shows that a strong sense of meaning is related to enhanced emotional resilience, lower levels of anxiety and depression, and greater overall life satisfaction (Michael F. Steger et al., 2021; Wong, 2012). By integrating meaning-based techniques—such as reflective writing, guided life-story narration, and values clarification exercises—counselors can help students navigate existential uncertainty, particularly during key transitional periods in academic life.

In the realm of career counseling, the intervention offers practical tools for helping students align their vocational goals with their intrinsic values and life purpose. This alignment has been shown to foster long-term job satisfaction and reduce career indecision or dissatisfaction. Meaning-centered career counseling enables students to approach career choices not merely as functional or economic decisions but as part of a broader life narrative that fosters coherence and fulfillment. Thus, this intervention holds promise for reducing psychological distress related to identity development and future planning.

5.3.2.2 Implications for Teaching Practice and Student Engagement

Teachers also play a pivotal role in promoting meaning within the classroom. The study suggests that educators who incorporate meaning-making activities—such as reflective assignments, experiential learning opportunities, and classroom discussions that relate course content to students’ lived experiences—can significantly enhance students’ intrinsic motivation and academic engagement. This approach empowers students to perceive their studies as personally meaningful and connected to their broader life goals. As a result, it fosters academic perseverance, deeper learning, and increased satisfaction with the educational process.

Moreover, when teachers are attuned to the personal, social, and cultural challenges faced by students, they can offer more empathetic and individualized support. By encouraging students to reflect on how their academic efforts serve their long-term values and aspirations, educators help promote self-determined learning, which is more sustainable and psychologically rewarding. This aligns with the principles of self-concordance theory (Sheldon, 2014), which posits that goals aligned with one’s core values are more likely to lead to well-being and success.

5.3.2.3 Implications for Parents and Family Engagement

Parents and family members also have a critical role to play in supporting the development of MiL, particularly during adolescence and early adulthood. The study highlights the importance of fostering open and supportive family environments where discussions about purpose, aspirations, and personal values are normalized. Parents who actively encourage such conversations can help their children clarify their goals and make meaningful life choices. This is especially important in helping students balance academic demands with personal growth and social engagement.

Furthermore, by recognizing signs of existential distress or purposelessness, parents can proactively encourage their youth to seek support or engage in reflective practices. This may involve promoting hobbies, volunteering, or spiritual engagement—activities that enhance a sense of coherence, connection, and

contribution. In culturally diverse contexts, such family-based support can significantly reinforce the messages and tools provided by formal interventions.

5.3.2.4 Implications for Curriculum and Educational Policy

The study advocates for a more intentional integration of meaning-centered content within the formal curriculum. Educational institutions, guided by the principles of positive education, can design curricula that integrate academic learning with opportunities for personal reflection, well-being, and ethical reasoning. Modules that incorporate philosophical, psychological, or spiritual discussions of purpose can deepen students' self-understanding and support their long-term development. Assignments can be structured to help students connect course content with real-world challenges, societal roles, and personal aspirations.

Such curricular innovations can be particularly effective when they reflect the cultural and religious backgrounds of students. For example, in Islamic education contexts, educators can integrate values from the *Maqasid al-Shari'ah* framework, which emphasizes the protection and flourishing of faith, intellect, life, lineage, and property. This holistic view encourages students to view education as part of their spiritual and moral development, thereby aligning personal growth with religious commitments.

5.3.2.5 Implications for Culturally Informed Practice

The integration of Western psychological theories and Islamic perspectives in this study represents a major advancement in designing culturally responsive interventions. In Islamic contexts, meaning is intimately tied to spiritual obligations, divine purpose, and moral development. As such, MiL interventions grounded in Islamic teachings—such as sincerity (*ikhlas*), service to others (*khidmah*), and the pursuit of knowledge (*talab al-'ilm*)—can be especially effective for Muslim students. These interventions help bridge the gap between academic pursuits and spiritual life, enhancing personal coherence and resilience. When students view academic

challenges as opportunities for growth within a divinely ordained path, they are more likely to persevere and derive meaning even in difficult circumstances.

