IMPACT OF SOCIAL SUPPORT, PROSOCIAL BEHAVIOR, BASIC PSYCHOLOGICAL NEEDS ON LIFE SATISFACTION AND SELF-ESTEEM AS A MEDIATOR AMONG CHINESE UNIVERSITY STUDENTS IN SHANDONG

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SULTAN IDRIS EDUCATION UNIVERSITY

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ABSTRACT

This study aims to develop a model of life satisfaction by looking at the following factors; prosocial behavior, basic psychological need satisfaction and social support. In addition, this study also examines self-esteem as a mediator and hypothesizes the model developed fit with data sample. A cross-sectional study employing stratified sampling and simple random sampling methods was used to achieve the desired objective of the study. A face-to-face survey was conducted among university students in Shandong, China, resulting in the collection of a total of 291 questionnaires. Instruments involved, such as the Satisfaction With Life Scale, Prosocialness Scale for Adults, Basic Psychological Need Satisfaction Scale, Multidimensional Scale of Perceived Social Support and Rosenberg Self-Esteem Scale. Data analysis was conducted using Smart PLS version 4.0. Findings reported that prosocial behavior ($\beta=0.170$, $t=2.330$, $P=0.020$; $P<0.05$), basic psychological needs ($\beta=0.224$, $t=2.439$, $P=0.015$; $P<0.05$) and social support ($\beta=0.314$, $t=4.106$, $P=0.000$; $P<0.01$) have significant impacts on life satisfaction. Self-esteem is a mediator between social support and life satisfaction among Chinese university students ($\beta=0.133$, $t=2.849$, $P=0.004$; $P<0.05$). Furthermore, the model of life satisfaction is fit with data sample ($SRMR<0.08$). The independent variables explain 68.1% of the observed variability in life satisfaction ($R^2=0.681$). As a conclusion, fostering prosocial behaviors, addressing basic psychological needs, enhancing social support, and bolstering self-esteem can contribute to the overall life satisfaction of university students. The implication of this study, it enhances the theoretical understanding of life satisfaction by identifying key factors influencing university students' life satisfaction in China, filling a literature gap by focusing on Shandong's student population, and providing practical suggestions for enhancing their life satisfaction.

IMPAK SOKONGAN SOSIAL, PERILAKU PROSOSIAL, KEPERLUAN ASAS PSIKOLOGI TERHADAP KEPUASAN HIDUP DAN HARGA DIRI SEBAGAI PENGANTARA DALAM KALANGAN PELAJAR CHINA UNIVERSITI DI SHANDONG

ABSTRAK

Kajian ini bertujuan untuk membangunkan model kepuasan hidup diri dengan mengkaji faktor-faktor berikut: tingkah laku prososial, kepuasan keperluan psikologi asas, dan sokongan sosial. Selain itu, kajian ini juga mengkaji peranan harga diri sebagai mediator dan merumuskan hipotesis bahawa model yang dibangunkan sesuai dengan data sampel. Satu kajian keratan rentas menggunakan kaedah pensampelan berlapis dan pensampelan rawak mudah telah digunakan untuk mencapai objektif yang diinginkan dalam kajian ini. Satu tinjauan bersemuka telah dijalankan dalam kalangan pelajar universiti di Shandong, China, dengan mengumpulkan sejumlah 291 soal selidik yang sah. Instrumen yang digunakan termasuk Satisfaction With Life Scale, Prosocialness Scale for Adults, Basic Psychological Need Satisfaction Scale, Multidimensional Scale of Perceived Social Support and Rosenberg Self-Esteem Scale. Analisis data telah dijalankan menggunakan Smart PLS versi 4.0 Hasil kajian menunjukkan bahawa tingkah laku prososial ($\beta=0.170$, $t=2.330$, $P=0.020$; $P<0.05$), keperluan psikologi asas ($\beta=0.224$, $t=2.439$, $P=0.015$; $P<0.05$), dan sokongan sosial ($\beta=0.314$, $t=4.106$, $P=0.000$; $P<0.01$) mempunyai kesan yang signifikan terhadap kepuasan hidup diri. Selanjutnya, harga diri berperanan sebagai mediator antara sokongan sosial dan kepuasan hidup diri dalam kalangan pelajar universiti di China ($\beta=0.133$, $t=2.849$, $P=0.004$; $P<0.05$). Selain itu, model kepuasan hidup diri adalah fit dengan data sampel ($SRMR<0.08$). Pembolehubah bebas yang digunakan dalam model ini menerangkan 68.1% daripada variabiliti yang diperhatikan dalam kepuasan hidup ($R^2=0.681$). Sebagai kesimpulan, memupuk tingkah laku prososial, memenuhi keperluan psikologi asas, meningkatkan sokongan sosial, dan memperkukuhkan harga diri boleh menyumbang kepada kepuasan hidup diri pelajar universiti.Kajian ini meningkatkan pemahaman teori mengenai kepuasan hidup dengan mengenal pasti faktor utama yang mempengaruhi kepuasan hidup pelajar universiti di China, mengisi jurang dalam literatur dengan memberi tumpuan kepada populasi pelajar di Shandong, serta memberikan cadangan praktikal untuk meningkatkan kepuasan hidup mereka.

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CHAPTER 1

INTRODUCTION

1.1   **Introduction**

This study focuses on examining the influence of social support, prosocial behavior, and basic psychological needs on life satisfaction among Chinese university students in Shandong, also exploring the mediating effect of self-esteem. The study is structured into five chapters, commencing with the first chapter that serves as a comprehensive introduction to the overall research context. Section 1.1 initiates the introduction, followed by Section 1.2, which provides background information for the research. Sections 1.3 and 1.4 introduce the problem statement and conceptual framework. Expanding on this groundwork, 1.5 introduce the objectives. Sections 1.6 and 1.7 delve into the research questions and hypotheses. Sections 1.8 and 1.9 subsequently present the conceptual framework and operational definitions. Following this, Sections 1.10

and 1.11 address contributions and limitations, respectively. Lastly, Section 1.12 summarizes the key points covered in this chapter.

1.2 Background of the Study

Life satisfaction is a concept that has been of interest to philosophers, psychologists and policy-makers for many centuries. A happier life has always been the goal of human society (Lima & Mariano, 2020). Life satisfaction, viewed as the ultimate aspiration of individuals, stands as a profound and universal human necessity. This sentiment goes beyond momentary pleasures, encompassing holistic satisfaction and life's intrinsic meaning. Life satisfaction is not only an individual pursuit but also a fundamental pillar for fostering a healthy and harmonious society (Austin, 2020). By comprehending and actively pursuing life satisfaction, personal trajectories and collectively participate in the construction of a more splendid society.

On an individual level, maintaining a high level of life satisfaction is paramount for psychological health and overall quality of life. Nurturing a robust sense of life satisfaction plays a vital role in maintaining psychological equilibrium and enhancing the overall enjoyment of life. Psychological research reveals that individuals imbued with a sense of life satisfaction are better equipped to navigate life's challenges, demonstrating heightened psychological resilience (Gang & Torres, 2022). In other words, psychological research indicates that individuals who possess a sense of life satisfaction are more adept at overcoming life's obstacles. At the same time, increased life satisfaction is linked to better physical health, solid social connections, and

heightened levels of performance. Elevated life satisfaction correlates positively with physical health, robust social connections, and enhanced performance (Kansky, 2017). Consequently, the pursuit of life satisfaction signifies more than a mere desire; it embodies a proactive commitment to health and a positive lifestyle. Simultaneously, actively seeking life satisfaction benefits not only individuals but also has a positive impact on the entire society.

