

HOW MEANING IN LIFE AFFECTS GOAL ACHIEVEMENT

by

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ABSTRACT

Previous research has found meaning in life (i.e., a sense of life purpose; MIL) relates to many adaptive benefits such as increased mood, motivation, and goal achievement. Hope theory posits that individuals who score high on this trait will have a greater ability to plan for and execute goals. Studies have demonstrated that hope and MIL are positively correlated. Building upon this work, the purpose of the current study was to explore the associative link between presence meaning, hope, and the extent to which people set and achieve goals (i.e., goal pursuit). To do this, college students were recruited to complete three questionnaires over the course of the semester: (a) at the beginning, (b) in the middle (i.e., mid-term) and (c) at the end. Everyone completed measures of MIL and hope across all sessions; however, persons were asked to list their goals for the semester at the beginning while evaluating their goal attainment at the end. Mediation results revealed that individuals who scored high in meaning experienced greater feelings of hope. A heightened hope response, in turn, was associated with greater goal achievement at the end of the semester. These findings can be used in future research and counseling programs focused on improving goal pursuit and achievement.

Introduction

Throughout daily life, individuals come into contact with various goals that are ranked, prioritized, and then completed to some extent. Meaning in life (MIL), or a sense of life purpose, gained popularity as a clinical construct and research interest when Victor Frankel (1963) proclaimed his interest in using the concept in therapeutic settings. Since then, much evidence has found that a heightened sense of meaning is associated with greater feelings of happiness, well-being (e.g., self-esteem, optimism, self-efficacy), and an increased connection to others (see e.g., Steger, 2017 for a review). Hope is another relevant concept in the field of positive psychology and has been linked to studies on MIL. According to Hope Theory (Snyder, Lopez, Shorey, Rand, Feldman, 2003), hope reflects an individual's capacity to conceptualize goals, develop strategies to achieve goals, and sustain the motivation to complete them. Previous work has shown that having higher MIL leads to increased feelings of individual hope (Yalcum & Malkoc, 2014; Feldman & Snyder, 1999). Integrating these two perspectives, the current study examined the link between meaning presence, feelings of hope, and the achievement of personal goals. It was hypothesized that a heightened sense of hope from having a meaningful life existence would lead to greater goal achievement.

Meaning in Life (MIL)

Many individuals encounter or experience things that they define as meaningful on a daily basis. The extent to which persons create a purposeful existence is a prevalent topic within the field of psychology. Throughout this paper, MIL is the extent to which people experience a sense of purpose, coherence, and significance in their lives (Steger, 2009). Within this definition, Steger and his colleagues (2006) define meaning within the context of two independent dimensions: (a) presence of meaning and (b) search. Meaning presence refers to the extent that

one finds or experiences meaning in their life in the current moment. On the other hand, search for meaning is the degree to which an individual is actively looking for purpose in his/her life (Newman, Nezlek, Thrash, 2017). The focus of this paper is on participants' meaning in life presence (i.e., MIL-P).

Previous work in this field has studied the positive outcomes of meaning presence. Krause (2009) researched MIL-P by longitudinally interviewing older adults in six waves to test the hypothesis that individuals who have a stronger life purpose tend to live longer than those whose sense of meaning is not as strong. The results demonstrated that older adults with a stronger presence of meaning rated their health more favorably. A higher rating of personal health led to fewer functional limitations in daily life and, in turn, resulted in lower mortality for participants. Krause (2004) also researched the connection between MIL-P and stress buffering when dealing with lifetime trauma. After interviewing older participants in two waves, he concluded that persons with a more profound sense of purpose in life had more adaptive qualities that offset the effects of stress and trauma and predicted a decline in depressive symptoms. These studies show that MIL-P predicts greater health outcomes for individuals.