By aligning academic learning with religious identity and moral values, educators and counselors can foster a more integrated and authentic development process. This dual focus not only addresses individual psychological needs but also strengthens the student's cultural and spiritual grounding. Consequently, the findings from this study can guide the development of culturally and religiously tailored MiL programs across diverse educational settings.

5.3.2.6 Implementation Considerations and Future Application

In addition to offering an effective tool for intervention, this study raises awareness of the necessary preconditions for successful implementation. Specifically, it highlights the moderating roles of religiosity and personality traits (e.g., openness to experience and emotional stability), which should be considered when designing and delivering MiL programs. Practitioners must be mindful that individual differences can shape how participants respond to meaning-centered activities, and adaptations may be required to accommodate these variations.

Furthermore, the study's application of a multidimensional MiL assessment instrument adds a practical measurement tool for both researchers and practitioners. By employing a scientifically validated scale, stakeholders can reliably evaluate changes in coherence, purpose, and significance over time, thus ensuring accountability and enabling continuous improvement of intervention programs.

5.4 LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

A major limitation of the study concerns attrition. Although the study experienced attrition within the control group, the remaining number of participants ($n = 21$) still managed to meet the minimum requirements for conducting robust statistical analyses as decided by power analysis. To prevent the same attrition from undermining similar experiments in the future, researchers should consider implementing strategies that

can enhance participant engagement and retention throughout all phases of the intervention. Effective strategies may include offering incentives, providing reminders, and fostering a supportive environment to encourage ongoing participation.

Another limitation of this study is the absence of follow-up measurements to ascertain the long-term effectiveness of the MiL intervention. Future research should incorporate systematic follow-up assessments to evaluate whether the changes in students' construction of meaning in life are sustained over time. Moreover, understanding the mediation effects of certain variables is crucial in experimental studies, as it helps researchers uncover the underlying mechanisms that can transform the intervention's effects into real outcomes. It is, therefore, recommended that future studies include mediation analyses to gain more insight into how and why interventions impact meaning in life.

Future intervention research should focus on the sources of MiL (particularly with university students) and include them in the intervention agenda. The current intervention did not identify specific sources of meaning, but it did attempt to provide helpful instruments for explorations that would aid in the construction of meaningfulness. The research literature provides some information on what often gives people's lives meaning (see, for example, Bar-Tur *et al.*, 2001; Wong, 1998). Young people who are making their way through a variety of distinct values and directions and experimenting with different ways of living would benefit especially from knowing numerous common sources of meaning. Some facets of life, such as interpersonal connections (e.g., Baumeister, 1991; Hicks & King, 2009; Lambert *et al.*, 2010), appear to be nearly universal and more fundamental, or at least influential to the experience of meaning, which may provide simpler routes to meaning.

It is vital to remember that all measurements for all variables in this study were self-reported. Additionally, there are numerous approaches to conceptualizing and measuring the constructs used to evaluate the major MiL constructs. Future studies should look into whether they will produce similar outcomes using different construct-based instruments. Finally, future research should more comprehensively examine the cultural validity of the constructs to ensure their applicability and relevance across diverse cultural contexts.

5.5 CONCLUSION

A five-week, face-to-face, meaning-enhancing intervention was designed to promote three key features of meaning-in-life development. This approach was intended to explain why certain students may experience a greater increase in MiL compared to others. The novelty of this study lies in its testing of a newly designed intervention that aimed to enhance the tripartite aspect of meaning in life, which has been ignored in previous research (Michael F Steger et al., 2021). Hence, this is the first study that proposed a concrete intervention of MiL to enhance the three aspects of meaning in life, which are coherence, purpose, and feeling of matter. Moreover, this study was designed an intervention specifically target meaning in life as the primary outcome, whereas past research has generally included meaning in life as a secondary component or part of other broader outcomes (Bloch et al., 2017; Kennon M Sheldon, 2014; Y. J. Wong et al., 2017). As a result, the findings give confidence to researchers and practitioners in psychology that the observed changes in the outcome (increased MiL) are attributable to the effectiveness of the MiL intervention itself, rather than to external or unrelated factors.

