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The Role of Meaning in Life as a Mediator in the Relationship Among Moral Identity, Hope, and Mental Well-being: A Subscale Perspective

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Abstract:

Introduction: Mental well-being (MW) has become increasingly challenging for university students. Research suggests that fostering hope, moral identity (MI), and meaning in life (MIL) can enhance MW. However, the mechanism by which these variables enhance MW is not clear. Theoretical frameworks propose that MIL represents a fundamental existential concern for human beings.

Objectives: This study investigated whether the presence of meaning in life (presence-MIL) mediates the relationship between the agency of hope (agency-HP), the pathway of hope (pathway-HP), the symbolization (symbolization-MI), and internalization aspects of moral identity (internalization-MI), and MW. In addition, since the search for meaning in life (search-MIL) is often associated with psychological distress and may negatively affect MW, the study also examined whether presence-MIL serves as a psychological buffer against this effect.

Methods: In this study, a cross-sectional design was employed. Using a stratified sampling technique, 595 students were selected from 10 colleges at Hawassa University, Ethiopia. Data were analyzed using Pearson correlation, independent t-tests, and structural equation modeling (SEM) with AMOS.

Results: The results demonstrated that the presence of MIL plays a partial mediating role in the relationship between agency-HP and pathway-HP with MW. The relationship between internalization-MI and symbolization-MI and MW was found to be fully mediated by the presence-MIL. The presence-MIL demonstrated the buffering effect against the negative impact of the search-MIL on MW.

Conclusion: The presence of MIL is critical for improving MW. Policy directions, public health interventions, such as hope therapies, and moral treatments to enhance MW should prioritize the incorporation of the MIL for successful outcomes.

Keywords: Agency, Pathway, Internalization, Symbolization, Meaning in life, Mental well-being.

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1. INTRODUCTION

Increasing concerns about MW challenges faced by university students have recently become an urgent issue [1, 2]. Data extracted from 5,561 journal articles published from 1975 to 2020 highlights a significant rise in mental wellness challenges among university students, especially since 2010 [3]. A cross-country survey reported that more than 60% of university students struggle to maintain their MW [4]. However, the majority of researchers have focused on treating mental illness, often neglecting the positive mental health/mental well-being that can make up the quality of life [5]. Currently, the MW status in sub-Saharan countries is becoming a significant challenge for establishing effective task forces [6, 7]. In Ethiopia, poverty, armed conflicts, limited job opportunities, and other sociopolitical issues may lead university students to experience moral vacuums, reduced hope, and increased desperation. Ultimately, these factors negatively affect mental well-being.

Psychological research recognizes that people who find meaning and purpose have a strong moral identity, hope, and improved MW [8, 9]. In particular, hope and moral identity are crucial factors for enhancing positive mental health. However, exploring the complexity of the relationship among these variables is necessary to understand them in detail. The specific mechanism by which these variables affect MW remains unexplored. This study aimed to investigate the role of meaning in life as a mediator in the relationship between moral identity and hope and MW. Given the complexity and detailed nature of the research question, the study utilized subscales to examine the variables.

1.1. Presence-MIL and its Mediating Effect

Meaning in Life (MIL) encompasses beliefs, experiences, goal-directed behaviors, and values that involve personal judgments, interpretations, aspirations, and evaluations of life [10]. Therefore, MIL explains the essence of life, determines motivation, and fosters the elements necessary for living. Ultimately, it improves our perception that life matters and is worthwhile. Both theoretical and empirical sources have strongly highlighted the significance of MIL in improving MW. However, the dimensions of MIL, namely the presence-MIL and the search-MIL, impact MW differently. The presence of MIL entails maintaining a stable set of values, goals, and purposes, whereas search-MIL necessitates individuals to actively participate in uncovering and understanding their purpose and significance. As a result, search-MIL is usually dynamic and uncertain, as noted by Steger [11].

Theoretical and empirical discussions justified the use of presence-MIL as a mediator. Barbara Fredrickson's Broaden-and-Build Theory of Positive Emotions suggests that positive emotions broaden thought processes and help build enduring psychological resources that support MW [12]. MIL is considered a positive emotional state; when individuals attain it (presence-MIL), they feel hopeful and become optimistic and morally integrated, which leads to improved MW. Edward Deci and Richard Ryan's Self-Determination Theory (SDT) advocates that behavioral outcomes involving self-determination significantly help to enhance MW [13]. MIL often stems from self-determination, allowing individuals to pursue their values and goals. As a result, people who find meaning in life are encouraged to feel hopeful and intrinsically motivated, leading to improved MW [14]. This suggests that individuals experience better MW when they attain meaning (presence-MIL) rather than when they are searching for MIL. In this regard, the empirical evidence in the field was not sufficiently clear. Disabato and Newman have established a positive and robust connection between MW and the presence of MIL [15, 16]. On the other hand, a definitive consensus on the impact of searching MIL on MW has yet to be reached. Some researchers, including Steger, have acknowledged that the relationship between search-MIL and MW remains unclear [10]. Other scholars have highlighted the potential negative associations, suggesting that the search-MIL may, at times, correlate with lower levels of MW [17, 18]. In addition to the theoretical underpinnings, this empirical evidence suggests that presence-MIL is the preferred mediator.