The relationship between MIL and positive health outcomes is bidirectional in that increased psychological well-being heightens the extent to which people believe life is meaningful. King, Hicks, Krull, and Gaiso (2006) explored whether positive mood, compared to negative mood, affected an individual's MIL-P to determine if positive feelings themselves enhance meaning presence. This study had participants fill out daily mood forms and meaning measures for 5 days to determine how mood affects presence meaning. The latter part of the study looked at how the average mood scores of a participant affected general MIL-P after 2 weeks. The significant finding of this study was that average positive mood, compared to

average negative mood, was the greatest predictor of general MIL-P in participants. This study shows that heightened well-being may predispose persons into feel that their lives are meaningful. Furthermore, greater feelings of positive affect may lead individuals to be more sensitive to situational factors (i.e., daily life experiences) to enhance purpose in life.

Goal Pursuit and Achievement

Another variable related to MIL and well-being outcomes is the extent to which individuals pursue and achieve goals in their lives. Specifically, goal meaning is defined as the amount of importance and commitment someone ascribes to a goal (Lecci, MacLean, & Croteau, 2002; Palfai & Weafer, 2006). There has been much longitudinal research to demonstrate that increases in participants' subjective well-being results from their ability to set and make progress towards goals (e.g., Sheldon, 2008; Sheldon & Elliot, 1999; Sheldon & Kasser, 1998). Goal attainment also produces meaning (e.g., Emmons, 1999; Klinger, 1977; Reker, 2000). For instance, a study done by Sedikides and colleagues (2017) researched the connection between experiencing nostalgia (i.e., a sentimental longing for the past) and goal pursuit with MIL-P as a mediator of the relationship. Participants were induced with nostalgia by thinking of a certain past event (or not) and then positive affect and meaning were assessed. Motivation was then measured by answering five questions related to the most important goal they listed. Results showed that participants who experienced nostalgia had greater MIL-P than those in the control condition. Furthermore, meaning was found to influence the relationship between nostalgia and goal pursuit, showing that nostalgic reflection boosted motivation to pursue a goal by increasing MIL-P. These results provide some support for the connection between meaning presence and goal pursuit in individuals.

Lastly, Davis, Kelley, Kim, and Tang (2015) researched how one conceptualizes (low vs. high-level construal) a goal affects motivation to pursue and achieve said goal. Specifically, the effects of assigning a high-level (i.e., why are you performing the task?) versus a low-level (i.e., how am I going to perform this task?) construal about a goal were researched in relation to participants motivation to complete the either an academic or non-specific goal they selected. Individuals were asked to write about a goal based on the conditions assigned, then meaningfulness of the goal and motivation to pursue the goal was assessed. The results showed that thinking about an academic goal with a high-level construal enhanced meaningfulness and motivation for the goal more than any other assigned condition pairings. These results suggest that when a goal is associated with a greater meaning this will increase an individual's motivation to achieve that goal. If thinking more introspectively about a goal increases motivation to achieve said goal, this posits the question, if having a more pronounced MIL-P will also predict goal pursuit and achievement. The current research will examine this connection between MIL-P and achievement of specific goals by using the theoretical model of Hope Theory (Snyder, 2002).

Hope Theory

According to Frankl (1963) and others (Feldman & Snyder, 1999; Yalcum & Malkoc, 2014), having a sense of meaning is important as it can increase perceptions of hope. Hope Theory (Snyder, 2002) centers around the idea that hope reflects an individual's perceptions regarding his/her ability to conceptualize goals, develop strategies to pursue goals (pathways thinking), and initiate and sustain motivation to use those strategies (agency thinking; Snyder, Lopez, Shorey, Rand, Feldman, 2003). There is evidence to suggest an associative relationship between meaning presence and hope. For example, Yalcum and Malkoc (2014) conducted a

study to see whether hope and forgiveness are mediators in the relationship between MIL and well-being. They found that more MIL predicted increased hope, which then predicted subjective well-being. Furthermore, Feldman and Snyder (2005) found that hope can be conceptualized as a larger life meaning factor. This study hypothesized that hope is related to life meaning, based on the research that hope is an important variable to goal pursuit and goal pursuit is important to life meaning. This research collected the life meaning scores and hope scale scores of college students and ran analyses to determine the positive relationship between these variables.