Additionally, the study measured meaning in life based on the unified model of meaning in life, as developed by Martela & Steger (2022). Hence, the assessment can be considered accurate as it captured the latest conceptual definition of MiL as suggested by several scholars in the field (George & Park, 2016; King & Hicks, 2021; Martela & Steger, 2016; M. F. Steger, 2018). Given this novelty, this study is unlike previous experimental studies whose construct measurements were restricted to only two aspects of MiL, i.e., coherence and/or purpose, or to other studies that combined these aspects into a unidimensional construct (e.g., Bundick, 2011; Feldman & Dreher, 2012; Pizzolato *et al.*, 2011; Steger *et al.*, 2014).

Although incorporating moderation variables in experimental research is crucial to understanding the conditions that facilitate and enhance the effectiveness of an intervention (Fairchild & MacKinnon, 2014; Montoya, 2019), few studies have done so. For instance, only a limited number of studies, such as Spitzenstätter and Schnell (2020), have included moderation variables to explore under what conditions meaning in life interventions are most effective. Understanding these conditions can

significantly improve the intervention process, making it more efficient and tailored to individual needs.

This study has additionally uncovered the roles of religiosity and personality traits as moderator variables, the results of which have enabled us to understand how these two factors influence the effectiveness of the intervention on meaning in life. Specifically, religiosity and certain personality traits, such as emotional stability and openness to experience, helped clarify the conditions under which the MiL intervention yielded more significant improvements in meaning making among participants. This insight can guide future interventions by tailoring approaches based on these individual differences, making the intervention process more personalized and effective.

Based on its positive results, the study proposes the use of a new framework based on the *Maqasid Shari'ah* to assist students in evaluating their meaning in life with some spiritual emphasis. By adopting the framework, students and other individuals can determine whether their MiL fits the Islamic worldview. In contrast, Western studies have not yet been successful in developing a comprehensive or objective framework to assess people's meaning in life with an emphasis on religion or spirituality. While many Western approaches have succeeded in exploring subjective experiences, personal narratives, or psychological factors that contribute to MiL, they often lack a unified, standardized model that is both spiritually meaningful and universally applicable (Michael F Steger, 2016; P. T. Wong, 2015). The spiritual or religious component in an MiL framework is crucial, as people can have meaning in life that may hurt themselves and society. Finally, a factorial experimental design was used to conduct the intervention, adding both rigor and precision in testing its effectiveness (Kazdin, 2021; Vogt & Johnson, 2011).

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APPENDIX 1

INTRODUCTION AND CONSENT

Welcome to our study on the experience of meaning in life. We want to see how people experience their lives as having or not having meaning. You will be shown several sets of statements about how you feel at the present moment, as well as other statements that are related to psychological constructs. You will have to specify to what extent you agree or disagree with them. There are no right or wrong answers; we would simply like to know what you think. Also, don't spend too long on any one item. Often, the first answer that comes to mind is the best. Your participation is voluntary, and you are free to withdraw from the study at any time without giving an explanation. All data we collect from you will be treated as confidential and will only be accessed by the research team. You can withdraw your data from the study at any point before data analysis has commenced. At the end of the study, you will be debriefed, and the aims and purposes of our research will be fully explained. The results of the study will be documented in my PhD thesis and in academic papers that may be submitted for publication. No identifiable information will be used in the write-up. By ticking the box below and clicking next, you acknowledge that you are over 16, have read and understood the information above, and consent to take part.

APPENDIX 2

SURVEY QUESTIONNAIRE

Introduction

In this survey, there are five sections. Section A includes four (4) demographic questions, followed by Section B, which contains several sets of statements about how you feel at the present moment, and Section C, which contains numerous events that you might have made you feel a certain way. Next is Section D, which contains a set of adjectives describing your personality traits, followed by Section E, which asks you about your religious beliefs or stances on certain issues.

