



The Relationship between Gratitude and Prosocial Behavior among High School Students in Da Nang: The Mediating Role of Meaning in Life

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ARTICLE INFO	ABSTRACT
Published Online: 29 October 2025	Gratitude is a positive emotion reflecting an appreciation and acknowledgment of the good things an individual receives from others and from life. Prosocial behavior reflects the tendency to help, share, and contribute to the common good. Meaning in life is an individual's sense of purpose and the perceived value of their own existence. This study aims to investigate the relationship between gratitude and prosocial behavior among high school students in Da Nang city, and to simultaneously examine the mediating role of meaning in life in this relationship. The study was conducted with 407 participating students who completed a survey using three standardized scales measuring gratitude, prosocial behavior, and meaning in life. The analysis results indicate that gratitude has a positive and significant influence on prosocial behavior, and that meaning in life partially mediates this relationship. This suggests that when students experience higher levels of gratitude, they tend to perceive their lives as more meaningful, and consequently exhibit more prosocial behaviors. Based on these findings, the study proposes several educational measures and experiential activities aimed at fostering gratitude and enhancing the perception of meaning in life for high school students, thereby contributing to the formation of positive character and a spirit of social responsibility in the younger generation.
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1. INTRODUCTION

Currently, the mental health of high school students is a matter of considerable concern. During adolescence, students begin to form their personal identity, life ideals, and value orientations. Therefore, cultivating positive qualities such as gratitude, empathy, a spirit of sharing, and prosocial behavior plays a crucial role in character development and the enhancement of spiritual well-being.

Gratitude is considered a positive psychological resource, reflecting an appreciation for the good things an individual receives from others and from life. According to Emmons & McCullough (2003), gratitude not only helps people become happier but also encourages them to engage in helping and socially supportive behaviors. Similarly, Wood et al. (2010) affirm that gratitude is closely linked to altruistic behaviors and the ability to maintain positive relationships.

However, many studies suggest that the relationship between gratitude and prosocial behavior is not always direct; it can be influenced by mediating factors such as meaning in life. Meaning in life reflects an individual's sense of purpose, value, and direction of existence. When individuals feel their

lives are meaningful, they tend to live more positively and are more willing to contribute to others and to society.

Currently, in Vietnam, research on the relationship between gratitude, prosocial behavior, and the mediating role of meaning in life among high school students remains very limited. Meanwhile, the age range of 16–18 is a key stage for establishing a system of values and character orientation (Arnett, 2014). Therefore, exploring the psychological mechanism governing positive social behavior in this age group holds significant theoretical and practical importance. Arising from this context, the study "The Relationship between Gratitude and Prosocial Behavior in High School Students in Da Nang City: The Mediating Role of Meaning in Life" is conducted to clarify the mechanism by which gratitude influences prosocial behavior through meaning in life. The research findings will not only contribute to the theoretical foundation of positive psychology but also provide practical value for designing educational programs on life values, gratitude, and character education for high school students.

2. THEORETICAL FRAMEWORK

2.1. Gratitude

In psychology, gratitude is viewed as a positive social emotion that arises when an individual recognizes that they have benefited from the kind actions of others and appreciates the source of that benefit (McCullough, Emmons & Tsang, 2002). It can be understood as a transient emotional state or a stable personality trait, contributing to the way an individual perceives and responds to the world. According to Algoe (2012), gratitude serves as a social mechanism that helps initiate, maintain, and strengthen positive relationships through the "Find-Remind-Bind" model. In Vietnam, this concept is closely associated with the traditional moral value of “*uống nước nhớ nguồn*” (drinking water, remembering the source), and is considered a virtue that needs to be nurtured in youth education (Vũ Ngọc Giang, 2024; Trần Văn Khánh & Hoàng Thanh Thúy, 2024).

Numerous empirical studies have pointed to the positive impact of gratitude on individual and social life. A review by Davis et al. (2016) showed that gratitude is closely related to life satisfaction and the perception of meaning in life, while a meta-analysis by Iodice, Malouff & Schutte (2021) demonstrated that it helps reduce anxiety and depression across various populations. Specifically in adolescents, gratitude not only strengthens psychological well-being but also fosters prosocial behavior and enhances community engagement (Ma, Tunney & Ferguson, 2017). Thus, gratitude is both a foundational element for healthy character development and a driving force for strengthening sustainable social relationships.

2.2. Prosocial Behavior

Prosocial behavior is a topic of deep interest in developmental and social psychology, reflecting voluntary actions intended to benefit others or the community (Eisenberg & Spinrad, 2014). This behavior can manifest in various forms such as helping, sharing, caring, protecting, and empathizing (Caprara et al., 2005). The core of prosocial behavior lies in its positive intention, meaning the action is performed with the desire to assist, regardless of the actual outcome.

According to Carlo & Randall (2002), prosocial behavior is both personal and social, as it is linked to moral values, cultural norms, and empathic ability—factors that form and develop strongly during adolescence. In the school context, behaviors such as helping classmates, sharing materials, or participating in volunteer activities all demonstrate students' positive social competence.