Alternatively, research has also found a relationship between hope and goal achievement. Snyder and his colleagues (1991, 1996), for example, posit that high-hope individuals, as compared to low-hope, are better able to find alternative strategies to pursue goals, especially when labeled the most important goal to an individual. This is supported by research demonstrating that generalized hope predicts academic hope, which is associated with higher grade point averages (i.e., GPA; Feldman & Kubota, 2015). Since GPA is related to college success and academic goal achievement, Feldman and Kubota provide support for the hypothesis that having a higher attainment of hope leads to the presence of greater goal achievement.

Research has also looked into the connection between hope and goal achievement by measuring self-rated attainment of goals. Feldman, Rand, and Kahle-Wroblewski (2009) examined whether hope predicted goal attainment by assessing college students' hope and goals during their first week and final week of the semester. The results found that participants with higher hope ratings showed increased levels of self-rated goal attainment after 3 months had passed. Our research is also using self-rated goal attainment measures from the beginning of the semester to the end to assess goal achievement. From previous research it has been shown that having a higher MIL predicts a higher level of individual hope, and that having more hope has the ability

to lead to a greater achievement of goals (Feldman & Kubota, 2015; Feldman, Rand, & Kahle-Wroblewski 2009).

For support of our hypothesis that having a meaningful life existence leads to greater goal pursuit due to a heightened sense of hope, we examined previous research regarding the link between hope and goal pursuit. Feldman and Dreher (2011) investigated the hypothesis that in a single session when a hope intervention is given to college students, their goal-directed thinking (pursuit of a goal) will be enhanced. Participants were either assigned to the hope intervention group, which employs a “hope visualization” exercise that has been noted in research to enhance hope through mental rehearsal in longer interventions (Cheavens et al. 2006), or the control conditions. To measure goal pursuit and attainment, participants wrote down a goal they would like to accomplish during the next 6 months. The results found that those who received the hope intervention showed greater increases in hope, along with substantially more pursuit and progress of their goal at a 1-month follow up. This finding provides support that may predict a participant’s progress towards a goal, which is related to pursuit to attain that goal, a central objective of Hope Theory and the second hypothesis of the current study.

The Present Study

Although previous research has explored the topics of MIL-P, goal achievement and pursuit, and hope individually, they have not been studied within the same model. Following previous research, the current study investigated several hypotheses. First, given that MIL-P is found to be associated with greater perceptions of hope (Yalcum & Malkoc, 2014), we predicted that participants scoring high (as compared to low) on meaning would experience greater feelings of general hope. Second, following work on the relationship between hope and goal motivation (Feldman & Dreher, 2010), it was predicted that high levels of hope would be

associated with an increased pursuit and attainment of goals. Finally, utilizing a mediational model, we explored the hypothesis that elevated hope in response to greater perceptions of meaning would be related to the extent to which college students achieved their goals across the semester.

Method

Participants

Participants included 179 males and 138 females ($N = 317$) who attended Texas Christian University as undergraduate students ($M_{\text{age}} = 18.28$, $SD_{\text{age}} = .52$). Participants were awarded psychology research credit for completing the study.

Materials and Procedure

Participants came to the laboratory three separate times: (a) at the beginning of the semester, (b) in the middle of the semester (i.e., mid-terms), and at the end of the semester. The study was conducted in a quiet laboratory setting. After participants signed the informed consent, they completed the questionnaires as described below.

Meaning in life. Participants first completed the Meaning in Life Questionnaire (MLQ; Steger, Frazier, Oishi, 2006), a self-report questionnaire assessing a participant's presence of, and the search for, MIL. The measure is comprised of 10-items; five statements assess meaning presence (e.g., "I understand my life's meaning" & "I have discovered a satisfying life purpose;" α 's $\geq .88$. for the three time periods) and five items measuring search (e.g., "I am looking for something that makes my life meaningful" & "I am seeking a purpose or mission for my life;" α 's $\geq .81$ for the three time periods). Questions were answered using a 7-point Likert scale (1 = *absolutely untrue*; 7 = *absolutely true*). Participants completed this measure at the three time

points throughout the semester. Search for meaning did not significantly correlate with hope or goal achievement, so it was not examined in further analyses, $r \leq .15$, $p \geq .16$.