According to these theoretical and empirical discussions, presence-MIL is important in enhancing MW. However, it should be noted that there is no presence-MIL without search-MIL. Victor Frankl, in his theory of logotherapy, argued that the search for MIL is often the drive, leading to finding MIL, which boosts resilience and positively impacts MW [19]. The process of assimilation (integrating new information), accommodation (adjusting existing mental structures), and equilibration (balancing new information with existing knowledge) in Jean Piaget's theory of cognitive development [20] can justify the presence of MIL, search-MIL, and the balance between them, which is the most important element in the thought process. The presence of MIL involves the assimilation of new meanings using the existing way of thinking. Searches for new meanings allow individuals to create or modify existing understandings to better fit the changing needs of their environment. The presence-MIL and search-MIL processes are important to acquire meaning. However, the search for MIL involves a multifaceted and intricate process that may lead to distress and uncertainties, which can reduce MW, whereas the presence of MIL enhances MW by developing positive mental processes. Hence, the study proposed that establishing a clear sense of presence-MIL before engaging in search-MIL can counteract the adverse impact of search-MIL on MW.

1.2. Relationship among MI, Presence-MIL, and MW

Moral identity (MI) represents the degree to which moral traits (*e.g.*, fairness, honesty, kindness, generosity, and hard work) become part of one's identity [21]. MI affects the mental health and well-being of university students by influencing their behavior, actions, and decisions [22]. Cultivating MI improves the capacity to make optimal decisions and engage in less risky behaviors, such as unethical or harmful actions. Theodore Roosevelt, former American president, once stated that "to educate a man in mind and not in morals is to educate a menace in society." Individuals who have developed strong moral values often stick to their purpose and become successful in their life endeavors by building moral competence [23]. This leads to a satisfying

life and enhances MW. Having a strong moral identity can bring more meaning to life as people live according to their values, finding purpose and fulfillment in their actions. Likewise, when individuals attain meaning in life, it can boost their moral identity by helping to define and stand by values, improving how they see themselves, and influencing their future choices.

Empirical evidence has shown a positive relationship between the MI subscales (Symbolization-MI and Internalization-MI) and MW [24]. Understanding internalization-MI entails how your moral beliefs form the essence of your self-perception and how they connect to your personal identity. Symbolization-MI pertains to how moral principles are shown to others and how they relate to the public or social part of your MI [25]. Some scholars have argued that symbolization-MI predicts MW more than internalization-MI does [26]. However, it is not clear how the presence of MIL affects the relationship between the subscales and MW.

1.3. Relationship among Hope, Presence-MIL, and MW

Hope is widely recognized as essential for human health, development, and well-being. Hope has two aspects: the determination and strength to achieve life goals (referred to as agency-HP) and the different methods and paths to achieve those goals (known as pathway-HP) [27]. Consistent commitment to pursue possible paths toward goals builds up hope. Hope instills resilience [28]. Resilience enhances emotional well-being, fosters positive emotions, increases life satisfaction, and nurtures a sense of purpose [29, 30]. Conversely, hopelessness reduces MW and hinders life's success [31].

Although there are theoretical discussions (sub-section 1.1), there is a lack of sufficient documented empirical evidence on the role of presence-MIL in hope. There is an argument that claims discovering meaning in life leads people to be hopeful, believing that challenges in the pursuit of meaningful goals are worthwhile [32]. Research involving college students has demonstrated that maintaining hopeful thoughts can enhance psychological resilience and MW, particularly during challenging times [33-35]. The underlying dimensions of hope effectively predict MW. Studies indicate that the pathway-HP dimension predicts MW more effectively than the agency-HP dimension [36].

1.4. The Current Study

Based on the empirical and theoretical evidence and justification, this study proposes the presence-MIL as a mediator in the relationship among hope, MI, and MW. Barbara Fredrickson's Broaden-and-Build Theory of Positive Emotions and Deci & Ryan's Self-Determination Theory help to understand that presence-MIL leads to improved MW by fostering hope and MI. However, there is no definitive consensus on the impact of search-MIL on MW. In addition, the assimilation, accommodation, and equilibration in Jean Piaget's theory of cognitive development can justify the presence of MIL, and search-MIL has a complementary but different impact on MW. Considering this, the present study:

A. Investigates the degree and type of mediation presence-MIL plays in the relationship between MW and agency-HP, pathways-HP, internalization-MI, and symbolization-MI.