From a societal standpoint, individuals with life satisfaction are more inclined to cultivate positive and harmonious interpersonal relationships, contributing to the stability and advancement of society. Individuals who possess a sense of life satisfaction are more likely to foster positive and harmonious interpersonal relationships, thus playing a role in fostering societal stability and progress. Individuals with heightened life satisfaction levels tend to show care for others by actively participating in social endeavors, thereby nurturing a positive societal ambiance. So the high life satisfaction of society contributes significantly to the creation of a more hospitable and harmonious social environment. The elevated life satisfaction of society plays a crucial role in fostering a more welcoming and harmonious social atmosphere.

In the World Happiness Report 2023, China is placed at the 65th position out of 137 countries, which is rather middling (Helliwell et al., 2017). This suggests that the current state of life satisfaction among the Chinese population is not particularly optimistic. The present state of life satisfaction among the Chinese population is not optimistic due to a variety of factors.

The multifaceted nature of China's economic growth has indeed brought about positive changes in the living standards of many citizens. However, the persisting challenges such as urban-rural disparities and unequal income distribution, as highlighted by Wu & He (2018), underscore the complex landscape of the nation's development. While the overall economic progress is evident, the benefits have not been uniformly distributed, leading to disparities that continue to impact various segments of the population.

One significant consequence of China's rapid urbanization, as noted by Guan et al. (2018), is the heightened pressure experienced by individuals in both their professional and daily lives. As cities grow and economies develop, individuals find themselves immersed in highly competitive environments where success is often measured by material wealth, social status, and professional achievements. This intense pressure to excel can take a toll on mental health, leading to anxiety, depression, and other related issues. The intense social competition accompanying urbanization has given rise to increased stress and competition in various spheres, affecting the life satisfaction of many Chinese citizens. This aspect sheds light on the social challenges that accompany economic advancement, emphasizing the need for holistic approaches to address the life satisfaction of the population.

Furthermore, the issue of environmental pollution, as highlighted by Wang et al. (2020), poses a severe threat to the physical and mental health of residents in certain cities. The detrimental impact of pollution on life satisfaction adds another layer to the challenges faced by the Chinese populace. Pollution, particularly air and water pollution, has become a significant problem in many parts of China due to rapid

industrialization, urbanization, and lax environmental regulations. Pollution can affect the life satisfaction of individuals. Living in environments with poor air and water quality can lead to increased stress, anxiety, and feelings of helplessness among the population. Moreover, concerns about the long-term consequences of environmental degradation on future generations can contribute to psychological distress. Addressing environmental concerns becomes imperative not only for ecological sustainability but also for the overall health and life satisfaction of the citizens.

In light of these challenges, the lower levels of life satisfaction observed among the Chinese population suggest a substantial gap in life satisfaction. It is evident that economic growth alone does not guarantee holistic improvements in the quality of life.

This is particularly pronounced among Chinese university students, where the existing conditions portray a discernibly low level of life satisfaction. This could be attributed to a variety of factors, including environmental changes, academic pressure, job competition, interpersonal relationships, and so forth, all of which collectively impact their mental health and overall sense of life satisfaction.

University serves as a bridge between late adolescence and early adulthood, mirroring the challenges faced during middle adolescence. However, the transition from late adolescence to early adulthood is marked by distinct difficulties and obstacles. The shift to university life introduces a more autonomous and loosely structured learning environment, requiring students to operate independently in contrast to the secure and supportive high school setting. Specifically, university students must acclimate to a new lifestyle, fulfill demanding academic criteria, allocate extra time and

effort to in-depth and self-directed learning, and navigate unfamiliar social dynamics. These adjustments can lead to physical, emotional, and psychological stress for students，then influence students' life satisfaction (Wynaden et al., 2013).

In China, higher education is marked by fierce competition, and students grapple with immense academic pressure as they strive for good grades and opportunities for advanced studies (Zhao et al., 2015). At the same time,with China's vast population and a substantial number of graduates annually, the job market is becoming increasingly competitive (Mok et al., 2016). University students face significant societal pressure due to uncertainties in employment prospects and heightened difficulty in securing jobs (Mok & Wu, 2016). It has been proposed that the academic, environmental, and social pressures inherent in university life may adversely impact students' academic success, placing them at risk of developing psychological and social problems (Wynaden et al., 2013). This, in turn, can impact their overall life satisfaction.

Indeed, reports indicate a rise in psychological and behavioral issues among students during their initial years of university study, both in Western countries and Chinese cultures (Walther et al., 2012). These factors collectively contribute to the potential decline in the overall sense of life satisfaction among university students. The myriad challenges, ranging from academic demands to adjusting to a new social environment, can create a complex web of stressors that affect various facets of students' lives.

Globally, the issue of diminished life satisfaction among university students has garnered widespread attention (Saipanish, 2003). University life, representing a distinctive period of independence for students, becomes challenging if they lack the maturity to adapt to personal and academic changes (Lu et al., 2014; Bidwal et al., 2015). The repercussions are significant, with studies reporting that nearly half of university students grapple with mental health problems linked to moderate stress (Regehr et al., 2013).

In China, the prevalence of mental health disorders among university students exceeds 20%, and this proportion is on the rise (Liu et al., 2019). According to the 2018 National College Student Health Assessment Survey, 13% of university students have experienced suicidal thoughts, and approximately 2% have attempted suicide in the past year (Davis et al., 2020). Life satisfaction seems to be a scarce commodity in such circumstances

Chinese university students often report low levels of life satisfaction, for example as follows. An examination of depressive symptoms and insomnia was conducted among students at Southwest University in China. The results indicated that lots of the students reported experiencing different levels of depressive symptoms, and reported mild to severe insomnia symptoms. In such circumstances, the presence of life satisfaction appears to be quite limited.

Especially among university freshmen, the transition from the familiar surroundings of friends and a secure home environment to the excitement and challenges of university life represents a significant, albeit stressful, life change. This

period is marked by the dual endeavor of establishing a stable and cohesive self-identity while grappling with the reality that not all adolescents can seamlessly navigate this transition (Berzonsky & Kuk, 2022). In such situations, it seems that finding a sense of life satisfaction is quite uncommon.

As a pivotal juncture in life, the adaptability of freshmen to their new roles in university life plays a vital role in shaping not only their healthy development but also influencing their entire academic career trajectory. The process of adjustment during this phase is intricate and multidimensional, necessitating the effective integration of various competencies with the environment. Factors such as the quality and quantity of learning, adaptation to new professors, and forming connections with classmates can pose challenges that extend beyond the academic realm, encompassing psychological and social dimensions (Bukhari & Ejaz, 2020). At this stage, students' sense of life satisfaction can impact their adaptability, academic performance, and overall quality of life. Therefore, offering support and resources to assist them in cultivating positive emotional security and social relationships is essential for their life satisfaction and overall development.

Every year, a large cohort of high school graduates embarks on the transformative journey of entering university and assuming the role of freshmen. This identity metamorphosis not only brings about stress but also introduces various challenges (Praharso et al., 2017), including establishing new interpersonal relationships and adapting to novel learning methods (Bruffaerts et al., 2018). Confronted with these transitional obstacles, individuals who struggle to cope with the

pressures may find themselves grappling with a range of mental health challenges, ultimately considering dropping out as a last resort (Haktanir et al., 2021).

Interpersonal stress emerges as a particularly crucial factor influencing the mental health of freshmen (Li et al., 2021). The intricate process of building relationships in an unfamiliar environment can exacerbate the emotional burden on these individuals, thereby exerting complex effects on their life satisfaction during this critical phase of their academic journey. This pressure may lead to feelings of isolation, anxiety, or social discomfort, consequently diminishing the life satisfaction levels of university students.

In their study spanning four years and conducted in three phases, Wu et al. (2020) examined 314 Chinese university students. The research findings indicated that first-year students experienced higher levels of negative mental health and lower levels of positive mental health, consequently diminishing the life satisfaction levels of university students.