Hope. Individuals then completed the Adult State Hope Scale (ASHS; Snyder, Sympton, Ybasco, Borders, Babyak, Higgins, 1996), a self-report questionnaire assessing the goal-directed thinking of participants. This questionnaire was completed at three times throughout the semester. This measure has six items that assess the current hope of the participant (e.g., “If I should find myself in a jam & I could think of many ways to get out of it;” α 's $\geq .87$ for the three time periods). Questions were answered using a 6-point Likert scale (1 = *definitely false*; 6 = *definitely true*).

Goal items. Given the longitudinal nature of this research, participants were asked to complete different goal-related items at each attended session. Specifically, at the start of the semester, individuals listed five goals that they were interested in pursuing across the semester, in order of most important to least important. For each goal, participants' answer five different items. The 5-item measure assessing goal pursuit at the beginning of the semester (Sedikides, 2018; i.e., “I am motivated to pursue this goal,” “I look forward to pursuing this goal,” “I feel excited about pursuing this goal,” “I want to put time and effort into pursuing this goal” & “I feel capable of pursuing this goal;” $\alpha = .81$) was answered using a 9-point Likert scale (1 = *I do not agree at all*; 9 = *I completely agree*).

For the second session, participants were reminded of the goals they chose at the previous session and then were given the opportunity to modify their goals and relist them from most important to least important. Once their goals were set they answered a 4-item measure for each goal listed that assessed their feeling towards completing that goal at the current moment (i.e., “I am taking active steps in order to achieve this goal,” “I am excited about the prospect of

completing this goal,” “I am putting forth the time and effort in order to achieve this goal” & “I am capable of being able to achieve this goal;” $\alpha = .90$). Questions were answered using a 9-point Likert scale (1 = *I do not agree at all*; 9 = *I completely agree*).

At the end of the semester, participants were again reminded of their goals from the second session and were allowed to modify them. After they had their goals, they answered a goal-item measure that assessed the achievement of their five goals and was comprised of 4-items (i.e., “I was excited about completing this goal,” “I took active steps and achieved this goal,” “I put forth the time and effort to achieve this goal” & “I felt capable of achieving this goal;” $\alpha = .92$). Participants answered these questions on a 9-point Likert scale (1 = *I do not agree at all*; 9 = *I completely agree*).

Results

Correlational analysis. We performed a correlational analysis for presence of meaning and hope at the three time points in the semester (see Figure 1). Preliminary analyses found significantly high, positive correlations between MIL-P across time along with hope. Given the nature of these relationships, and potential problems with multi-collinearity in our mediation model, scores were averaged across time for meaning presence (Presence C) and hope (Hope C). First, Presence C and Hope C were positively correlated, $r = .582, p < .001$. Next, hope at the beginning of the semester and goal pursuit were found to be positively correlated, $r = .418, p < .001$. Furthermore, Presence C and Hope C were both positively correlated with goal achievement at the end of the semester (r 's $\geq .239, p$'s $\leq .025$). These results suggest that more presence of meaning in life and hope is related to greater goal achievement.

Mediational analyses on goal achievement. A mediation analysis using Process Model 4 (Preacher & Hayes, 2008) examined hope as a mediator of presence of meaning and goal

achievement relationship (see Figure 2). First, Presence C predicted Hope C, $b = .592$, $t = 7.117$, $p < .001$, $R^2 = .371$ (i.e., *a* path). Hope C further predicted goal achievement, $b = .260$, $t = 2.28$, $p = .02$, $R^2 = .114$, while controlling for Presence C (i.e., *b* path). Finally, when hope was added as a mediator in the model, the association between presence of meaning across the semester and goal achievement at the end became non-significant, $b = .061$, $t = .436$, $p = .664$, $R^2 = .002$ (i.e., *c'* path). The 95% confidence interval for the indirect effects did not contain zero (.042, .414), suggesting a significant indirect effect. These results suggest that when participants have a greater presence of meaning across semester, they experience greater hope which further predicts more goal achievement.