Section A: Demographic Information

Instructions: In the spaces below, please tell us your background information.

1-Gender

1-Male

2-Female

3 Age:

4-GPA :

2-Level of study 1-first year

2-second year

Section B: Meaning in Life

Using the following scale of 1 to 7, please indicate how much you agree or disagree with the given statements to express how you are feeling right now.

1 2 3

4 5

6 7

Not at all true

Somewhat true

Very True

Items	1	2	3	4	5	6	7
1) Most things happening in my life do make sense.							
2) By and large, I am able to understand the world around me.							
3) I can comprehend what my life is all about.							
4) I can easily make sense of my life.							
5) I pursue one or more big purposes in my life.							
6) I am highly committed to certain core goals in my life.							
7) I have a set of core goals that give my life a sense of direction.							
8) My daily activities are consistent with a broader life purpose.							
9) My life is full of value.							
10) My personal existence is significant.							
11) Every day, I experience the sense that life is worth living.							

Section D: Personality Traits

Read the following sentence and rate how you see yourself as:

Disagree strongly =1, Disagree a little= 2, Neither agree nor disagree Agree =3, a little

Agree strongly=4, Agree strongly =5

Items	1	2	3	4	5
1. Extraverted, enthusiastic.					
2. Critical, quarrelsome.					
3. Dependable, self-disciplined.					
4. Anxious, easily upset.					
5. Open to new experiences, complex.					
6. Reserved, quiet.					
7. Sympathetic, warm.					
8. Disorganized, careless.					
9. Calm, emotionally stable.					
10. Conventional, uncreative.					

Section E: Religiosity

Read the following sentence and rate yourself based on the statements that express your belief. You can choose from 1 to 5 as your response.

1 strongly disagree, 2 = disagree, 3= neutral, 4= agree, 5= strongly agree.

Item	1	2	3	4	5
1) God has a significant impact upon my life.					
2) I realize that my daily activities are part of ibadah.					
3) I strive to make Messenger as my role model.					
4) I strive to be the bearer upholding right & forbidding wrong.					
5) I am responsible to protect life.					
6) I do my best to live comfortably for myself and my family and I.					
7) I make sure that my surroundings are safe.					
8) I avoid harmful food or drink.					
9) I adhere to safety procedures.					
10) I am clear of my objectives in this life.					
11) I am happy with my personal relationships.					
12) I made myself prepared in all my work.					
13) Every morning I look forward to another day at work.					
14) I am satisfied with the religion environment.					
15) I do the right things in my life.					
16) I can satisfy my spiritual needs.					
17) I am satisfied with myself.					

18) I am satisfied with my achievement in my work.						
19) I arrange my life according to priorities.						
20) I strive to improve my life by optimizing my resources.						
21) I prioritize my life activities according to the Shariah.						
22) I contribute to the community through obligatory zakat, Sadaqat.						
23) I value time						
24) I avoid wastage in any form.						
25) I allocate part of my time to help.						
26) I am a good parent to my children.						
27) I have the positive attributes to lead my family.						
28) I am comfortable working with people of the opposite gender.						
29) I can explain LGBTQ issues from an Islamic point of view.						

APPENDIX 3

SUMMARY OF STUDIES INCLUDED IN THIS SLR

No.	Author/s (years)	Sample; research design; analysis strategy	Country	Nature of intervention; No. of follow-up session	Outcome measure	Moderators / Mediators	Key findings
1	(Hwang, Chen & Lin, 2005)	96 nursing students, RCT Individual level ANCOVA	Taiwan	Life and Death Studies course (LDS) 13 sessions weekly	Purpose of life test (PIL.T) (Crumbaugh & Maholick, 1964) SR	None	Sg.
2	(Routledge et al., 2011b) Study 2	53 female undergraduates RCT Individual level One-way ANOVA	United Kingdom	Nostalgia by music (Barrett et al., 2010; Janata et al., 2007; Juslin et al., 2008)	Meaning in life (Steger et al., 2006)	Social connectedness	Sg.
3	(Pizzolato, Brown, & Kanny, 2011)	30 students high school RCT	United States	Promote purpose development and internal control 18 weeks	The Revised Purpose in Life Test (PIL-R) (Curmbaugh	None	Sg.