Many studies have underscored the challenges faced by first-year university students (Rogers et al., 2018). For instance, Nightingale et al. (2013) found that approximately 28.8% of university freshmen exhibited lower levels of adaptation during the early stages of enrollment. Some research even reported a detection rate of adaptation difficulties as high as 71.2% among first-year university students (Li et al., 2016). These challenges span various aspects, including academic, social, and emotional domains, potentially leading to elevated stress levels and a sense of maladjustment among first-year university students. Adapting to a new academic

environment, establishing social connections, and coping with the pressures of university life can all impact the life satisfaction levels of these students during their crucial first year.

In summary, the complexities of this adjustment process for university freshmen may manifest in various forms, including psychological stress, social discomfort, and academic hurdles. Students may find themselves navigating a new academic environment, unfamiliar teaching methods, and forging relationships with a diverse group of peers. These challenges, if not effectively addressed, can potentially lead to a range of difficulties that impact life satisfaction.

As the hometown of Confucius, Shandong is the birthplace of traditional Chinese culture (Zhiyuan & Qijing, 2023). Confucian thought holds a pivotal position in China (Chunhua, 2021). Consequently, students at Shandong University are deeply influenced by traditional culture (Beibei et al., 2022). The impact of Confucianism is particularly significant, as Confucius, being the founder of the Confucian school of thought, profoundly shapes the mindset of Shandong University students (Zhao, 2015). Confucianism emphasizes values such as benevolence, filial piety, and ritual, and these principles may be underscored and reflected in the ethical beliefs and behavioral norms of students.

So, Shandong, influenced by Confucian culture, sees parents placing a strong emphasis on their children's education and academic success, amplifying the academic stress on university students. This intense atmosphere can lead to feelings of anxiety and frustration, ultimately affecting their life satisfaction (Agnihotri, 2018).

In Shandong Province, being one of the most populous regions in China, the employment challenges for university students are even more pronounced.These factors are likely to present new challenges to the life satisfaction of incoming freshmen at Shandong University. Consequently, this study is dedicated to thoroughly investigating and addressing this issue. Furthermore, this research has played a crucial role in advancing the field by bridging a notable gap, given the absence of prior inquiries into the life satisfaction of college students, particularly within the specific context of Shandong.

In a word, the consequences of low life satisfaction,including compromised physical and mental health, severe mental disorders, strained interpersonal relationships, and poor academic performance, significantly impact individuals' future development and career trajectories (Davis et al., 2020). Addressing the urgent need to improve low life satisfaction levels among students (Saipanish, 2003), a thorough investigation of contributing factors is imperative. This will facilitate the implementation of proactive and effective measures to enhance student life satisfaction.

Improving people's life satisfaction has become a prominent topic of concern for researchers and the public. In recent years, the promotion of life satisfaction has been recognized as a crucial public health goal. Interventions designed to promote life satisfaction, such as increasing positive emotions, improving social relationships, and developing positive cognitive schemes, have been developed and evaluated. Positive psychology interventions, for instance, have been demonstrated to increase positive emotions and improve life satisfaction (Seligman & Csikszentmihalyi, 2000).

Research consistently shows that higher levels of life satisfaction are associated with positive outcomes, including better physical and mental health, increased learning and productivity, increased resilience in times of setbacks, and enhanced social and occupational functioning. As a result, awareness of the importance of improving life satisfaction as a public health goal is growing, and experts have developed and evaluated various interventions to improve life satisfaction.

"The National Medium and Long-term Education Reform and Development Plan (2010-2020)" is a strategic, national-level document in China, meticulously crafted to guide and shape educational improvements across the country. This comprehensive plan highlights the critical need to nurture students' life satisfaction, marking a significant shift from a traditional focus solely on academic achievements. It recognizes the necessity of addressing mental health alongside academic progress, reflecting a broader understanding of what constitutes a successful education.The improvement of life satisfaction plays an important role in solving mental health problems, and is one of the important areas of education exploration.

The plan places substantial emphasis on the overall life satisfaction of students, indicating that education should encompass more than just academic excellence and future employment prospects. It seeks to ensure that students experience happiness and fulfillment throughout their educational journey. To achieve this goal, the plan advocates for a variety of measures, including the expansion of after-school activities that cater to diverse interests and talents, the promotion of community service and volunteer opportunities, and a heightened focus on improving students' general quality of life.

By integrating these elements, the plan aims to create a more holistic educational environment that supports students' emotional and psychological needs, in addition to their academic and professional aspirations. This approach reflects a broader vision of education that values students' overall life satisfaction and strives to provide a more balanced and fulfilling educational experience. It also seeks to foster a supportive place where students feel valued and empowered, ultimately contributing to their long-term well-being and personal growth. Through such a comprehensive framework, the educational system aspires to cultivate not only knowledgeable individuals but also well-rounded and resilient members of society.

This study aims to explore ways to enhance the life satisfaction of university students in Shandong Province, China. Previous research indicates that meeting basic psychological needs, experiencing social support and positive self-esteem, and engaging in prosocial behaviors all contribute positively to life satisfaction. However, these studies remain disparate and have not been integrated. This study seeks to bridge the gap by incorporating self-determination theory, basic psychological needs theory, and resilience theory, exploring a novel model that influences life satisfaction. This study seeks to construct a model focused on life satisfaction with the goal of elevating the life satisfaction levels of university students in Shandong. Also, this study has made significant contributions by addressing a gap in the research field, as there has been no investigation into the life satisfaction of college students specifically in the context of Shandong.

1.3   Problem Statement

Research investigating the relationship between some factors indicates that Chinese university students derive a clear positive impact on their life satisfaction from engaging in prosocial behavior, fulfilling basic psychological needs, and social support.

Firstly, participating in prosocial behavior is linked to enhanced life satisfaction among university students (Ma & Huang, 2022). A study with 1871 college students from various regions in China found that engaging in volunteer activities not only enhances the life satisfaction of those receiving support but also has positive effects on the volunteers themselves, particularly when considering their life experiences. This dual impact, when viewed through the lens of the life course, has the potential to foster the long-term life satisfaction of students (Geng et al., 2022).

The identification of prosocial behavior as a substantial influence on life satisfaction underscores its significance. Moreover, within the educational landscape of Chinese students, investigations into reciprocal relations reveal that engaging in prosocial behavior indirectly contributes to the enhancement of life satisfaction, particularly in the context of academic environments. This implies that the positive effects of altruistic actions extend beyond individual acts, creating a supportive and fulfilling atmosphere within the academic sphere (Su et al., 2021).

Secondly, Numerous studies have delved into the intricate relationship between basic psychological needs and life satisfaction (Cantarero et al., 2021). These studies are guided by the foundational framework of the basic psychological needs theory,

which suggests that for optimal functioning and development, humans must fulfill three psychological needs: autonomy, competence, and relatedness (Ryan & Deci, 2020). In the context of Eastern culture, particularly in collectivist countries like China, researchers propose that life satisfaction is notably influenced by the satisfaction of basic psychological needs for autonomy, relatedness, and competence (Lin & Chan, 2020). Specifically, a study examining Chinese university freshmen discovered a noteworthy positive correlation between basic psychological needs and life satisfaction (Zhang & Luo, 2021).

Thirdly, there were significant correlations between social support and life satisfaction in China (Su et al., 2021). Positive correlations between social support and life satisfaction have been established in Chinese medical college students (Pang et al., 2022). The study of poor university students in China found that family support can positively predict life satisfaction (Lin, 2022). Some studies on Chinese students prove that teacher autonomy support perceived by students has a positive effect on students' life satisfaction (Zhang et al., 2022).

Fourthly, further exploration into the impact mechanism of social support on life satisfaction reveals that self-esteem serves as a mediator. A Chinese research with Tibetan university students highlighted the mediating role of self-esteem in the relationship between social support and life satisfaction (Li & Ma, 2020). A research on Chinese left-behind adolescents revealed that self-esteem played a mediating role in the relationship between social support and life satisfaction (Ma et al., 2021).