B. Detects whether presence-MIL serves as a psychological buffer, protecting the negative effects of search-MIL on MW, in which case, seeking further meaning can be viewed as an opportunity for personal growth rather than a treat for MW.

2. METHODS AND MATERIALS

2.1. Participants and Procedures

The study employed a cross-sectional study design. Data was collected from July to August 2024. Before the selection procedure, ethical clearance was obtained from Hawassa University. Participants from 109 randomly selected departments in 10 colleges at Hawasa University were included using a stratified sampling technique. Students were selected for the sample in proportion to the size of each college. With the consent and guidance of the university's psychiatry office, students who were formally identified with serious mental illness and attending professional support from the office were excluded. Verbal and written consent was received from the participants before data collection.

Kline recommended that a sample size greater than 200 is considered large for estimation using maximum likelihood in structural equation modeling [37]. Nevertheless, this method is simplistic and does not account for the complexities inherent in structural equation modeling. Daniel Soper's A-priori sample size online calculator was used to determine the required sample size, taking into account seven latent variables and 50 observed variables (including demographic variables), a medium effect size (medium = 0.3, based on common research findings in the area) [38, 39], the desired statistical power (0.8), and the significance level (0.05) [40]. The analysis showed that a minimum sample size of 170 was needed to detect the effect in this study, while 437 was required for the model structure.

In this study, 627 students were selected from 22 classes randomly. During data cleaning, 20 partially completed questionnaires, 6 totally unanswered questionnaires, 2 students under psychiatric follow-up, and 4 outlier questionnaires were excluded from the analysis. In cases where 11 questions from 8 respondents were unanswered, the average value was imputed using the imputation method. Finally, data collected from 595 students were used for the analysis (Table **1**).

2.2. Measures

The English version of the scales was used. A psychologist who belongs to the same culture as the research participants reviewed the survey instrument for relevance, appropriateness, and clarity. The expert identified whether items reflect culturally appropriate concepts to ensure content validity. The items in the scale were checked to determine if they were not aggressive and suitable for the target culture. Experts also checked for potential conflicts in cultural norms or sensitivities.

Table 1. Summary of the sampling procedure.

S.No.	College	Departments	Male	Female	Total	Sample Size
1	Institute of Technology	22	760	366	1126	67
2	Natural and Computational Science Education	16	643	376	1019	60
3	Medicine and Health Science	18	546	380	926	55
4	Agriculture	8	640	599	1293	76
5	Wendo Genet Forestry and Natural Resources	12	600	361	961	57
6	Business and Economics	8	754	489	1243	73
7	Social Science and Humanities	11	722	508	1230	73
8	Law and Governance	3	502	324	826	48
9	Teachers' Education	3	498	408	906	54
10	Natural and Computational Science Applied	8	820	266	1086	64
-	**Total**	**109**	**1485**	**714**	**10, 616**	**627**

2.2.1. Moral Identity

To evaluate moral identity, the scale developed by Aquino and Reed was adapted [41]. The scale comprised 10 items rated on a seven-point Likert-type scale from 1 (completely disagree) to 7 (completely agree). Its purpose is to assess how moral traits, such as caring, compassion, friendliness, generosity, fairness, hopefulness, hard work, honesty, and kindness, relate to individuals. Sample statements like "I strongly desire to possess these traits" and "Being a person with these qualities would bring me joy" were included. The initial scale demonstrated strong reliability, indicating consistent results with a Cronbach's α coefficient of 0.77 for internalization-MI and 0.76 for symbolization-MI. In this study, Cronbach's α coefficient of 0.91 for the MI scale, 0.88 for internalization-MI, and 0.86 for symbolization-MI indicated high reliability in measuring moral traits.

2.2.2. Meaning in Life

For assessing meaning in life, the scale developed by Steger was adapted [42]. The scale consisted of 10 items on a seven-point Likert scale ranging from 7 (completely true) to 1 (completely false). It has two subscales: presence-MIL and search-MIL. Sample items included "My life has a clear sense of purpose" and "I am searching for meaning in my life." The total score ranged from 5 to 35 for each of the subscales. A higher score indicated a strong sense of presence-MIL or a strong search-MIL. The reliability scores for the original scale, measured using Cronbach's α, ranged from 0.81 to 0.86 for presence-MIL and from 0.84 to 0.92 for search-MIL. In this study, reliability of 0.92, 0.89, and 0.87 was reported for the MIL, search-MIL, and presence-MIL, respectively.