Discussion

Following previous research that studied the association between meaning presence and hope (Snyder, 1991; Yalcum & Malkoc, 2014), the current work was interested in whether presence of meaning is associated with greater perceptions of hope. As found in the “*a* path” of our mediational model, students who scored high, as opposed to low, on meaning presence experienced greater feelings of hope. These results were found collectively across the semester given the composite measures examined. Not only were we able to build upon past research finding a positive relationship between meaning and hope, but we were also able to provide longitudinal evidence for this relationship.

The current research was also interested in exploring whether enhanced perceptions of hope were related to the extent to which students achieve personal goals. Previous research has found that indices of subjective well-being, including that of general hope, are related to a person’s pursuit and obtainment of goals (Sheldon, 2008; Sheldon & Elliot, 1999; Sheldon & Kasser, 1998). A similar pattern of results was found in the current research in support of “*b*

path” of our mediational model that hypothesized an association between high levels of hope, as opposed to low, and an associated increase in pursuit of goals and achievement of those goals. Our results found that higher hope in individuals (collectively over the semester) was more likely to predict people’s goal achievement at the end of the semester. It was also found that higher levels of hope were linked to greater pursuit of those goals at the beginning of the semester. These results present similarity to previous research done by Feldman and colleagues (2009). This work investigated college students’ experienced hope across a 3 month period and its association with goal attainment at the end of the semester. The study concluded that higher levels of hope across the 3 months predicted higher levels of goal attainment at the end of the 3 months. Similar to prior work, we provide evidence that increased feelings of hope help people obtain their goals.

Finally, a goal of the present work was to examine the associative link between MIL, hope, and goal achievement. Although this has been of interest in prior work, researchers have yet to explore the relationship between variables within the same study. Furthermore, research has failed to explore how variables are related to one another across the course of time. The results of the present research demonstrated that higher levels of hope in response to a greater perception of MIL in individuals, was associated with a greater ability to achieve goals across the semester. These results support the “*c*’ path” in our mediational model that show when hope is included in the mediational model, the isolated relationship between MIL and goal achievement becomes insignificant. This suggests that a greater MIL is related to a more pronounced goal achievement because of the increased levels of hope that result from an increase in MIL. Overall, these findings suggest that individuals with a greater meaning presence experience higher hope levels over the course of the semester and are better able to achieve their goals. Not only can

these results be applied to theory and further research, but these findings can be applied to programs working with students, recovery patients, and other individuals in need of producing a certain goal.

Implications of These Results

Theoretical implications. The results from this study also provide important implications for the work of Hope Theory. Specifically, Snyder (1994) posited the relationship between presence of MIL and hope suggesting that the same self-reflections and introspective process used to construct and progress towards goals is also used to construct meaning in a person's life. Furthermore, because hope is the cognitive construal of planning and executing goals, a relationship between hope and MIL can be predicted based on the shared reflection processes between MIL and goal construal and execution. Feldman and Snyder (1999) found the same strong positive correlation between hope and presence of MIL that we also found in this present work. Our results, however, are the first to find that not only does meaning in life relate to hope, but hope is also the construct that relates MIL to goal achievement.

Practical implications. The results also suggest practical implications to be applied to counseling. The significant finding that presence of meaning predicts more hope, which predicts greater goal pursuit and goal achievement can be applied to school and college counseling in terms of programs, interventions, and techniques. Schools and colleges can use our findings to develop additional interventions as they strive to increase students' motivation towards their goals, whether that be furthering their education, entrance exams, GPAs, or future jobs. Although presence of MIL has already been positively correlated with measured areas of school adjustment, including hope (Trevisan, Bass, Powell, & Eckerd, 2017), our results provide novel research that it is important to involve a student's MIL during counseling. Applying meaning

purpose to counseling may help to improve student's MIL, perceptions of hope, and help in the attainment of personal goals. Since our results found significant positive correlations between MIL and hope throughout the semester and goal achievement at the end, intervention programs can focus on improving presence of meaning and hope for a longer period of time. This will lengthen the scope of those who are able to participate in these intervention programs and still have successful results. This work can also be implemented into programs for students lacking motivation, where their MIL and hope can be assessed and improved. Specifically, a population that would benefit from a program centered around improving motivation is at-risk students whose major concern in learning and success is the lack of motivation (Hidgkinson, 1985). Overall, our results provide valuable information to be applied to programs focused on improving an individual's current life, future, or development.