Regarding its characteristics, Nguyễn Trọng Lăng (2021) points out three salient features of prosocial behavior: (1) it contains the intention to benefit others; (2) its "prosocial" nature changes according to time and context; and (3) it is directed towards the common good rather than personal gain. These characteristics suggest that prosocial behavior is not

merely an emotional reaction but also an expression of cognition, morality, and life values.

Empirical studies also affirm the benefits of prosocial behavior for mental health and character development. Thoits & Hewitt (2001) found that individuals who frequently participate in volunteering activities have lower levels of depression and a higher perception of meaning in life. Aknin, Dunn & Norton (2012) demonstrated that helping others or spending money on others can increase positive emotions and personal happiness, regardless of income. Furthermore, Poulin et al. (2013) showed that individuals who regularly engage in helping behaviors often have better physical health and lower stress levels.

2.3. Meaning in Life

Meaning in life (MIL) is one of the central topics in existential psychology and positive psychology, considered a foundational element that guides human cognition, behavior, and emotions. According to Martela & Steger (2016), MIL is a construct composed of two main elements: the cognitive sense of meaning and the experiential component of meaning, reflecting the process by which individuals interpret their life as a purposeful and valuable whole. Frankl (1984)—the founder of logotherapy—asserted that humans have an innate need for purpose, and the loss of meaning leads to spiritual crisis.

George & Park (2016) suggest that meaning in life is not universal but an active process that each person constructs for themselves through the identification of goals, values, and behavioral direction. From a quantitative perspective, the three-dimensional model by Steger (2016) is the most commonly used, encompassing: coherence—the ability to understand and logically interpret one's life; purpose—a clear direction in life; and significance—the feeling that one's life holds value beyond the mundane.

In the Vietnamese context, Trương Thị Khánh Hà et al. (2024) applied this model to study young people with two main dimensions: presence of meaning—the feeling that life already has goals and values; and search for meaning—the effort to explore, construct, and affirm that meaning. This study adopts this approach, viewing MIL as a combination of the perceived presence and the deliberate search process, reflecting the extent to which individuals perceive and strive for a worthwhile life.

Regarding its role, numerous studies have demonstrated that MIL is a crucial psychological protective factor. Lutzman et al. (2021) found that individuals with a high level of MIL are less likely to experience suicidal ideation; Steger (2022) pointed out the link between low MIL and depression and loss of direction. Concurrently, MIL also serves as a driver for personal growth, helping individuals enhance self-awareness, consolidate self-worth, and orient positive behavior (Melnychuk, 2024).

Specifically, in high school students—a phase of identity formation and the development of life ideals—the recognition and search for meaning in life play a vital role in character formation, value orientation, and the promotion of prosocial behavior.

2.4. Theoretical Rationale for the Relationship between Gratitude and Prosocial Behavior

2.4.1. The Broaden-and-Build Theory of Positive Emotions

According to Barbara L. Fredrickson (1998, 2001), positive emotions such as joy, hope, and gratitude help broaden cognition, increase social connectedness, and build durable psychological resources. Unlike negative emotions that narrow the behavioral repertoire, positive emotions create an "upward spiral" (Fredrickson & Joiner, 2002), where positive behavior and positive emotion reinforce each other.

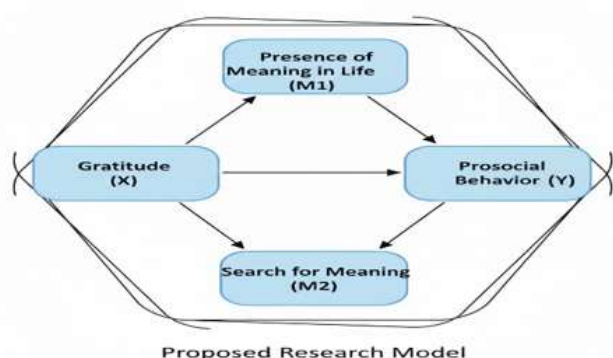
Gratitude helps individuals recognize and appreciate the goodwill of others, thereby promoting helping behavior and social bonding (Algoe, Haidt & Gable, 2008; Emmons & McCullough, 2003).

2.4.2. Self-Determination Theory (SDT)

Self-Determination Theory by Deci & Ryan (1985, 2000) posits that humans have three basic psychological needs: autonomy, competence, and relatedness. When these needs are met, individuals possess a strong intrinsic motivation to engage in behaviors of positive value. In this context, gratitude serves to enhance the sense of relatedness and self-worth, thereby encouraging prosocial behavior.

2.4.3. Proposed Model

Based on the two theories above, gratitude both activates positive emotions and satisfies the need for relatedness, consequently enhancing meaning in life—expressed through two aspects: presence and search for meaning (Steger et al., 2006).



Proposed Research Model

The proposed research model is:

Gratitude (X) to **Prosocial Behavior (Y)** through the two mediating variables: **Presence (M1)** and **Search (M2)** for **Meaning in Life**.

2.5. Theoretical Rationale for the Relationship between Gratitude and Meaning in Life

Wood et al. (2010) propose that gratitude is an appreciation of valuable things, linked to the recognition that the good

things come from others or the surrounding world. This emotion helps individuals connect with the community and perceive a deeper sense of meaning in life (MIL). Empirical studies have consistently reinforced this positive relationship between gratitude and MIL.