This study aims to research life satisfaction and enhance understanding of life satisfaction among Chinese university students in Shandong: investigating the influence of social support, prosocial behavior, and basic psychological needs. Further exploring the role of self-esteem as a mediator role to better support the life satisfaction of university students. In this study, the population consists of public university freshman majoring in education in Shandong Province, China.

There is a noticeable gap in research concerning the influence of prosocial behaviors, basic psychological needs, and social support on the life satisfaction of university students within the cultural context of Shandong Province, China. Shandong, renowned as the birthplace of Confucian culture, reveres traditional values such as filial piety, loyalty, and kindness inherited from Confucianism. These values are believed to significantly impact how university students engage in prosocial behaviors, fulfill their basic psychological needs, and seek social support, ultimately affecting their overall life satisfaction. By conducting thorough empirical research and analysis, this study intends to provide insights into how traditional Confucian values shape the behaviors and experiences of university students in Shandong, shedding light on the intricate effect of prosocial behaviors, basic psychological needs and social support on life satisfaction within this cultural context.

At the same time, within the domain of life satisfaction research, especially concerning university students, prior studies have primarily focused on the entire student body. Nevertheless, freshmen frequently confront unique psychological, social, and adaptive hurdles that may deviate from those encountered in other phases of university life. Freshmen commonly experience the shift from high school to university,

which entails adjustments in social circles, heightened academic demands, and acclimatization to a new residential setting. These adjustments can significantly affect their life satisfaction. Thus, focusing on investigating the life satisfaction of freshmen can illuminate the hurdles they encounter during this pivotal phase and pinpoint elements that might bolster or undermine their life satisfaction. The practical implications of this research are poised not only to benefit individual students but also to create a positive ripple effect within educational institutions and households, promoting life satisfaction on a broader scale.

From a theoretical standpoint, it seeks to integrate a fresh perspective aimed at enhancing the study of life satisfaction among Chinese university students. By delving into dimensions and factors that influence life satisfaction, the research aims to enrich the theoretical framework and offer novel insights. Also, this research could make a practical contribution by acknowledging which domains positively correlate to life satisfaction. The findings of the research will be useful to the parents, higher education administrators and teachers, psychologist, and researchers to develop strategies to enhance life satisfaction. If there is a positive correlation between prosocial behavior, basic psychological needs, social support and life satisfaction, higher education administrators and teachers could know how to increase university students' life satisfaction. For university students, they can learn how to adjust themselves to increase their life satisfaction. These findings also could help university students to improve the quality of life. From a practical perspective, this research provides guidance for schools, governments, teachers, and students, aiming to enhance the promotion of life satisfaction among university students in Shandong, China, thereby facilitating their comprehensive development.

1.4   Conceptual Framework

The conceptual framework proposed in this study is illustrated in the figure. Social support, basic psychological needs, and prosocial behavior are treated as independent variables, while life satisfaction is the dependent variable. Additionally, self-esteem acts as a mediator between social support and life satisfaction. This framework offers insights into understanding and explaining the factors influencing individual life satisfaction by examining the relationships between different variables. Each aspect of the framework emphasizes how specific variables affect overall life satisfaction either directly or indirectly.

Figure 1.1

Conceptual Framework

INDEPENDENT VAR.   DEPENDENT VAR.
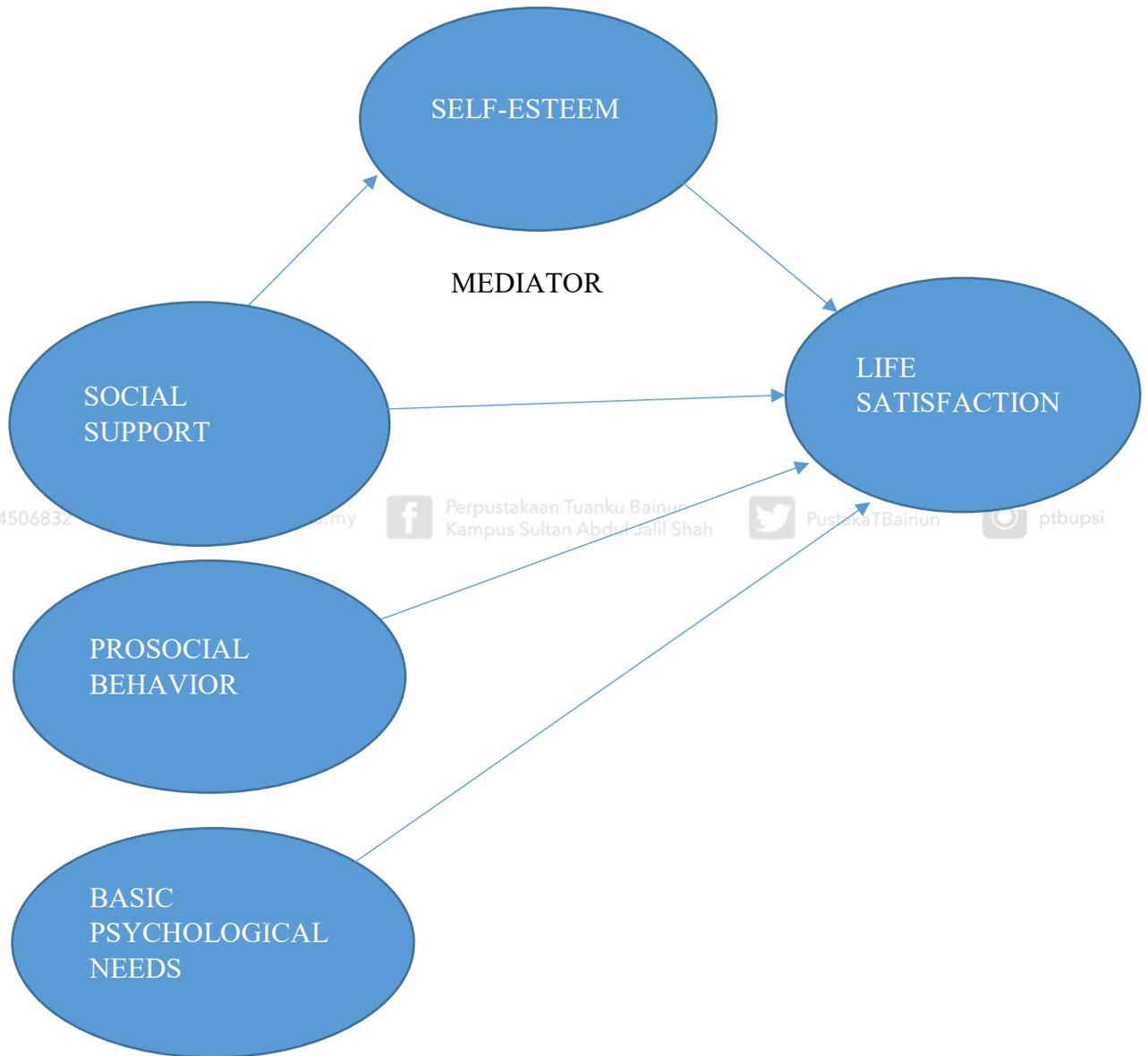
1.5   Objectives of the Study

Consistent with the purpose of this research, the objectives include:

1. Examine the effect of prosocial behavior on life satisfaction among Chinese university students in Shandong.

2. Investigate the influence of basic psychological needs on life satisfaction among Chinese university students in Shandong.

3. Investigate the impact of social support on life satisfaction among Chinese university students in Shandong.

4. Examine the mediating role of self-esteem between social support and life satisfaction among Chinese university students in Shandong.

5. Develop a new model of life satisfaction that fits with the sample.

1.6   Research Questions

Aligned with the research purpose and objectives, the investigative questions for this study are as follows.

RQ1. Does prosocial behavior have a positive effect on life satisfaction among Chinese university students in Shandong?

RQ2. Does basic psychological needs exert a positive influence on life satisfaction among Chinese university students in Shandong?

RQ3. Does social support have a positive impact on the life satisfaction of Chinese university students in Shandong?