Limitations and Future Directions

Although the current results provide important insight into the relationship between MIL and goal achievement, there are a few limitations that need to be addressed. First, the data we collected was specific to undergraduate college students. Although this population is especially involved with goal pursuit and achievement, future research should continue this study with other age groups and populations to see if results can be generalized elsewhere. Specifically, in future research this research should be applied to populations involved in treatment or recovery-based programs. In any type of recovery program, individuals cannot just show up for activities and be passive, these recovery programs require daily effort and hope that this will work (Weinberg, 2013). Another population that would benefit from these results is older adults. It would be interesting if the results we found could be applied to older individuals whose goals may vary from the academic and school-focused goals we studied in this research. Specifically,

future research could investigate if the same findings are present in this population and study a possible intervention program for those in nursing homes or involved with geriatric counseling.

Second, our measure for goal achievement, our dependent variable, was self-reported. This is a limitation because participants could have not achieved the goal they wrote down or lied about which goals were most important to them, decreasing validity of our goal measures. An option for increasing validity of the goal measures in further research would be to randomly assign goals to participants. Specifically, participants would be randomly assigned to different goals that although would be not be personal they would be generic and easily recognizable goals. This model would allow researchers to control for the possibility that participants are creating unattainable goals and would help control for differences between groups with randomization. Providing different goals for groups within the same study allows for research to investigate if there are differences in outcomes between goals.

In the future, research can also incorporate this model with only participants whose goals can be measured objectively, for example GPA or college entrance exams. Future research with GPA as the goal should take into consideration Bressler et al.'s (2010) findings regarding the significant positive relationship between hope and grade performance. Grade performance is a measure of goal achievement in terms the academic setting and our research was carried out with students future research should investigate if the same mediational relationship of hope between presence of meaning and goal achievement would exist with grade performance.

Lastly, this experiment did not take into consideration individual differences among participants in regards to the definition or concept of MIL. Previous research has found that what is considered a meaningful life and how people derive meaning from their lives varies across cultures and is therefore influenced by culture (Steger et al., 2008). Future research could

investigate this model with participants from different cultures and determine if it is consistent across diverse populations. For example, collectivist cultures (e.g., Japan) and individualistic populations (e.g., America) vary based on how they derive meaning and what they value most. Collectivist populations focus on the community and other people in their lives, while individualistic cultures focus on themselves and derive meaning from their self-worth. A future study could see if this mediational model has different results if the goal measures for collectivistic cultures are less focused on personal or academic goals and more focused on goals regarding the community as a whole or doing things for others. These results are be important for generalization of results to other cultures and also in creating different implication programs for different cultures if the results vary.

Despite these limitations, the current findings offer valuable insight into research on MIL, hope, and improving goal achievement. The study also offers important implications to hope theory, school counseling, and future research. The results suggest that when an individual has greater life purpose, this will provide them with greater hope in the situation and resulting higher goal achievement. The current study is the first to emphasize the mediational effects of hope on the relationship between MIL and goal achievement. The results found from this research can be applied to individuals, especially students, struggling with finding or realizing meaning in their lives in an effort to encourage the achievement of various goals.

Table 1

Pearson Correlations Among Presence of Meaning, Hope, Goal Pursuit, and Goal Achievement.