Specifically, Datu & Mateo (2015) showed that gratitude has a positive correlation with both the presence of meaning ($r = 0.35$) and the search for meaning in life ($r = 0.23$). Lin (2019) found that gratitude is related to MIL ($r = 0.57$) through the mechanism of self-esteem, which helps reduce suicidal ideation. Zhang et al. (2021) confirmed similar results on a larger scale in China, demonstrating that this connection is stable and cross-cultural. Chauhan et al. (2024) also found a strong correlation between the two variables ($r = 0.617$).

In terms of psychological mechanism, Emmons & Mishra (2011) and Wood et al. (2010) suggest that gratitude strengthens social relationships and helps individuals reframe negative experiences, thereby increasing their perceived value of life. However, an intervention study by Czyżowska & Gurba (2022) indicated that short-term gratitude is insufficient to create a change in MIL, as MIL is a relatively stable psychological construct. From a philosophical perspective, Manela (2022) noted that gratitude can foster moral behavior and a sense of self-worth, but if excessive, it might lead to feelings of guilt or a "debt of obligation."

Overall, studies confirm that gratitude is a positive predictor of meaning in life by enhancing social connectedness, regulating cognition, and promoting positive emotions, although more diverse research on culture and empirical intervention is still needed.

2.6. Theoretical Rationale for the Relationship between Prosocial Behavior and Meaning in Life

According to Self-Determination Theory and Existential Theory, perceiving meaning in life not only satisfies basic psychological needs such as autonomy, competence, and relatedness but also fosters an intrinsic motivation toward other-oriented behaviors (Guo et al., 2025). Numerous studies have demonstrated a positive relationship between meaning in life (MIL) and prosocial behavior.

Fu et al. (2022) showed that a high level of presence of meaning significantly predicts stronger prosocial behavior ($\beta = 0.19$, $p < 0.001$), particularly when social support is available. Dakin et al. (2021) also found that the search for meaning in life is positively correlated with prosocial behavior ($r = 0.22$ – 0.29 , $p < 0.03$), reflecting that people act for a purpose that transcends the self. Following the Wenchuan earthquake disaster, Wang et al. (2018) further confirmed that MIL acts as a mediating variable between post-traumatic stress disorder and prosocial behavior ($r = 0.38$, $p < 0.001$).

In summation, these findings indicate that meaning in life is a core psychological driver for the formation and

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maintenance of prosocial behavior, demonstrating stability across various contexts and cultures.

3. RESEARCH PARTICIPANTS AND METHODOLOGY

3.1. Participants

The study's participants are adolescents aged 16–18. The research sample focuses on individuals currently living and studying at high schools (THPT) in Da Nang city.

3.2. Methodology

Data Collection Method

A survey method using questionnaires was employed.

Based on the theoretical framework and research hypotheses, the following standardized scales were used:

GQ-6 (Gratitude Questionnaire-6; McCullough et al., 2002): Measures gratitude. The scale has been localized for Vietnamese context (Nguyễn Phước Cát Tường et al., 2020), with a reliability coefficient of ($\alpha = 0.83$)

PSA (Prosocial Scale for Adolescents; Caprara et al., 2005): Measures prosocial behavior. The scale has a reported reliability of ($\alpha > 0.8$) and was adjusted to be suitable for high school students (aged 16–18).

MLQ (Meaning in Life Questionnaire; Steger et al., 2006): Measures meaning in life (with two factors: Presence and Search). It was localized and validated by Trương Thị Khánh Hà et al. (2024), with a reliability coefficient of ($\alpha = 0.8$).

Data Processing Method (Mathematical Statistics)

The study used SPSS software to process and analyze data according to the following steps:

Descriptive Statistics: Used to calculate the mean scores to assess the level of the variables (gratitude, meaning in life, prosocial behavior), and the valid percent to describe the distribution of responses on the Likert scale.

Correlation Analysis: The Pearson correlation test was run to investigate the relationship between the variables. Variables with a significant correlation were then included in the regression analysis.

Regression Analysis: Simple and multiple regression analyses were conducted to examine the influence of the gratitude variable on prosocial behavior and meaning in life, and the influence of meaning in life on prosocial behavior.

Mediation Test: The three-step procedure by Baron and Kenny (1986) was used to test the mediating role of meaning in life in the relationship between gratitude and prosocial behavior.

Additionally, the study also analyzed the differences between groups based on biological sex.

4. RESEARCH FINDINGS

4.1. Current Status of Gratitude, Prosocial Behavior, and Meaning in Life among High School Students (Ages 16–18)

4.1.1. Current Status of Gratitude Levels in High School Students (Ages 16–18)

The results of the descriptive statistics on the current status of gratitude levels, based on the reports of participants aged 16–18, are presented in Table 4.1.1.