2.2.3. Hope

The adult hope scale (AHS) developed by Snyder was adapted [43]. It consisted of 12 items rated on an eight-point scale ranging from 8 (definitely true) to 1 (definitely false), with 4 items each for agency-HP, pathway-HP, and fillers. Sample items included "I can think of many ways to get out of my problem" and "I have been pretty successful in life." Tested on different samples, Cronbach's α reliability values ranged from 0.74 to 0.84 [44]. For this study, the item "There are lots of ways around any problem" was excluded due to its low item-to-total correlation. The scores ranged from 3-24 and 4-32 for pathway and agency subscales, respectively. The higher score indicated a higher pathway and agency. For this study, Cronbach's α values of 0.86, 0.76, and 0.80 were demonstrated for the full-scale hope, pathway-HP, and agency-HP, respectively.

2.2.4. Mental Well-being

The Warwick-Edinburgh Mental Well-being Scale (WEMWBS) developed by Stewart was adapted for assessing MW [45]. The scale consisted of 14 items rated on a five-point Likert scale from 1 ("none of the time") to 5 ("all of the time"). Scores on the scale ranged from 14 to 70. A higher score on the scale indicated a higher level of mental wellness. Items, such as "I have been feeling good about myself" and "I have been feeling confident," were part of the scale. Cronbach's α reliability of the original scale for the university students was 0.89. Consistent results were confirmed for the English-speaking Chinese samples (α = 0.92) and Pakistani samples (α = 0.90) [46]. In this study, the internal consistency reliability of the total scale was high (α = 0.92).

2.3. Statistical Analysis

SPSS Statistics 27.0 was used to describe the subject characteristics using mean, standard deviation, and percentage. An independent t-test was conducted to examine the mean difference in MW based on gender, marital status, age, and GPA. The Pearson correlation coefficient was used to ensure the zero-order correlation among the endogenous, exogenous, and mediating variables.

IBM SPSS AMOS was used for the mediation analysis using structural equation modeling (SEM). Agency-HP, pathway-HP, internalization-MI, symbolization-MI, the presence-MIL, and the search-MIL were the exogenous variables. MW was the endogenous variable. The SEM was built to determine the mediating role of presence-MIL in the relationship between the exogenous and endogenous variables. It also aimed to assess how presence-MIL mitigates the negative impact of search-MIL on MW in the model. Prior to the structural analysis, tests for multicollinearity, outlier, and influential case analysis (leverage and Cook's distance) were conducted. The overall model fit using maximum likelihood was estimated using the χ^2/df (CMIN/DF), CFI (comparative fit index), GFI (goodness of

Table 2. Summary of the participants' characteristics using percentage, mean, standard deviation, and t-test.

Variables	n (%)	Mean (SD)	t (*p*-value)
Age	-	-	-
Emerging adult (18-24)	490 (82.5)	57.33 (8.17)	0.45 ($p > 0.05$)
Adults (25-34)	105 (17.5)	56.88 (9.69)	
Gender	-	-	-
Man	375 (63.0)	58.26 (7.77)	3.68 ($p < 0.001$)
Woman	220 (37.0)	55.53 (9.27)	
Marital status	-	-	-
Single	543 (82.4)	56.76 (8.58)	-7.62 ($p < 0.001$)
Married	52 (17.6)	62.35 (4.56)	
GPA	-	-	-
>= 3.20 (>=distinction)	319 (53.4)	57.75 (8.01)	1.77 ($p > 0.05$)
<3.20 (< distinction)	257 (46.6)	56.50 (8.96)	

Table 3. Zero-order correlations among agency-HP, pathway-HP, internalization-MI, symbolization-MI, presence-MIL, search-MIL, and MW.

-	N=595, *p<0.05, **p<0.001	mean	S.D	1	2	3	4	5	6	7	8	9
-	-	-	-	-	-	-	-	-	-	-	-	-
1	Gender	-	-	-	-	-	-	-	-	-	-	-
2	Age	23	2.00	-0.18**	-	-	-	-	-	-	-	-
3	Marital_stat	-	-	-0.05	0.43**	-	-	-	-	-	-	-
4	Pathway-HP	19.94	3.09	-0.19**	-0.09*	0.06	-	-	-	-	-	-
5	Agency-HP	26.63	3.73	-0.16**	0.02	0.22**	0.64**	-	-	-	-	-
6	Internalization-MI	31.25	2.88	0.02	-0.12**	0.03	0.36**	0.33**	-	-	-	-
7	Symbolization-MI	30.00	2.99	-0.03	-0.01	0.07	0.31**	0.30**	0.59**	-	-	-
8	The Presence-MIL	28.81	4.61	-0.14**	-0.02	0.19**	0.51**	0.57**	0.40**	0.38**	-	-
9	The Search-MIL	24.35	4.29	-0.12**	-0.05	0.14**	0.42**	0.44**	0.33**	0.26**	0.64**	-
10	MW	57.25	8.45	-0.16**	-0.02	0.19**	0.50**	0.57**	0.31**	0.26**	0.63**	0.46**

fit index), TLI (Tucker-Lewis index), and RMSEA (root mean square error of approximation). The level of model fitness was accepted when the CFI, TLI, and GFI values were 0.90 and greater; the relative chi-square was between 2 and 5, and the RMSEA was 0.08 or lower [47, 48].