	1	2	3	4	5	6	7	8
1. Pres1	-	.531***	.720***	.561***	.285***	.335***	.270***	.165
2. Pres2	.531***	-	.555***	.502***	.439***	.249	.273***	.029
3. Pres3	.720***	.555***	-	.535***	.389***	.475***	.252*	.310***
4. Hope1	.561**	.502***	.535***	-	.411***	.659***	.418***	.162
5. Hope2	.285***	.439***	.389***	.411***	-	.296*	.285**	.094
6. Hope3	.335**	.249	.475***	.659***	.296*	-	.388***	.446***
7. Pursuit	.270***	.273**	.252*	.418***	.285**	.388***	-	.174
8. Achieve	.165	.029	.310**	.162	.094	.446***	.174	-

Appendix A

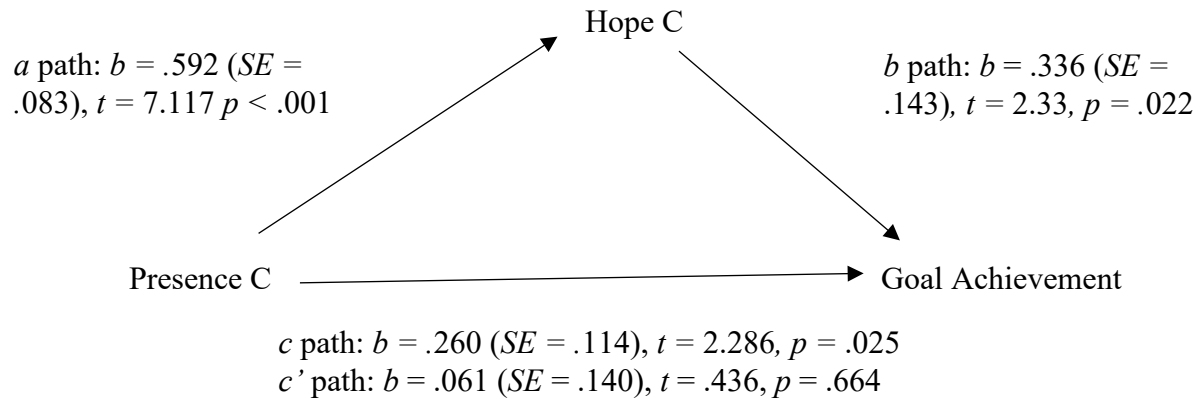


Figure 1. The indirect effect of presence of meaning in life across the whole semester (Presence C) on goal achievement through hope throughout the semester (Hope C).

References

- Bressler, L. A., Bressler, M. E., & Bressler, M. S. (2010). The role and relationship of hope, optimism and goal setting in achieving academic success: A study of students enrolled in online accounting courses. *Academy of Educational Leadership Journal, 14*(4), 37.
- Cheavens, J. S., Feldman, D. B., Gum, A., Michael, S. T., & Snyder, C. R. (2006). Hope therapy in a community sample: A pilot investigation. *Social Indicators Research, 77*, 61–78.
- Davis, W. E., Kelley, N. J., Kim, J., Tang, D., & Hicks, J. A. (2016). Motivating the academic mind: High-level construal of academic goals enhances goal meaningfulness, motivation, and self-concordance. *Motivation and Emotion, 40*(2), 193-202.
- Emmons, R. A. (1999). *The psychology of ultimate concerns: Motivation and spirituality in personality*. New York, NY, US: Guilford Press.
- Feldman, D. B., & Dreher, D. E. (2012). Can hope be changed in 90 minutes? testing the efficacy of a single-session goal-pursuit intervention for college students. *Journal of Happiness Studies, 13*(4), 745-759. doi:10.1007/s10902-011-9292-4
- Feldman, D. B., & Kubota, M. (2015). Hope, self-efficacy, optimism, and academic achievement: Distinguishing constructs and levels of specificity in predicting college grade-point average. *Learning and Individual Differences, 37*, 210-216.
doi:10.1016/j.lindif.2014.11.022
- Feldman, D.B, Rand, K., & Kahle-Wroblewski, K. (2009). hope and goal attainment: Testing a basic prediction of hope theory. *Journal of Social and Clinical Psychology, 28*(4), 479-497. doi:10.1521/jscp.2009.28.4.479
- Feldman, D. B., & Snyder, C. R. (1999). Natural companions: Hope and meaning. *Unpublished manuscript*, University of Kansas, Lawrence.