		Individual level Independent t-test			& Maholick, 1969) 18 items		
4	(Bundick, 2011)	102 students from higher education Pre-post design Individual level t-test	United States	Deep reflection on and discussion of one's purpose in life One-on-one face-to-face One-time section Follow up after 9 months	Meaning in Life Questionnaire- Presence MLQ- P (Steger et al., 2006) 5- Items Purpose in Life (Ryff, 1989) 9-items	None	Sg.
5	(Feldman & Dreher, 2012)	96 College students RCT Individual level Mixed ANOVA	United States	Hope intervention (Snyder et al., 1991) Single section 1-month follow-up	Purpose in Life Test PILT (Crumbaugh & Maholick, 1964) 20 items	None	Sg.
6	(Kasler et al., 2013)	256 Jewish students in school Pre-post design (pre-exp)	Israel	Meaning in life program (Josef Levi, n.d.)	Meaning of life Questionnaire (Kasler et al., 2013)	None	NSg. with Jewish students Sg. with

		396 Arabic children Individual paired t-test			17 items		Arabic students
7	(Kim & Kang, 2013)	28 patients 28 caregivers Quasi- experimental Individual level Mann-Whitney U test.	Korea	Colour therapy (Kim et al., 2010) 16 sessions	Purpose in life test (PIL) (Crumbaugh & Maholick, 1964)	None	Sg.
8	(Steger et al., 2014)	85 college students, HLM Within-subject design RM. ANOVA	United States	Auto-photography by (Steger et al., 2014)	Meaning in Life (MIL) (Steger et al., 2009)	None	Sg.
9	(Morita et al., 2014)	76 nurses, RCT Mixed-effect model HLM	Japan	Short-term educational intervention 9 sessions	Functional Assessment of Chronic Illness Therapy- Spiritual (FACIT-SP) (Peterman, 2002)	None	NSg.

10	(Mason & Nel, 2015)	42 college's Nurses, Pre-post design (pre-exp) Individual level Paired sample t-test	South Africa	Psych-educational stress management programme (Gentry et al., 2002)	Life Purpose Questionnaire LPQ (Hutzell, 1989) 20 items	None	Sg.
11	(Cheng et al., 2015)	66 college students RCT* HLM R.M ANOVA	China	Meaning-centered psychoeducational based on MCA (Wong & Fry, 1998) 9 weeks - baseline, posttest, 3 months follow-up	Meaning in Life Questionnaire MLQ - Chinese Version (Wang & Dai, 2008)	None	Sg.
12	(Waytz et al., 2015) Study 2	315 Amazon MTurk participants RCT Individual level ANCOVA	United States	Mental simulation in meaning of life by writing about (past, future, present)	Meaning in Life MIL (Steger et al, 2006)	Profundity of descriptions, valence, detailed descriptions (MED)	Sg.
13	(Waytz et al.,	Amazon MTurk	United	Mental simulation in meaning of life (past vs	Meaning in Life Questionnaire	None	NSg.

	2015) Study 3	participants RCT Individual level 2 way ANOVA	States	future) (details vs gist)	MLQ (Steger et al., 2006)		
14	(Waytz et al., 2015) Study 4	480 Amazon MTurk participants RCT ANOVA Individual level	United States	Mental simulation in meaning of life (current location-elsewhere) (details vs details)	Ad-hoc measure of the perceived meaning of events (Waytz, Hershfield, & Tamir, 2015)	None	Sg.
15	(Waytz et al., 2015) Study 5	377 adults RCT Independent t-test Individual level	United States	Mental simulation in (spatial simulation)	Ad-hoc measure of the perceived meaning of events (Waytz, Hershfield, & Tamir, 2015)	*Event-derived meaning, hope, nostalgia, awe (MED)	Sg.
16	(Waytz et al., 2015) Study 6	706 adults RCT Independent t-test Individual level	United States	Mental simulation in (minimal spatial simulation)	Meaning in life (MIL) (Steger et al., 2006)	None	Sg.
17	(Keisari &	55 older adults	Israel	Rudimentary life-review	Meaning in life	None	Sg.