3. RESULTS

3.1. Description of the Characteristics of the Participants

As mentioned in Table 2, the majority of the participants were male (63.0%), single (82.4%), and had a GPA of 3.20 or higher (53.4%). The average age was 23, with a minimum of 18 years old and a maximum of 34 years old. Emerging adults (18-24 years old) accounted for 82.4%.

MW was higher for men (t = 3.65, $p<0.001$) and lower for singles (t = -7.62, $p<0.001$) than for women and married, respectively. A significant difference was not observed in the level of MW between emerging adults and adults (t =0.45, $p>0.05$) and GPA (t = 1.77, $p >0.05$).

3.2. Correlational Relationship among all the Variables

Table 3 depicts the degrees and directions of the correlation among the exogenous and endogenous variables. The Pearson correlation and point-biserial correlation were computed using the same option (correlation >> bivariate >> Pearson) in SPSS. A similar explanation using the point biserial was already discussed in the independent t-test.

Accordingly, increased presence-MIL (r =0.63, $p<0.01$), search-MIL (r =0.46, $p<0.01$), pathway-HP (r =0.50, $p<0.01$), agency-HP (0.57, $p<0.01$), internalization-MI (r =0.31, $p<0.01$), and symbolization-MI were related to better MW. Similarly, a higher presence-MIL was associated with an increased search-MIL (r = 0.62, $p < 0.01$), pathway-HP (r = 0.51, $p < 0.01$), agency-HP (r = 0.57, $p < 0.01$), internalization-MI (r = 0.41, $p < 0.01$), and symbolization-MI (r =0.38, $p < 0.01$).

3.3. Presence-MIL as a Mediator Variable

The SEM path coefficients in Fig. (1) and the summary of effects in Table 4 revealed how presence-MIL influences MW. Before conducting SEM, Cook's distance for detecting outliers and leverage to assess how far an observation deviates from the average of the independent variables were analyzed. A value of 0.07 was the highest observed for Cook's distance, raising concern when it exceeded 1. For 7 predictors (p) at a 95% confidence interval, the maximum leverage value should not exceed 14.07 [49], calculated as 2p/n-observations. No observation exceeded this threshold.

VIF was less than 5, ensuring the absence of multicollinearity. Model re-specification was conducted to improve the initial model fit indices. Removing some covariance paths between variables and adding search-MIL in the diagram improved some of the fit indices. As a result, the RATIO (parsimonious fit ratio) index increased from 0.356 to 0.436, indicating a better balance between model fitness and complexity. The chi-square index (CMIN/DF) decreased from 4.689 to 4.017, TLI increased from 0.899 to 0.917, and RMSEA decreased from 0.079 to 0.071. Moreover, a GFI value of 0.971 and a CFI value of 0.964 demonstrated acceptable levels of goodness of fit.