RQ4. Does self-esteem play as a mediating role between social support and life satisfaction among Chinese university students in Shandong?

RQ5. Does the model of life satisfaction fits with the sample?

1.7 Research Hypotheses

In line with the research questions and research objectives, the hypotheses for the study are:

Ha1. Prosocial behavior has a significant positive effect on life satisfaction among Chinese university students.

Ha2. Basic psychological needs have a significant positive influence on life satisfaction among Chinese university students.

Ha3. Social support has a significant positive impact on life satisfaction among Chinese university students.

Ha4. Self-esteem is a mediator between social support and life satisfaction among Chinese university students.

Ha5. The model of life satisfaction fits with the sample.

1.8   Theoretical Framework

This study is grounded in three fundamental psychological theories: Self-Determination Theory, Basic Psychological Needs Theory, and Psychological Resilience Theory. These theories provide a solid framework for understanding the impact of prosocial behavior, basic psychological needs, social support, and self-esteem on life satisfaction among Chinese university students.

1.8.1   Self-Determination Theory

Self-determination theory (SDT), conceptualized by Deci & Ryan in 2006, serves as a foundational framework for understanding the intricate dynamics of motivation and its profound influence on human behavior and life satisfaction (Vasconcellos et al., 2020). They think there are two overarching types of motivation. Intrinsic motivation involves engaging in an activity for its inherent enjoyment, deriving satisfaction from the process

itself. Extrinsic motivation, on the other hand, entails engaging in an activity for an outcome external to the activity, such as seeking a reward or avoiding a punishment (Bakar et al., 2013). Recognized as a meta theory, SDT delves deep into the multifaceted nature of motivational processes, extending its purview to encompass individual life satisfaction (Kachanoff et al., 2017). Central to SDT is the notion that individuals possess an inherent inclination towards behaviors that foster psychological growth (Vansteenkiste & Ryan, 2013). Moreover, the theory emphasizes the internalization of actions and beliefs consistent with one's self-concept, thereby promoting life satisfaction (Kaap et al., 2018).

One of the fundamental distinctions within SDT lies in the differentiation between autonomous and controlled motivation. Autonomous motivation stems from intrinsic interests and personal goals, reflecting a higher level of self-determination (Ryan & Deci, 2017). And controlled motivation is driven by external pressures or rewards, showcasing lower levels of self-determination (Ryan & Deci, 2017). This differentiation is pivotal in understanding the quality of motivation and its subsequent impact on various outcomes, including life satisfaction and academic achievement.

SDT underscores the significance of fostering autonomous motivation to facilitate meaningful and sustainable outcomes in individuals' lives. It posits that both motives and behavioral regulation independently contribute to life satisfaction, with basic psychological needs serving as the integration framework (Deci & Ryan, 2000). Environments that support these needs are more likely to promote self-determined regulation and enhance life satisfaction.

In practical terms, SDT offers valuable insights for creating environments conducive to individual life satisfaction. It highlights the pivotal role of intrinsic motivation in promoting higher levels of life satisfaction, in contrast to the detrimental effects associated with controlled motivation (Benita et al., 2020). By understanding the interplay between motivation and life satisfaction, interventions informed by SDT can be designed to enhance individual outcomes and promote flourishing across various domains of life.

1.8.2   Basic Psychological Needs Theory

The Basic Psychological Needs Theory is one of the six mini-theories within the framework of self-determination Theory. Individuals experience higher levels of mental wellness when pursuing the fulfillment of basic psychological needs. The Basic Psychological Needs Theory provides an explanation for how prosocial behavior influences life satisfaction. This theory focuses on three fundamental psychological needs: autonomy, belonging, and competence. Autonomy can be defined as one's need to experience a sense of willingness in one's actions (Vasconcellos et al., 2020); the need of individuals to feel they are the author of their actions and not controlled by external forces (Ryan & Deci, 2017). Relatedness refers to experiences of interpersonal care and warmth (Ketonen et al., 2018). The aspiration for relatedness signifies a yearning to establish meaningful connections with others, to express love and care, and to experience the reciprocal feelings of being loved and cared for by others (Hoorn et al., 2016). Competence refers to one's need to experience effectiveness in one's interactions with the world (Ryan & Deci, 2017). When the need for autonomy is

satisfied, individuals tend to feel a higher level of satisfaction for the other basic needs (Olafsen et al., 2018).

People cannot afford competence without satisfying basic psychological needs because they these basic needs are essential nutriments to thrive (Ryan & Deci, 2000). When people are satisfied basic psychological needs, they become active, enthusiastic, and volitional in doing an activity which are the locus of causality to design motivational intensity. In this way, basic psychological needs satisfaction is an energizing state to construct human motivation and conduce mental health (Ryan & Deci, 2000). To fulfil life satisfaction and experience a sense of integrity, basic psychological needs for competence, autonomy and relatedness must be satisfied (Ryan et al., 1994). Many studies suggest that people naturally approach toward activities, contexts and association that provide satisfaction of these three basic psychological needs (Yu et al., 2018). Competence development necessitates both environmental feedback and autonomy, arising from the dynamic interaction between the individual and their immediate surroundings (Yu et al., 2018).

Basic psychological needs theory serves as the overarching principle that elucidates the interplay among the individual, their immediate or proximal context, and their pervasive context (Olafsen et al., 2018). According to basic psychological needs theory, the fulfillment of an individual's fundamental psychological needs leads to positive outcomes such as enhanced psychological growth, integration, adherence to cultural norms conveyed by socializing agents, and improved life satisfaction (Broeck et al., 2016).

Basic psychological needs theory demonstrates the association between a student's life satisfaction and the degree to which students perceive a social context, such as the home or school environment, or the behaviors of a socializing agent, like a parent or teacher, supports their basic psychological needs (Ryan & Deci, 2017).

The Basic Psychological Needs Theory suggests that an individual's sense of life satisfaction is influenced by the fulfillment of three fundamental psychological needs.Prosocial behavior and social support are recognized as pathways to meet these needs, facilitating positive social interactions and cooperation, ultimately contributing to improved psychological health and life satisfaction (eg., Weinstein & Ryan, 2010; Tian et al., 2016). This theory underscores the critical role of addressing autonomy, belonging, and competence in enhancing an individual's life satisfaction.

In the context of the Basic Psychological Needs Theory, researchers have explored how prosocial behavior is elucidated in its impact on life satisfaction.Firstly,prosocial behavior can provide individuals with opportunities to feel a sense of autonomy in their actions and decisions. When individuals engage in positive social interactions, expressing their values and making choices, it satisfies their need for autonomy, thereby promoting an increase in life satisfaction (Rinner et al., 2022). Secondly, prosocial behavior directly involves establishing connections and relationships with others. Through supporting, cooperating, and caring for others, individuals feel accepted and a sense of belonging to social groups. This social connection fulfills their need for belonging, contributing to an elevated level of life satisfaction (Weinstein & Ryan, 2010). Offering assistance inherently involves interpersonal interactions, shaping relationships by actively nurturing closeness,

eliciting positive responses, and fostering cohesion or intimacy. This perspective echoes the stance of Caprara & Steca (2005), who argue that the human capacity to provide help is vital for sustaining mutually fulfilling relationships. They posit that humans are evolutionary wired to perceive a sense of connection through the act of assisting others. Preliminary support for this idea was illustrated in a longitudinal study with volunteers, demonstrating that the subjective experience of feeling significant, acknowledged, and relied upon played a mediating role in the impact of helping others on life satisfaction (Piliavin & Siegl, 2007). Lastly, prosocial behavior often entails showcasing individuals' skills and contributions. By helping others, sharing experiences, or providing knowledge, individuals can demonstrate their competence and value (Nelson et al., 2015). This satisfies their need for competence, positively impacting their life satisfaction. In summary, Basic Psychological Needs Theory suggests that fulfilling these basic psychological needs is crucial for individuals to experience life satisfaction. Prosocial behavior serves as a pathway to meet these needs through social interactions and cooperation, thereby enhancing life satisfaction (Wentzel, 2014). This theoretical perspective underscores the significance of social connections and positive interactions for individual life satisfaction.