	Palgi, 2016)	Quasi-experimental Individual level Mixed ANOVA		(drama therapy and life- crossroads) (Dunae, 2000, 2003) (Epston, 1990) 12-sessions	questionnaire (Krause, 2004, 2007)		
18	(Bloch et al., 2017)	205 undergraduate students, Within-subject design HLM	United States	Classroom-based meditation intervention	Meaning in life (MIL) (Steger et al., 2006) 10 items	None	Sg.
19	(Park & Park, 2016)	84 nursing college students Quasi-experimental 2-way ANOVA- individual	Korea	Overseas volunteering programmes 2 weeks	Meaning in life (MIL) (Steger et al., 2006)	None	Sg.
20	(Da Luz, Murta, & De Aquino, 2017)	47 adolescents, first-year university students Quasi-experimental Individual-level t- test	Brazil	Promoting meaning in life on adolescence (Aquino, 2011) 6 sessions	Meaning in life (MIL) (Damansio, 2013; Steger et al., 2006) 10 items	None	Sg.

21	(Khodabakhsh i-Koolae et al., 2017)	30 wives of male addicts, Quasi-experimental Individual level ANCOVA	Tehran	Hope therapy (Snyder, 1989) 8 sessions	Meaning in life (MIL) (Steger et al., 2006)	None.	Sg.
22	(Wong et al., 2017)	16 university students' Individual level Pre-post design (pre-exp) Paired sample t-test RM ANOVA	United States	Psychoeducational gratitude program (Wong, 2017), 5 sessions	Meaning in life (PPMS) (Wong, 1998) 8 items	None	Sg.
23	(Calia et al., 2018)	21 organizational professionals Pre-post design (pre-exp) Individual level Sing test	Brazil	Mindfulness and Theory U (Garland et al., 2015) 4 sessions	Meaning in life (MIL) (Steger et al., 2006)	None	Sg.
24	(Lan, Huimin and Ying, 2019)	62 older adults RCT* Individual level	China	Life review (Haight & Haight, 2007) 6 weeks	Purpose in life test (PIL) (Crumbaugh &	None	Sg. only within the group

		Independent t-test Dependent t-test			Maholick, 1969) 20 items		
25	(Heisel et al., 2020)	27 older men Pre-post design (pre-exp) Individual level Paired sample t-test	Canada	Meaning-centred men's group MCMG- (Heisel et al., 2016, 2018) 12 sessions 3-6 months follow up	Experience meaning in life scale (EMIL) Heisel, 2009) 40 items	None	Sg.
26	(Poerio & Totterdell, 2020)	90 adults RCT mixed effect models ANCOVA HLM	United Kingdom	Fiction (novels) vs non-fictions 4 sessions 2 weeks follow-up	Presence-Meaning in life (P-MIL) (Steger, 2006) 5 items	None	NSg.
27	(Jafari et al., 2020)	20 couples Quasi-experimental Individual level MANOVA	Iran	Existential-humanistic psychotherapy 13 sessions	Meaning in life (MIL) (Steger et al., 2006) 10 items	None	Sg. with searching for meaning
28	(Van Zyl et al., 2020)	58 smartphone users Pre-experimental Bayesian latent	Cross-Countries	Meaningful-moments intervention (Van Zyl et al., 2019) 12 months	Meaning in life (MIL) (Steger et al., 2006) 10 items	None	Sg.

		growth model (BLGM) HLM					
29	(Spitzenstätter & Schnell, 2020)	98 Amazon MTurk participants, RCT HLM	Australia	Mortality awareness 7 weeks	SoMe questionnaire (LeBe, Schnell, 2007, 2014) 5 items	Religiousness, Mood	NSg. Sg only with moderation

Appendix 1. Summary of studies included in this review (n = 29).

APPENDIX 4

OUTLIERS