Table 4.1.1. Current Status of Gratitude

No.	Survey Statement	Minimum Value	Maximum Value	Mean (M)	Standard Deviation (SD)	Brief Interpretation
1	I have so much in life to be grateful for.	1	7	4.98	1.538	Relatively high gratitude level
2	If I had to list all the things I felt grateful for, the list would be very long.	1	7	4.87	1.440	Profound awareness of gratitude
3	When I look at the world, I don't see much to be grateful for. (Reversed item)	1	7	4.71	1.651	Average trend – reflects the reverse nature of the question
4	I am grateful to many different people in my life.	1	7	4.99	1.458	Gratitude directed towards people

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5	As I get older, I find myself more grateful for the people, events, and situations that have been part of my life's history.	1	7	4.99	1.521	Demonstrates maturity in grateful emotion
6	It takes me a long time to feel grateful to someone or for something. (Reversed item)	1	7	3.68	1.377	Low score reflects a tendency for quick and direct gratitude

Table 4.1.1 illustrates the participants' current status of gratitude through six rating statements. The results indicate that the general level of agreement with statements about gratitude is moderately high, with an overall mean (M) of 4.87 on a 7-point scale, and a standard deviation (SD) of 1.51. The descriptive statistics show that the participants' level of gratitude is generally positive and stable (most statements have a mean score close to 5/7).

Specifically, the statement with the highest mean score is: "As I get older, I find myself more grateful for the people, events, and situations that have been part of my life's history" with M = 4.99; SD = 1.52. This reflects a deeper recognition of life's value and gratitude with age, which is consistent with the assumption that gratitude can be gradually formed and reinforced through life experiences.

The statement with the lowest mean score is: "It takes me a long time to feel grateful to someone or for something" (reversed item) with M = 3.68; SD = 1.38, indicating that the majority of participants experience gratitude relatively quickly and directly, without needing extensive reflection time.

Notably, another reversed item: "When I look at the world, I don't see much to be grateful for" has M = 4.71; SD = 1.65. The high mean score here reflects a relatively strong

disagreement with the negative statement, thus affirming the participants' positive outlook on the world and life.

Overall, the standard deviation values range from 1.38 to 1.65, indicating a moderate level of dispersion—meaning that the perception of gratitude is fairly consistent among individuals. However, there is still some degree of individual difference (some individuals having very low scores), which may be attributed to variations in living circumstances, life experiences, or personal value systems.

Compared to previous domestic studies, such as Tran Thi To Hoa (2022) (M = 3.39; SD = 0.49) and Nguyen Phuoc Cat Tuong et al. (2020) (M = 3.92; SD = 1.06), the current research findings show a significantly higher level of gratitude among high school students. This difference may stem from the developmental characteristics of the 16–18 age group—a phase where students are forming their personal identity and becoming more strongly aware of their own value, family, and society, especially within a rapidly changing educational and social context.

In sum, this result reflects a positive psychological foundation, which is an essential basis for further examining the role of gratitude in promoting prosocial behavior and nurturing meaning in life among high school students.

4.1.2 Current Status of Prosocial Behavior in High School Students (Ages 16–18)

Table 4.1.2. Current Status of Prosocial Behavior

No.	Statement	Min	Max	Mean	Standard Deviation (SD)
1	I am willing to help friends/colleagues when they are in difficulty.	1	5	3.68	0.770
2	I share joys and sorrows with my friends.	1	5	3.32	0.798
3	I am willing to participate in activities to help others.	1	5	3.57	0.821
4	I sympathize with people who are experiencing difficulties.	1	5	3.83	0.910

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5	I am willing to share my personal belongings with those who need help.	1	5	3.38	0.822
6	I share my feelings with those who are feeling sad.	1	5	3.42	0.861
7	I am capable of comforting people who are sad.	1	5	3.58	0.817
8	I try to understand the circumstances of others.	1	5	3.63	0.845
9	I am willing to share what I have with others.	1	5	3.52	0.937
10	I care about the feelings of others.	1	5	3.74	0.804
11	I regularly participate in community or charitable activities.	1	5	3.42	0.861
12	I value people who are always willing to help others.	1	5	3.48	0.907
13	I feel happy when I can support others.	1	5	3.57	0.837
14	I actively create opportunities to help others.	1	5	3.54	0.824
15	I often think about how I can help others within my capacity.	1	5	3.63	0.877
16	I feel that helping others is an important part of my life.	1	5	3.62	0.877

Table 4.1.2 shows the current status of participants' prosocial behavior across 16 statements. The results indicate a moderately fair level of prosocial behavior ($M = 3.62$, $SD = 0.79$), reflecting the students' tendency to be willing to assist others.

The statement with the highest mean score is "I comfort others when they are sad" ($M = 4.05$; $SD = 0.95$), suggesting participants have good capacity for empathy and emotional support. Conversely, the statement with the lowest score is "I easily lend money or other things to others" ($M = 2.98$; $SD = 1.12$), indicating that material sharing behavior is less common, possibly due to social reservations or limited economic capacity.