In the context of the Basic Psychological Needs Theory, researchers have explored how social support elucidated in its impact on life satisfaction. Firstly, social support meets the individual's need for belonging by providing care and support. When individuals feel understood, cared for, and have attachments in social relationships, they are more likely to experience a sense of life satisfaction. Secondly, social support can also, to some extent, promote individual autonomy. Individuals who receive support and understanding are more likely to feel a degree of freedom in social interactions,

contributing to the fulfillment of their need for autonomy and subsequently enhancing their sense of life satisfaction (Uchino, 2009). Thirdly, social support encourages and aids individuals in fully utilizing their capabilities, fostering a sense of competence in social interactions. This support helps individuals better cope with life challenges, thereby elevating their sense of life satisfaction (Thoits, 2011). In summary, the Basic Psychological Needs Theory posits that the satisfaction of these three fundamental needs is foundational for individual psychological health and life satisfaction. Social support, as a channel for meeting these basic needs, can assist individuals in building positive social connections, reducing life stressors, and thus positively influencing their life satisfaction. This theory underscores the crucial role of social support in meeting individual psychological needs and, consequently, promoting life satisfaction.

1.8.3   Psychological Resilience Theory

Psychological resilience is defined as an individual's ability to maintain or quickly restore their normal functioning when faced with adversity (Vella & Pai, 2019). This does not imply immunity to negative emotions or difficulties but rather refers to an individual's capacity to actively adapt, learn, and grow in overcoming life's pressures. Psychological Resilience Theory aims to comprehend how individuals can maintain or swiftly recover their mental health and adaptability in the face of life's stressors, challenges, and adversities (Fletcher & Sarkar, 2013). This theory emphasizes the study of individuals' positive adaptation and development when confronted with adversity, highlighting the concepts of resilience and recovery.

The Psychological Resilience Theory posits that the development of adaptive capacity stems from a combination of individual traits, psychological processes, and interactions with external support systems (Mukherjee & Kumar, 2016). This encompasses factors such as cognitive flexibility, self-efficacy, and social support (Arici et al., 2019). Social support is regarded as a crucial coping strategy, aiding individuals in better navigating life's stressors and challenges (Feeney & Collins, 2015). When individuals encounter difficulties, receiving understanding, care, and support from others helps reduce emotional burdens and enhances their ability to cope with adversity, thereby maintaining or restoring life satisfaction (Shastri, 2013). The Psychological Resilience Theory underscores individuals' capacity to adapt and recover when confronted with stress, adversity, and challenges (Troy et al., 2023). This theory focuses on how individuals maintain or restore their life satisfaction and adapt to difficulties and adjustments in the face of adversity (Hartmann et al., 2022). The concept of resilience is often closely tied to both social support and life satisfaction. Resilience is defined as "the ability to adapt to stress and adversity" (Liu et al., 2017). Research highlights resilience as a critical psychological resource that supports the life satisfaction of individuals facing traumatic stress (Yildirim et al., 2020). Resilient individuals effectively safeguard their psycho-social and mental health in the face of adversities, alleviating the negative impacts of stressful situations. Resilience significantly contributes to life satisfaction (Arslan & Yildirim, 2020). Resilience is recognized to be associated with psycho-social functioning (Pietrzak et al., 2010), health, social relationships, life satisfaction, affect balance, and flourishing (Yildirim, 2019).

The Psychological Resilience Theory can explain the positive impact of social support and prosocial behavior on life satisfaction, emphasizing the roles of social connections, emotional resonance, and a sense of purpose (eg., Yıldırım & Tanrıverdi, 2021; Saddique et al., 2021; Haller et al., 2022). Additionally, the theory can explain the importance of satisfying basic psychological needs in promoting individual adaptation and life satisfaction (Abualkibash, 2019).

The Psychological Resilience Theory provides insights into how social support mechanisms influence an individual's life satisfaction. Social support plays a role in slowing down the spread and accumulation of negative impacts (Mcdowell, 2023). Faced with adversity, individuals who share their problems with friends, family, or social groups within their social networks receive support and comfort, contributing to the alleviation of emotional burdens and preventing the prolonged accumulation of negative emotions, thus sustaining a level of life satisfaction (Wang et al., 2018). Social support also contributes to the establishment of closer social connections and a sense of group identity for individuals. This connection and sense of belonging provide a feeling of security and understanding, ultimately enhancing an individual's life satisfaction. In essence, psychological resilience theory emphasizes the pivotal role that social support plays in shaping and fortifying psychological resilience in the face of life's challenges. The interconnections of supportive social networks acts as a crucial buffer, not only alleviating the immediate negative impacts but also fostering long-term emotional resilience. By fostering a sense of connection, understanding, and security, social support contributes significantly to the overall enhancement of an individual's life satisfaction. This theory underscores the importance of a supportive social environment for sustained emotional health and life satisfaction.

Psychological Resilience Theory provides a comprehensive explanation of the impact of prosocial behavior on life satisfaction. Firstly, engaging in prosocial behavior, as outlined by Xiao et al. (2023), fosters the development of closer social connections and a heightened sense of group identity. This interconnections and sense of belonging cultivate feelings of acceptance and understanding, contributing significantly to the enhancement of life satisfaction. Secondly, the emotional dimension of prosocial behavior is evident in the study by Nelson et al. (2016), which conducted a 6-week longitudinal experiment involving 473 participants. The research substantiates that activities such as helping others, sharing joy, and participating in cooperative efforts generate positive emotional experiences. This emotional resonance and satisfaction with others contribute positively to an individual's life satisfaction. Lastly, involvement in prosocial behavior, as highlighted by Klein (2017), imparts individuals with a profound sense of meaning and purpose. Klein's evidence, derived from a nationally representative datasets and two experiments in the United States, supports the notion that helping others and engaging in social activities instill in individuals a belief that their actions have a positive impact on society, thereby playing a pivotal role in the enhancement of life satisfaction. In summary, Psychological Resilience Theory offers a nuanced understanding of how prosocial behavior shapes various facets of life satisfaction, encompassing social connections, emotional experiences, and a sense of purpose.

The Psychological Resilience Theory can explain the impact of basic psychological needs on life satisfaction. Firstly, individuals have a need for autonomy and self-determination. When individuals have a certain degree of freedom in their lives and can make choices that align with their values and interests, they are more likely to

experience life satisfaction and satisfaction (Sapmaz et al., 2012). Secondly, humans are social beings with an innate need to establish connections and relationships with others. By fostering positive relationships, receiving support, and understanding, individuals feel accepted and a sense of belonging, thereby enhancing their sense of life satisfaction (Haim et al., 2023). Thirdly, individuals aspire to develop and showcase their abilities. When they can fully utilize their skills, experience a sense of accomplishment, and engage in continuous learning and growth, these satisfy their need for competence, contributing to an increase in life satisfaction (Shir et al., 2019).

So Psychological Resilience Theory provides a framework and theoretical support for understanding the influence of basic psychological needs on life satisfaction. The Psychological Resilience Theory emphasizes the importance of maintaining adaptability and quick recovery in adversity (Fletcher & Sarkar, 2013). When faced with challenges, college students may enhance their psychological resilience by seeking social support, engaging in prosocial behavior, and satisfying basic psychological needs, allowing them to better adapt to adversity.