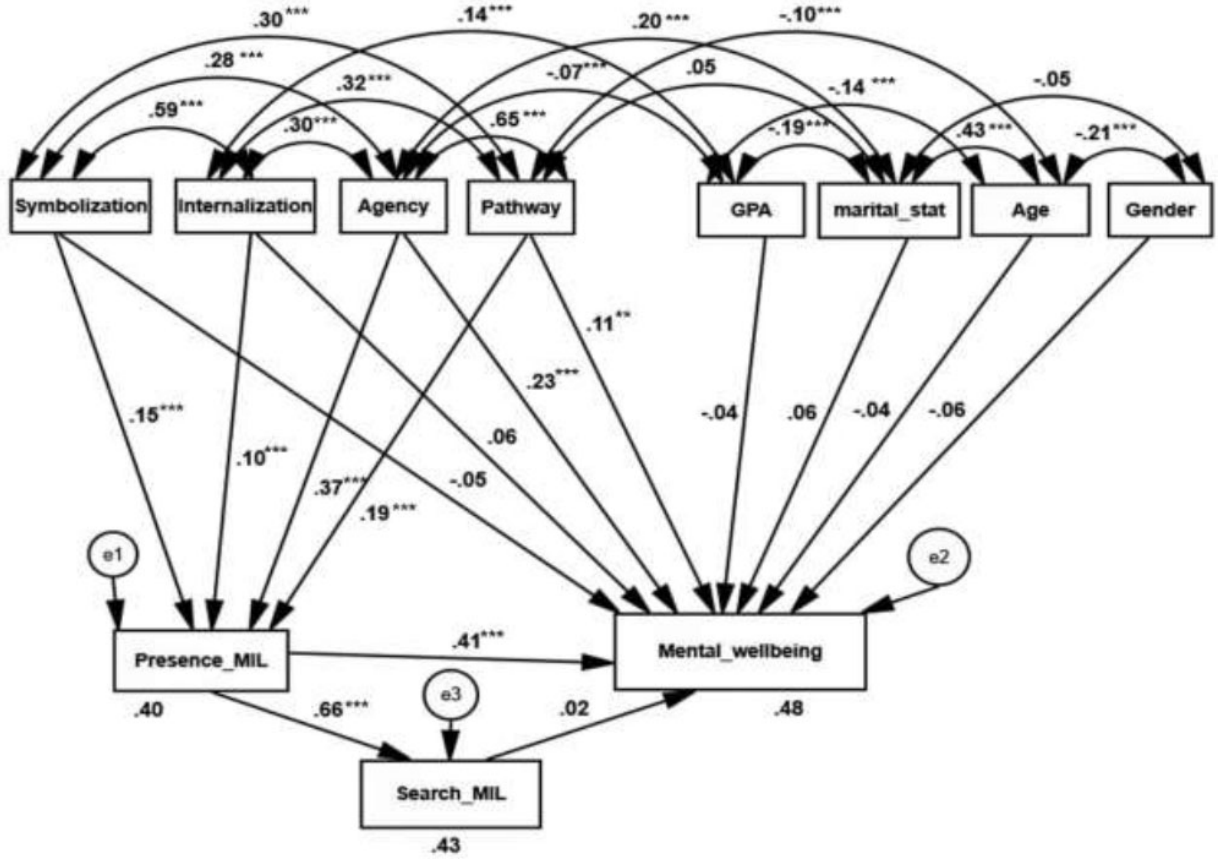

Fig. (1). Path diagram showing the mediating and buffering effects of presence-MIL.

Table 4. Summary of the direct, indirect, and total effects of the mediation analysis using presence-MIL as the mediator.

Variables and Effects	The Presence-MIL				
(Direct, Indirect, and Total)	B	*β*	Std. err	CL (95%)	*P*-value
Symbolization-MI	-	-	-	-	-
Direct	0.23	0.15	0.060	[0.11 – 0.35]	0.000
Internalization-MI	-	-	-	-	-
Direct	0.16	0.10	0.065	[0.033 – 0.287]	0.013
Agency-HP	-	-	-	-	-
Direct	0.37	0.37	0.041	[0.287 – 0.449]	0.000
Pathway-HP	-	-	-	-	-
Direct	0.17	0.19	0.38	[0.039 – 0.242]	0.000
-	**MW**				
-	B	*β*	Std. err	CL (95%)	*P*-value
The Presence-MIL	-	-	-	-	-
Direct	0.27	0.41	0.029	[0.209 – 0.323]	0.000

(Table 4) contd.....

Variables and Effects	The Presence-MIL				
Indirect	-	-	-	-	-
Total	0.27	0.41	0.029	[0.209 – 0.323]	0.000
The Search-MIL	-	-	-	-	-
Direct	0.02	0.02	0.028	[-0.040 – 0.075]	0.561
Indirect	-	-	-	-	-
Total	0.02	0.02	0.028	[-0.040 – 0.075]	0.561
Symbolization-MI	-	-	-	-	-
Direct	-0.05	-0.05	0.038	[-0.120 – 0.027]	0.218
Indirect	0.06	0.06	0.018	[0.029 – 0.098]	0.000
Total	0.02	0.02	0.041	[-0.063 – 0.097]	0.033
Internalization-MI	-	-	-	-	-
Direct	0.07	0.06	0.041	[-0.013 – 0.148]	0.099
Indirect	0.04	0.04	0.018	[0.008 – 0.080]	0.016
Total	0.11	0.10	0.044	[0.024 – 0.199]	0.012
Agency-HP	-	-	-	-	-
Direct	0.15	0.23	0.027	[0.096 – 0.204]	0.000
Indirect	0.10	0.16	0.015	[0.073 – 0.131]	0.000
Total	0.25	0.39	0.028	[0.196 – 0.307]	0.000
Pathway-HP	-	-	-	-	-
Direct	0.09	0.11	0.024	[0.013 – 0.113]	0.007
Indirect	0.05	0.08	0.011	[0.024 – 0.069]	0.000
Total	0.13	0.19	0.026	[0.061 – 0.163]	0.000
-	The search –MIL				
-	B	*β*	Std. err	CL (95%)	*P*-value
The presence-MIL	-	-	-	-	-
Direct	0.58	0.66	0.027	[0.530 – 0.637]	0.000
Symbolization-MI	-	-	-	-	-
Indirect	0.13	0.10	0.036	[0.064 – 0.204]	0.000
Internalization-MI	-	-	-	-	-
Indirect	0.09	0.07	0.038	[0.019 – 0.168]	0.014
Agency-HP	-	-	-	-	-
Indirect	0.21	0.24	0.026	[0.163 – 0.266]	0.000
Pathway-HP	-	-	-	-	-
Indirect	0.10	0.12	0.023	[0.054 – 0.142]	0.000