Some statements like "I happily help friends/colleagues in their activities" ($M = 3.78$) and "I try to encourage those who are sad" ($M = 3.74$) score relatively high, reflecting a tendency to help within close relationships. In contrast, more subtle empathetic expressions such as "I immediately recognize others' discomfort" ($M = 3.42$) or "I deeply feel the emotions of others" ($M = 3.31$) score lower, suggesting that students' ability to recognize indirect emotions is still limited. Overall, the participants' prosocial behavior leans towards emotional rather than material or cognitive support, which is consistent with trends noted in previous studies in Vietnam (Le Van Hao, 2016; Nguyen Tuan Anh, 2018).

4.1.3. Current Status of Meaning in Life in High School Students (Ages 16–18)

Table 4.1.3. Current Status of Presence and Search for Meaning in Life

Meaning in Life Classification	Number (N = 406)	Percentage (%)
High Presence, High Search	135	33.3
High Presence, Low Search	68	16.7
Low Presence, High Search	67	16.5
Low Presence, Low Search	136	33.5
Total	406	100.0

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The results indicate that 33.3% of students exhibit *High Presence and High Search* for meaning in life, representing those who possess clear awareness of their life goals and actively pursue their personal values.

Conversely, the group with *Low Presence and Low Search* also accounts for 33.5%, revealing that a substantial proportion of students have yet to define their life purpose or engage in seeking meaning.

The two remaining groups—*High Presence, Low Search* and *Low Presence, High Search*—each constitute roughly 16–17%, reflecting transitional stages: one group perceives meaning but is less inclined to explore further, while the other is actively searching yet has not fully realized life meaning.

Overall, the distribution of meaning in life among high school students appears fairly balanced, emphasizing the importance of educational initiatives on value orientation, life skills, and personal development within schools.

4.2. Relationship between Gratitude, Prosocial Behavior, and Meaning in Life in High School Students (Ages 16–18)

4.2.1. Influence of Gratitude on Prosocial Behavior and Meaning in Life

Pearson Correlation Analysis

If $r > 0$ and $\text{Sig.} < 0.05 \rightarrow$ there is a positive and significant correlation.

Table 4.2.1. Correlation matrix among variables (N = 406)

Variable	Gratitude	Prosocial Behavior	Meaning in Life
Gratitude	1	0.376 ($p < .001$)	0.299 ($p < .001$)
Prosocial Behavior	0.376 ($p < .001$)	1	0.371 ($p < .001$)
Meaning in Life	0.299 ($p < .001$)	0.371 ($p < .001$)	1

The Pearson correlation analysis results indicate that all study variables have a positive and statistically significant relationship. Specifically, gratitude is positively correlated with prosocial behavior ($r=0.376$; $p<0.001$) and with meaning in life ($r=0.299$; $p<0.001$). This means that as an individual's level of gratitude increases, they tend to exhibit more prosocial behavior and simultaneously experience a deeper sense of meaning in life.

Furthermore, prosocial behavior also has a positive correlation with meaning in life ($r=0.371$; $p<0.001$),

suggesting that individuals who frequently engage in helping and supporting behaviors are more likely to perceive their lives as meaningful.

According to Cohen's (1988) criteria, the correlation coefficients in this study are at a moderate level. This result confirms the important role of gratitude in promoting positive social behavior and nurturing a sense of meaningful life, while also highlighting the role of prosocial behavior as a bridge in the relationship between gratitude and meaning in life.

4.2.2. Influence of Meaning in Life on Prosocial Behavior

Table 4.2.2. Linear Regression Results: Influence of Meaning in Life on Prosocial Behavior

Independent Variable	R ²	β	SE	t	p
Presence of Meaning in Life	0.197	0.292	0.102	4.97	<0.01
Search for Meaning in Life		0.229	0.099	3.89	<0.01

Dependent Variable: Prosocial Behavior

The multiple regression analysis reveals that both aspects of meaning in life—including the presence of meaning in life and the search for meaning in life—have a positive and statistically significant influence on prosocial behavior.

Presence of Meaning in Life: $\beta=0.292$, $SE = 0.102$, $t=4.97$, $p<0.01$

Search for Meaning in Life: $\beta=0.229$, $SE = 0.099$, $t=3.89$, $p<0.01$

The R² value of 0.197 indicates that the model explains approximately 19.7% of the variance in prosocial behavior.

This reflects a stable and notable link between the two aspects of meaning in life and prosocial behavior.

Although the predictive proportion is not exceedingly high, the results suggest that individuals who either perceive a clear meaning in life or are actively seeking life meaning tend to exhibit more prosocial behavior.

This finding aligns with the research hypothesis and reinforces social-psychological theories that meaning in life is an internal motivator that drives people towards positive, altruistic, and community-engaged behavior.

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4.2.3. Mediating Role of Meaning in Life in the Relationship between Gratitude and Prosocial Behavior

The study examined whether Meaning in Life (Mean Score) mediates the relationship between Gratitude (X) and

Prosocial Behavior (Y), based on the three-step procedure of Baron and Kenny (1986).