Figure 1.2

Theoretical Framework
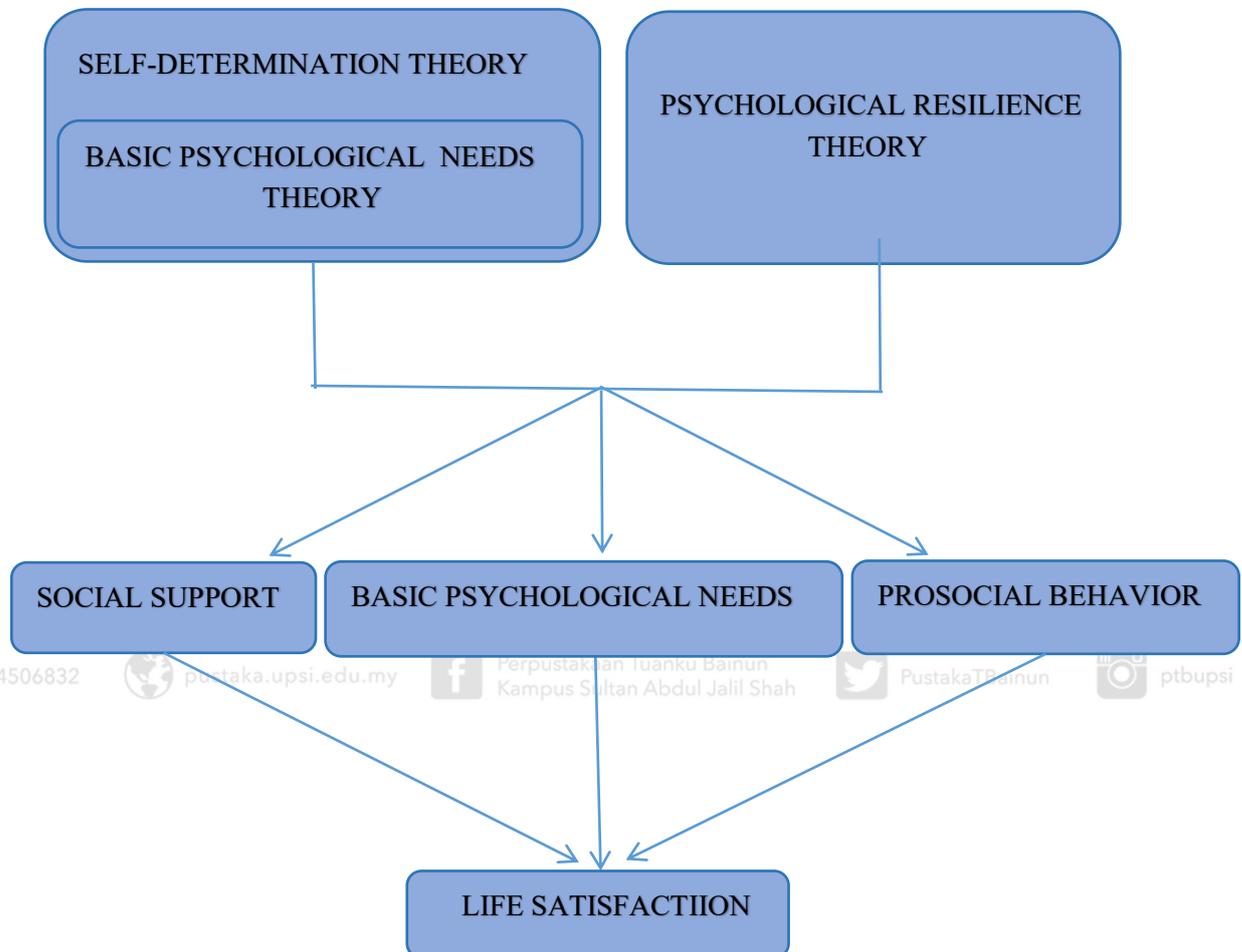
1.9   **Operational Definitions**

The following concepts are operationally defined based on their actual meanings as conveyed or implied in the research: prosocial behavior; life satisfaction; basic psychological needs; self-esteem; social support. By operationally defining these concepts, researchers can establish clear criteria and measures to consistently assess them across different studies and contexts, ensuring the reliability and validity of their

findings. This approach helps ensure the research's applicability across various contexts and provides a consistent framework for cross-cultural or longitudinal studies. Through operational definitions, researchers gain a clear understanding of these complex concepts and translate them into observable and measurable indicators, thereby laying a more rigorous and reliable foundation for scientific inquiry.

1.9.1 Life Satisfaction

Life satisfaction encompasses an individual's overall life experience, incorporating various dimensions of positive functioning. Certain theories of life satisfaction, have centered around the satisfaction of needs and goals. In psychological literature, life satisfaction is defined as an individual's subjective evaluation of their own life. This evaluation reflects the balance between pleasurable and negative thoughts and feelings (Malvaso & Kang, 2022). Essentially, life satisfaction is characterized by a reduction in negative feelings and an increase in positive feelings. Life satisfaction refers to an individual's subjective evaluation of their quality of life based on their own standards (Berggren & Bjornskov, 2020). Life satisfaction represents a comprehensive judgment about one's own life, acting as a cognitive factor that influences emotional experiences. This, in turn, affects an individual's life goals and behavioral pursuits, thereby having significant implications for both the individual and society at large.

1.9.2 Prosocial Behavior

Prosocial behavior encompasses voluntary actions performed with the intention of benefiting others, including activities such as sharing, donating, caring, comforting, and providing assistance (Eisenberg et al., 2006). Within social psychological theories, there is often a distinction made between altruistic and egoistic motivations driving prosocial behavior.Altruistic behavior is typically characterized as prosocial actions motivated by a genuine desire to benefit another person, without expecting any personal gain in return (Feigin et al., 2014). Although the terms prosocial behavior and altruism are sometimes used interchangeably (Hawley, 2014). In this research, prosocial behavior is defined as demonstrating empathy and care towards others, along with corresponding voluntary actions aimed at benefiting them (Eisenberg et al., 2006).

1.9.3 Basic Psychological Needs

In this study, basic psychological needs, as outlined by Deci & Ryan (2006), encompass autonomy, relatedness, and competence needs. These three basic psychological needs are considered important factors in achieving individual intrinsic motivation and life satisfaction for everyone. Autonomy is defined as the need for individuals to perceive themselves as the authors of their actions and not as being controlled by external forces (Ryan & Deci, 2017). Competence refers to one's need to experience effectiveness in one's interactions with the world (Ryan & Deci, 2017). Relatedness refers to the inherent desire of individuals to establish positive and supportive relationships with

others, experiencing a fundamental need for social connection and a sense of belonging (Deci & Ryan, 2000).

1.9.4   Social Support

Social support encompasses the social assets, resources, and networks available to individuals when they seek aid, advice, assistance, approval, comfort, protection, or backing. It embodies the assurance that one is cared for, esteemed, valued, and part of a network involving communication and mutual obligations (Cobb, 1976). Sarason et al. (1983) define social support as the "existence or availability of people on whom we can rely, people who let us know they care about, value, and love us." According to Demaray et al. (2005), social support is a concept that arises from various sources such as parents, teachers, close friends, classmates, and the school, encompassing multiple types like emotional, informational, appraisal, and instrumental support. These various forms of support may contribute to enhancing a student's adjustment and outcomes. It is important to note the distinction between actual receipt of support and perceived support, where the latter refers to the belief that support will be available if needed (Okun & Keith, 1998). Perceived social support refers to the subjective perception of the level of support an individual believes they receive from their social relationships. This includes emotional support, tangible assistance, and informational guidance from friends, family, colleagues, or the community (Li et al., 2018). In this study, social support is measured through perceived social support, emphasizing the individual's belief that support is available, as a substantial body of literature suggests that perceived

social support is more predictive and functional than received social support (Li et al., 2018).

1.9.5 Self-Esteem

Self-esteem involves an individual's overall assessment of their own self-worth. The conceptualization in this study primarily aligns with Rosenberg's (1965) perspective, emphasizing the value placed on one's positive self-image. Recognized as a fundamental aspect in mental health and life satisfaction research (Fox, 2000), self-esteem plays a crucial role in understanding various psychological phenomena. In an academic context, researchers have employed self-esteem as an indicator within explanatory models based on self-determination theory to elucidate university students' life satisfaction. In the context of this study, self-esteem is defined as an individual's positive or negative orientation toward themselves, encompassing both feelings and qualitative judgments.