GPA, age, gender, and marital status were statistically controlled. Symbolization-MI (β=0.15, p<0.001, CI 95% [0.11–0.35]), internalization-MI (β=0.10, p<0.01, CI 95% [0.033–0.287]), agency-HP (β=0.37, p<0.001, CI 95% [0.287–0.449]), and pathway-HP (β=0.19, p<0.001, CI 95% [0.039–0.242]) had a direct and significant predictive relationship with presence-MIL. In a similar vein, presence-MIL (β=0.41, p<.001, CI 95% [0.209–0.323]) was significantly associated with MW. After controlling for presence-MIL, agency-HP (β=0.23, p<0.001, CI 95% [0.096–0.204]), and pathway-HP (β=0.11, p<0.01, CI 95% [0.013–0.113]) showed a direct and significant contribution to MW but with a reduced magnitude compared with the total effect. Hence, in this relationship, presence-MIL acted as a partial mediator. On the other hand, the non-significant relationship of internalization-MI (β=0.06, p>0.05, CI 95% [-0.013–0.148]) and symbolization-MI (β=-0.05, p>0.05, CI 95% [-0.120 –0.027]) with MW revealed the full mediating effects of presence-MIL.

3.4. Presence-MIL as a Psychological Buffer

As shown in Fig. (**1**) and Table **4**, the role of presence-MIL as a psychological buffer was revealed by including search-MIL in assessing the relationship between presence-MIL and MW. Presence-MIL had a significant impact on search-MIL, with a strong positive influence (β=0.66, p<0.001, CI 95% [0.530–0.637]). The search-MIL showed no significant connection to MW (β=0.02, p>0.05, CI 95% [-0.040–0.075]), suggesting that it did not act as a mediator between presence-MIL and MW. Nevertheless, search-MIL had indirect and significant effects on symbolization-MI (β=0.10, p<0.000, CI 95% [0.064–0.204]), internalization-MI (β=0.07, p<0.05, CI 95% [0.019–0.168]), agency-HP (β=0.24, p<0.000, CI 95% [0.163–0.266]), and pathway-HP (β=0.12, p<0.000, CI 95% [0.054–0.142]). Therefore, seeking further meaning after already establishing a strong sense of purpose did not negatively impact MW. On the contrary, it had a positive effect on personal growth and psychological enrichment.

4. DISCUSSION

This study revealed that male and married students had higher MW than female and single students. There were no significant differences in MW based on age and GPA. Similar to previous findings [34, 35], fostering hope was significantly associated with students' MW. Given the

partial mediating role of presence-MIL, both agency-HP and pathway-HP were significant predictors of MW. This relationship suggests that students who have the determination to pursue paths can better achieve their goals and, in effect, improve MW. Presence-MIL partly aids this relationship by creating a clear sense of values, purpose, and trustworthiness, which increases the effort to use these cognitive capabilities. Similar findings were documented by Steger [32]. Contrary to Murphy's argument [36], the current study revealed that agency-HP had a stronger association with MW compared to pathway-HP. This supports the evidence that students who had the determination and motivation to push in the self-chosen strategies until they arrived at goals (high agency-HP) had better MW than those with multiple strategies (increased pathway-HP) but with inconsistencies and less energy to pursue the goals (less agency-HP).

This study also revealed that MI significantly contributed to MW. In this regard, the work of Lapsley and Hardy is evident [23]. Given the full mediating role of presence-MIL, both symbolization-MI and internalization-MI of moral traits have a greater contribution to MW. Presence-MIL influences the strength of moral behaviors and actions by involving students in meaningful life events. Unlike Giacalone and his associates [26], the present study highlighted the greater importance of internalization-MI over symbolization-MI in predicting MW. Hence, when moral values are more deeply integrated into one's self-concept, people consistently act because these moral values are part of who they are. This consistently reinforces positive outcomes in life, which helps to enhance MW. Symbolization of MI lacks this depth and focuses on outward behaviors to persuade the public and seek social approval. This aspect of moral value functions primarily as a means to express and share moral beliefs and perspectives. However, it often reflects superficial agreement rather than genuine personal commitment.