Table 4.2.3: Summary of Mediation Model Test Results (Baron & Kenny, 1986)

Test Step	Regression Equation	Standardized β Coefficient	Sig. (p)	Conclusion
Step 1	Prosocial Behavior (Y) = $\beta_1 \times$ Gratitude (X)	$\beta_1=0.376$	$p<.001$	Gratitude significantly affects Prosocial Behavior → Condition 1 met
Step 2	Meaning in Life (Mean Score (M)) = $\beta_2 \times$ Gratitude (X)	$\beta_2=0.299$	$p<.001$	Gratitude significantly affects Meaning in Life → Condition 2 met
Step 3	Prosocial Behavior (Y) = $\beta_3 \times$ Gratitude (X) + $\beta_4 \times$ Meaning in Life (Mean Score (M))	$\beta_3=0.291$ $\beta_4=0.283$	$p<.001$ (both)	The effect of X → Y decreases but remains significant → Meaning in Life acts as Partial Mediator

The results presented in the Table indicate:

Step 1: Gratitude has a positive and statistically significant influence on prosocial behavior ($\beta=0.376$; $p<.001$). This suggests that as an individual's level of gratitude increases, prosocial behavior also tends to increase. This result meets the first condition of the mediation model.

Step 2: Gratitude has a positive and statistically significant influence on meaning in life ($\beta=0.299$; $p<.001$). Thus, individuals with high gratitude generally perceive a clearer sense of meaning in their lives. This satisfies the second condition.

Step 3: When both gratitude and meaning in life are simultaneously entered into the regression model to predict prosocial behavior, both independent variables show a positive and statistically significant influence ($\beta_X=0.291$; $\beta_M=0.283$; $p<.001$). However, the coefficient for gratitude decreases from 0.376 to 0.291, indicating that the direct effect of gratitude on prosocial behavior still exists but is attenuated by the presence of the mediator variable.

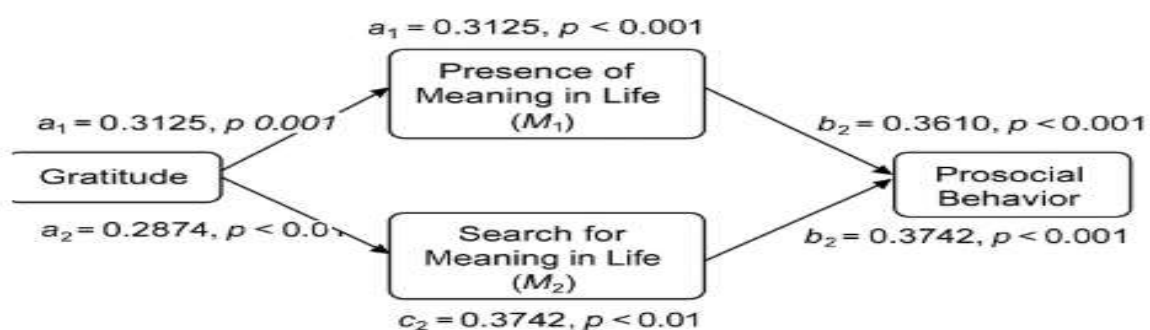
Based on these results, it can be concluded that: Meaning in Life plays a partial mediating role in the relationship between

gratitude and prosocial behavior, which is consistent with the hypothesis. In other words, gratitude not only impacts prosocial behavior directly but also indirectly by helping individuals perceive a deeper sense of meaning in their lives. When people appreciate and acknowledge the positive value of life, they tend to form positive emotions, foster the motivation to act towards others, and exhibit more social support behaviors.

This finding contributes to strengthening the theoretical basis regarding the role of gratitude in promoting positive behaviors, while also highlighting meaning in life as a crucial psychological mechanism for explaining this relationship.

In summary, the regression analysis results following the Baron and Kenny (1986) procedure confirm the research's hypothesis H5: "Meaning in life mediates the relationship between gratitude and prosocial behavior." This shows that high school students with high gratitude not only directly exhibit more prosocial behavior but also do so indirectly through a deeper perception of their meaning in life.

Figure 4.3.3. Mediation Model of Meaning in Life in the Relationship Between Gratitude and Prosocial Behavior



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The analysis was conducted on 406 high school students in Da Nang City (aged 16–18) using PROCESS Macro Model 4 in SPSS. The results indicated that gratitude (X) not only directly affects prosocial behavior (Y) but also exerts an indirect effect through the two components of meaning in life: Presence (M₁) and Search (M₂) for meaning.

Mediation Model 1 – Presence of Meaning in Life (M₁): Results show that gratitude has a direct effect on prosocial behavior ($c'1 = 0.3581$, $p < 0.001$) and an indirect effect through presence of meaning in life ($a1 \times b1 = 0.1337$, CI 95% [0.0614; 0.2226]).

The total effect of gratitude on prosocial behavior is 0.4918, with the indirect effect accounting for approximately 27.2% of the total effect.

The model explains 22.64% of the variance in prosocial behavior ($R^2 = 0.2264$), indicating that presence of meaning in life serves as a partial mediator in this relationship.

Mediation Model 2 – Search for Meaning in Life (M₂): Similarly, gratitude has a direct effect on prosocial behavior

($c'2 = 0.3742$, $p < 0.001$) and an indirect effect through search for meaning in life ($a2 \times b2 = 0.1037$, CI 95% [0.0372; 0.1915]).