1.10 Importance of Research

This research aims to broaden the understanding of the impact of prosocial behavior, basic psychological needs and social support on life satisfaction. Traditionally, studies focusing on these aspects have been conducted independently. However, this study takes a pioneering approach by developing a comprehensive model of life satisfaction that integrates these previously separate variables. Through this integration, the study

seeks to offer a more nuanced perspective on the factors influencing individual life satisfaction. By doing so, it aims to establish a robust groundwork for future research and practical applications in this field.

Moreover, the research aspires to formulate a life satisfaction model tailored specifically to Chinese university students in Shandong, utilizing self-esteem as a mediating factor. The introduction of this mediating variable aims to offer a more nuanced comprehension of the intricate relationship between basic psychological needs and life satisfaction. This all-encompassing model not only enriches the life satisfaction research landscape in Shandong but also brings depth and specificity to the examination of these psychological factors within the context of Chinese university students. The potential for further expansion remains, as the study lays the groundwork for future explorations and extensions in this evolving research domain.

Beyond its theoretical advancements, this research extends its impact into practical realms by offering valuable insights for university students to enhance their life satisfaction and overall quality of life. The findings serve as a practical reference, providing students with guidance on strategies to improve their satisfaction and life satisfaction.This study has played a crucial role in advancing the understanding of life satisfaction among university students, particularly in the unique cultural context of Shandong Province. By focusing on this specific region and cultural background, the research fills an important gap in the existing literature. Previously, there was a notable absence of studies investigating how prosocial behavior, social support, and basic psychological needs influence life satisfaction within the framework of Confucian culture in Shandong. Therefore, this study offers a novel perspective on elucidating the

mechanisms underlying life satisfaction formation within this cultural and regional context. Moving forward, future research can build upon these findings to further explore and refine the understanding of the factors shaping the life satisfaction of university students in Shandong Province.

The transition from secondary to tertiary education is widely acknowledged as a challenging and stressful process (Vanzyl et al., 2020). The stressful nature of the first-year experience adversely affects students' academic performance and life satisfaction (Scott, 2018). Also, it is argued that the first year of studies represents a pivotal period for equipping students with the skills necessary to navigate university life while simultaneously enhancing their readiness for the workforce (Akkermans et al., 2018). Expanding research on the life satisfaction of freshmen holds significance in gaining deeper insights into the challenges they face in university life and lays the groundwork for providing more effective support and resources. Understanding the support and resources needed by freshmen in university life can help formulate more comprehensive and targeted policies to promote their academic success and overall life satisfaction. Most importantly, gaining a deeper understanding of freshman's life satisfaction can contribute to better supporting them as they transition into higher education. This not only helps improve freshman's life satisfaction and quality of life but also aids in nurturing them to become more adaptive and successful professionals, preparing them for their future careers.

Furthermore, the study extends its practical reach to educational institutions, offering guidance for universities to enhance instructional methodologies and management practices. By doing so, universities can contribute to fostering an

environment that positively influences students' satisfaction and life satisfaction. Furthermore, this research provides actionable guidance for teachers and parents alike. It illuminates various forms of support that can be extended to students, aiding in the improvement of their life satisfaction. The practical implications of this research are poised not only to benefit individual students but also to create a positive ripple effect within educational institutions and households, promoting life satisfaction on a broader scale.

1.11   Study Limitations

While this research contributes valuable insights, it is crucial to acknowledge its limitations for a comprehensive understanding. Recognizing these limitations is essential for ensuring the integrity and reliability of the study's findings.

First and foremost, it is important to recognize that the reliance on self-reported questionnaires for data collection introduces a potential limitation to the scope of this study. While self-report measures offer valuable insights into individuals' perceptions and experiences, they are inherently subjective and may be influenced by various biase (Chan, 2010). To address this limitation, future research endeavors could benefit from adopting a more comprehensive approach to data collection.One avenue for improvement involves incorporating multiple data sources to findings. Combining self-report data with objective measures, such as physiological indicators or behavioral observations, can provide a more well-rounded and accurate depiction of the phenomena under investigation (Sutarto et al., 2020). This approach not only enhances

the reliability of the results but also offers a more nuanced understanding of the complex interplay between variables.Additionally, diversifying the methodologies employed in research design could contribute to a more robust and holistic exploration of the research questions (Abdalla et al., 2018). While self-reported questionnaires provide valuable quantitative data, complementing them with qualitative methods, such as interviews or focus group discussions, can offer richer insights into participants' experiences. Qualitative data can capture nuances, context-specific details, and participants' subjective interpretations, adding depth to the overall analysis. So recognizing the limitations of relying solely on self-reported questionnaires opens avenues for improvement in future research. By incorporating multiple data sources and employing diverse methodologies, researchers can enhance the rigor, validity, and comprehensiveness of their investigations, ultimately contributing to a more nuanced understanding of the phenomena under study.

Secondly, it is crucial to acknowledge that the sample pool in this study is limited to three universities in Shandong, which poses a constraint on the generalization of the study's findings. To enhance the external validity and broaden the applicability of the research, expanding the participant pool across a more diverse array of institutions and geographical locations is imperative. Diversifying the sample across various universities, both within and outside Shandong province, would provide a more representative and comprehensive perspective on the life satisfaction of college students. This approach enables researchers to capture a more varied range of experiences, considering potential regional variations, cultural influences, and institutional differences. Furthermore, extending the study to encompass participants from different academic disciplines and socioeconomic backgrounds would contribute

to a more nuanced understanding of the factors influencing life satisfaction. Different academic environments and socioeconomic contexts can introduce unique challenges and opportunities that may impact students' life satisfaction in distinct ways. In summary, recognizing the limitation of a confined sample to three universities in Shandong emphasizes the importance of expanding the participant pool to enhance the study's external validity. A broader and more diverse sample will better reflect the complexity and diversity of factors influencing life satisfaction among university students in various settings, thus strengthening the overall robustness of the research.

Lastly, it is essential to note that, despite the identification of influential factors such as social support, prosocial behavior, and basic psychological needs on life satisfaction, certain demographic and contextual variables remain unexplored in this study. To achieve a more comprehensive understanding of the complexities influencing life satisfaction, future research endeavors should consider delving into the impact of factors such as sibling dynamics and socioeconomic status. Exploring the dynamics within sibling relationships can offer valuable insights into the support systems that individuals may have outside immediate family structures. Sibling interactions, rivalry, or cooperation can contribute significantly to one's life satisfaction and should be considered in the broader context of social support. Additionally, investigating the role of socioeconomic status is crucial for understanding how economic factors may shape individuals' life satisfaction. Socioeconomic disparities can influence access to resources, opportunities, and support networks, impacting the overall quality of life. Examining these variables will contribute to a more nuanced understanding of the multifaceted nature of life satisfaction. So, by acknowledging the unexplored demographic and contextual variables, future research endeavors can deepen our

understanding of life satisfaction. Examining factors like sibling dynamics and socioeconomic status will provide a more comprehensive and holistic perspective on the intricate interplay of elements influencing individuals' life satisfaction.

1.12   Summary

In this chapter，the first part mainly introduces background of the study and problem statement to show it is necessary to develop a model of life satisfaction among Chinese university students. The second part introduced conceptual framework, objectives, research questions and research hypotheses. On this basis, a model is proposed that shows influence mechanism of basic psychological needs, social support and prosocial behavior on life satisfaction, and the mediating effect of self-esteem between social support and life satisfaction among Chinese university students in Shandong. The third part introduce self-determination theory, basic psychological needs theory and psychological resilience theory in theoretical framework. The forth part shows operational definitions and theoretical contribution.