Discussions on theoretical and empirical evidence have demonstrated that presence-MIL is linked to increased MW outcomes [12, 13]. While the search for MIL is a complex task and may take a long journey from having no meaning to discovering it, it is an active process that people should pursue and sustain [49]. This search can often be a source of stress and frustration, particularly for students, until a sense of meaning is established. However, the accumulation of meaning depends on the amount of successful search for new meanings. This study revealed that when individuals possess a solid foundation of MIL, search-MIL has no negative impact on MW. As a result, individuals can search for new meanings with ease, enabling them to self-regulate in response to new challenges in the environment and improve their personal growth by widening the depth and width of the existing MIL.

5. IMPLICATIONS FOR THEORIES AND PRACTICES

The findings of this study have implications for all stakeholders, including policymakers, curriculum developers, counselors, hope therapists, and moral educators. Mental health, mental well-being, and academic achievement determine the health and success of university students. Health policymakers should create practical and evidence-based support systems and strategies to address the mental health challenges faced by university students. For instance, implementing an integrated system that includes mental health support and promoting the practice of visiting university counselors at the first sign of mental health issues are some of the strategies. Education policymakers should update the curriculum to help students deal with challenges effectively. For example, the introduction of life skill courses into the curricula equips students with strategies for stress management, time management, social communication, and decision-making skills.

This study also has practical implications for health institutions and professionals, such as therapists and moral educators, to ensure the presence of MIL for effective outcomes in MW. Hope therapists should provide structured intervention to help students develop meaningful life goals, especially for targeted students. Moral educators should prioritize educational sessions that empower students by instilling meaningful purpose and values in their lives.

Theories of MIL should also evaluate their arguments considering the distinctions and similarities between presence-MIL and search-MIL in their contribution to a theoretical understanding of meaningful life and its connection to MW. The results of this study also call on university administrators and policymakers to review moral education curricula and ensure their alignment with moral content and recommended moral traits and behaviors by theories and the literature.

6. LIMITATIONS

We acknowledge that this study has the following limitations. The study lacks important background information, such as details on socioeconomic status, religion, and racial demographics. This additional information could enhance our understanding of the demographics in relation to the findings. We used self-report questionnaires, which may have led to social desirability biases, where respondents tend to give socially appropriate or favorable answers rather than their actual feelings. The results of this study are limited to a specific group, *i.e.*, university students. The findings are primarily applicable to Ethiopian cultural backgrounds and specific age groups (18-34 years old, usually university age), and the interpretation of the results may vary across different cultures and countries. During the adaptation of the adult hope scale, an item was omitted due to its low item-to-total correlation that increased the internal consistency reliability, which might have impacted the reliability again without determining the validity.

CONCLUSION

The existing theoretical and empirical evidence supports the idea that presence-MIL mediates the relationship among MI, hope, and MW. This study also confirmed similar results. It was found that fostering hope significantly influenced MW. Both the belief in personal agency and the belief in clear pathways were found to be important predictors of MW, as they raised awareness of how to achieve goals and the determination to pursue them consistently to reach desired outcomes. Presence-MIL improves these cognitive skills, leading to a positive impact on MW by establishing a clear sense of values and life purpose. The attainment of MI

positively impacts MW. The impact of internalization-MI and symbolization-MI on MW can be enhanced by promoting a deeper understanding and meaningful representation of personal experiences. Describing oneself as a moral person in public and the integration of moral traits into one's sense of self impact MW positively by increasing students' engagement in positive behaviors like helping others, being honest, having integrity, having value for others, feeling trustworthiness, *etc*. Presence-MIL was reported to be crucial in promoting MW by motivating students to apply moral values effectively in their daily lives. Given the development of presence-MIL, search-MIL does not have a negative effect on MW. Instead, it facilitates the integration of new meanings in response to changing environmental demands without any adverse impact on MW. Policymakers and health professionals should devise strategies that are applicable to students who are coping with MW challenges. Finally, focusing on university students is crucial for developing them into healthy and productive citizens. Therefore, stakeholders should actively participate in ensuring the MW of students.

AUTHORS' CONTRIBUTIONS

It is hereby acknowledged that all authors have accepted responsibility for the manuscript's content and consented to its submission. They have meticulously reviewed all results and unanimously approved the final version of the manuscript.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

This study was approved by the Research Ethics Review Committee of the College of Education at Hawassa University (Ref. No. COE-REC/017/2024) on June 18th, 2024. The following were the members of the Research Ethics Review Committee:

- Dr. Tesfaye Basha Ludago- chairperson
- Dr. Adnew Ontoro-member-secretary
- Dr. Girma Moti-member
- Dr. Habtamu Gezahegn-member

Informed consent was received from the participants.

CONSENT FOR PUBLICATION

Not applicable (no images, personal information, and identification were used during the study period and for publication).

DATA AVAILABILITY

The datasets collected and analyzed during the current study are available at the Mendeley repository (https://data.mendeley.com/datasets/jgsv7pcrs8/1).

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CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

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