The total effect is 0.4779, with the indirect effect accounting for about 21.7% of the total effect. This model explains 20.71% of the variance in prosocial behavior ($R^2 = 0.2071$), confirming that search for meaning in life also functions as a partial mediator between gratitude and prosocial behavior.

Conclusion:

Both models reinforce the hypothesis that gratitude positively influences prosocial behavior through meaning in life. When students clearly perceive and actively pursue meaning in life, they tend to show more empathy, sharing, and helpful behaviors toward others.

These findings suggest that social–emotional learning programs should focus on fostering gratitude and cultivating awareness of life’s meaning to encourage positive and compassionate behaviors in schools.

4.3. Comparison of Differences by Group

4.3.1. By Gender (Male-Female)

Table 4.3.1: Summary of Comparison Results by Gender Group (ANOVA)

Dependent Variable	F	Sig.	Test Conclusion	Note (Mean Score Male – Female)
Gratitude	3.215	0.074	No significant difference ($p > 0.05$)	Male (4.35) – Female (4.60)
Prosocial Behavior	5.472	0.020	Significant difference ($p < 0.05$)	Male (3.20) < Female (3.58)
Meaning in Life	1.981	0.160	No significant difference ($p > 0.05$)	Male (4.32) – Female (4.51)

The ANOVA test results show that the prosocial behavior variable has a significant difference ($p < 0.05$). Specifically, the mean score for Prosocial Behavior for the female group (3.58) is higher than that for the male group (3.20), suggesting that female students exhibit more prosocial behavior than

male students. However, no significant difference was found for Gratitude and Meaning in Life.

Conclusion: The hypothesis that "All 3 genders have no significant difference in gratitude, social behavior, and meaning in life" is partially rejected as a significant difference was found for Prosocial Behavior.

4.3.2. By Academic Performance

Table 4.3.2. Summary of Comparison Results by Academic Performance (ANOVA)

Dependent Variable	F	Sig.	Test Conclusion	Note (Homogeneous subsets – Mean Score)
Gratitude	2.812	0.061	No significant difference ($p > 0.05$)	Satisfactory (4.08) < Fair (4.46) < Good (4.75)
Prosocial Behavior	1.956	0.143	No significant difference ($p > 0.05$)	Satisfactory (3.10) < Fair (3.46) < Good (3.53)
Meaning in Life	4.129	0.017	Significant difference ($p < 0.05$)	Satisfactory (3.46) < Fair (4.50) < Good (4.71)

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Gratitude The ANOVA result shows $F(2,403)=2.812$, $p=0.061>0.05$, indicating no statistically significant difference among academic performance groups. However, considering the mean scores, the Good academic group (Mean = 4.75) has a higher level of gratitude than the Fair (Mean = 4.46) and Satisfactory (Mean = 4.08) groups, suggesting a trend where higher academic performance is associated with greater gratitude, though not reaching statistical significance.

Prosocial Behavior $F(2,403)=1.956$, $p=0.143>0.05$, indicating no significant difference. The mean scores show that the Good (Mean = 3.53) and Fair (Mean = 3.46) groups are higher than the Satisfactory group (Mean = 3.10). While not statistically significant, a positive trend is noted.

Meaning in Life $F(2,403)=4.129$, $p=0.017<0.05$, indicating a statistically significant difference among academic

performance groups. Tukey HSD analysis shows that the Good academic group (Mean = 4.71) and Fair group (Mean = 4.50) have significantly higher scores compared to the Satisfactory group (Mean = 3.46). This indicates that higher academic performance is associated with a clearer perception of meaning in life.

Conclusion: Academic performance has a significant influence on meaning in life, but does not clearly affect gratitude and prosocial behavior. Thus, the hypothesis that "Students with high academic performance have higher scores in gratitude and meaning in life compared to students with average or low academic performance" is only partially true. Students with higher academic performance tend to have a deeper perception of life values, but gratitude and positive social behavior may be influenced by other factors such as family environment, personal experience, or moral education.

4.3.3 By Grade Level

Table 4.3.3: Summary of ANOVA Analysis Results by Grade Level

Dependent Variable	F	Sig.	Test Conclusion	Note (Homogeneous subsets – Mean Score)
Gratitude	24.860	0.000	Statistically significant difference ($p<0.05$)	Grade 10 (3.88) < Grade 11 (3.86) < Grade 12 (4.28)
Prosocial Behavior	5.561	0.004	Statistically significant difference ($p<0.05$)	Grade 10 (3.72) < Grade 11 (3.77) < Grade 12 (4.05)
Meaning in Life	7.544	0.001	Statistically significant difference ($p<0.05$)	Grade 10 (3.93) < Grade 11 (3.89) < Grade 12 (4.24)

The ANOVA results show that the Sig. values are all <0.05 , proving a statistically significant difference among the grade levels (10, 11, 12) for all three variables:

Gratitude ($F=4.764$; $p=0.009$): The level of gratitude increases with grade level, with Grade 12 (Mean = 4.28) being significantly higher than Grade 10 (Mean = 3.88) and Grade 11 (Mean = 3.86).

Prosocial Behavior ($F=3.801$; $p=0.023$): Grade 12 students (Mean = 4.05) exhibit **higher prosocial behavior** than the other two grades (Grade 10 = 3.72, Grade 11 = 3.77).

Meaning in Life ($F=4.425$; $p=0.012$): The perception of meaning in life is higher in **Grade 12 students** (Mean = 4.24)

compared to Grade 10 (Mean = 3.93) and Grade 11 (Mean = 3.89).

Conclusion: There are statistically significant differences among the grade levels regarding gratitude, meaning in life, and prosocial behavior. Specifically, Grade 12 students demonstrate higher levels in all three aspects compared to Grades 10 and 11. This suggests that higher grade level is associated with more pronounced positive psychological development—final-year students tend to be more grateful, live more meaningfully, and exhibit more positive social behavior. The reason may be the clearer formation of learning experiences, value orientation, and personal responsibility during the phase of preparing to enter adulthood.

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4.4. Research Results on Measures to Enhance Gratitude

Content	Not Necessary	Less Necessary	Necessary	Very Necessary	Mean	SD	Rank
1. Proactively express gratitude in daily study and life	1.6%	3.1%	54.7%	40.6%	3.35	0.602	2
2. Schools organize workshops, seminars, and experiential activities on gratitude	0%	9.4%	51.6%	39.0%	3.30	0.650	3
3. Independently research, read books, and learn from role models of gratitude	1.6%	7.8%	50.0%	40.6%	3.30	0.675	4
4. Teachers integrate gratitude education content into subjects and class activities	0%	6.3%	53.1%	40.6%	3.34	0.620	2
5. Families regularly encourage, set examples, and practice gratitude with their children	0%	1.6%	38.0%	60.4%	3.59	0.520	1

Both subjective and objective factors have a certain influence on the formation and development of gratitude. Many students believe that gratitude training needs to be performed regularly, with specific methods, and linked to practical experience.

Content of Measure	Not Necessary (%)	Less Necessary (%)	Necessary (%)	Very Necessary (%)	Mean	SD	Rank
1. Practice "Counting Blessings" daily to deepen the awareness of life's value	0.8	3.1	42.6	53.5	3.49	0.601	2
2. Apply the CASEL model in learning and daily life (self-awareness – self-management – social awareness – relationship skills – responsible decision-making)	0.8	6.6	49.2	43.4	3.36	0.658	3
3. Utilize Gross's emotional regulation model to recognize, evaluate, and regulate positive emotions, and reduce negative ones	0.0	3.3	40.6	56.1	3.53	0.574	1
Average	—	—	—	—	3.46	—	—

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The table results indicate that all three measures are rated by participants as Necessary to Very Necessary, with an overall mean score of 3.46/4. The measure "Gross's emotional regulation model" achieves the highest score (Mean = 3.53), suggesting that learners highly value the role of understanding and regulating emotions in nurturing gratitude. The practice of "Counting Blessings" is also rated very positively (Mean = 3.49), reflecting the effectiveness of maintaining a habit of appreciation and positive recognition each day. The CASEL model, although slightly lower in score (Mean = 3.36), is still rated highly, indicating the need and feasibility of integrating social-emotional learning into the school environment.

In general, these measures form a comprehensive complementary system: CASEL helps establish the foundation of social-emotional competence, Gross helps regulate emotions appropriately, and "Counting Blessings" helps reinforce positive emotions, thereby promoting gratitude and prosocial behavior.

5. CONCLUSION

Through the research process, the study elucidated the link between gratitude, prosocial behavior, and meaning in life in young adults in Vietnam, and clearly identified the partial mediating role of meaning in life in this relationship. Based on positive psychology theoretical frameworks—specifically the Broaden-and-Build Theory of Positive Emotions (Fredrickson, 2001) and Self-Determination Theory (Deci & Ryan, 1985)—the research affirms that gratitude is a positive emotion capable of broadening cognition, fostering social connection, and creating a foundation for prosocial behaviors. Meanwhile, meaning in life reflects the individual's internal motivation and value orientation, serving as a crucial bridge that helps gratitude translate into prosocial behavior. This finding contributes to the existing theoretical foundation by clarifying the mediating mechanism of meaning in life—an aspect less explored in previous studies, especially within the young adult age group in Vietnam.

From a practical perspective, the study shows that the level of gratitude among young people is moderately fair, while prosocial behavior and meaning in life are at an average level. The link between gratitude and prosocial behavior is proven to be statistically significant, suggesting that gratitude can become a positive driving force for helping, sharing, and empathetic behavior within the community. The two factors of meaning in life—Presence of Meaning and Search for Meaning—respectively explain 19.93% and 18.05% of the variance in prosocial behavior. As the level of gratitude increases, the meaning in life score also increases, thereby amplifying prosocial behavior. However, meaning in life does not fully account for the relationship, indicating that the direct impact of gratitude on social behavior remains significant.

Overall, the research results not only reinforce the theoretical basis of positive psychology but also suggest practical application directions for education and personality development of Vietnamese youth today: nurturing gratitude is a sustainable path to promote a meaningful life and prosocial behavior in society.

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