- Feldman, D.B., & Snyder, C. (2005). Hope and the meaningful life: Theoretical and empirical associations between goal-directed thinking and life meaning. *Journal of Social and Clinical Psychology, 24*(3), 401-421. doi:10.1521/jscp.24.3.401.65616
- Frankl, V. E. (1963). *Man's search for meaning: An introduction to logotherapy*. New York: Washington Square Press.
- Hodgkinson, H. L., & Institute for Educational Leadership, Washington, DC. (1985). *All one system: Demographics of education, kindergarten through graduate school*.
- King, L. A., Hicks, J. A., Krull, J. L., & Gaiso, A. K. D. (2006). Positive affect and the experience of meaning in life. *Journal of Personality and Social Psychology, 90*(1), 179-196. doi:10.1037/0022-3514.90.1.179
- Klinger, E. (1977). *Meaning & void: Inner experience and the incentives in people's lives*. Minneapolis, MN, US: University of Minnesota Press.
- Krause, N. (2009). Meaning in life and mortality. *The Journals of Gerontology: Series B: Psychological Sciences and Social Sciences, 64B*, 517–527.
- Krause, N. (2004). Stressors arising in highly valued roles, meaning in life, and the physical health status of older adults. *The Journals of Gerontology: Series B: Psychological Sciences and Social Sciences, 59B*, S287–S291.
- Lecci, L., MacLean, M. G., & Croteau, N. (2002). Personal goals as predictors of college student drinking motives, alcohol use and related problems. *Journal of Studies on Alcohol, 63*(5), 620-630.
- Meisel, S. N., & Palfai, T. P. (2015). Meaning in life goal pursuit moderates the effects of social influences on college student drinking. *Journal of Applied Social Psychology, 45*(10), 561-567. doi:10.1111/jasp.12319

- Newman, D. B., Nezlek, J. B., & Thrash, T. M. (2018). The dynamics of searching for meaning and presence of meaning in daily life. *Journal of Personality, 86*(3), 368-379.
doi:10.1111/jopy.12321
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*(3), 879-891. doi:10.3758/BRM.40.3.879
- Reker, G. (2000). Theoretical perspective, dimensions, and measurement of existential meaning. In G. T. Reker & K. Chamberlain (Eds.), *Exploring existential meaning: Optimizing human development across the life span* (pp. 39-56). Thousand Oaks, CA: SAGE Publications, Inc.
- Sedikides, C., Cheung, W., Wildschut, T., Hepper, E. G., Baldursson, E., & Pedersen, B. (2018). Nostalgia motivates pursuit of important goals by increasing meaning in life: Nostalgia, meaning, motivation. *European Journal of Social Psychology, 48*(2), 209-216.
doi:10.1002/ejsp.2318
- Sheldon, K. M. (2008). Assessing the sustainability of goal-based changes in adjustment over a four-year period. *Journal of Research in Personality, 42*(1), 223-229.
doi:10.1016/j.jrp.2007.03.002
- Sheldon, K. M., & Elliot, A. J. (1999). Goal striving, need satisfaction, and longitudinal well-being: The self-concordance model. *Journal of Personality and Social Psychology, 76*(3), 482-497. doi:10.1037/0022-3514.76.3.482
- Sheldon, K. M., & Kasser, T. (1998). Pursuing personal goals: Skills enable progress, but not all progress is beneficial. *Personality and Social Psychology Bulletin, 24*(12), 1319-1331.
doi:10.1177/01461672982412006

- Siwek, Z., Oleszkowicz, A., & Słowińska, A. (2017). Values realized in personal strivings and motivation, and meaning in life in Polish university students. *Journal of Happiness Studies, 18*(2), 549-573. doi:10.1007/s10902-016-9737-x
- Snyder, C. R. (1995). Conceptualizing, measuring, and nurturing hope. *Journal of Counseling & Development, 73*(3), 355-360. doi:10.1002/j.1556-6676.1995.tb01764.x
- Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., et al. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology, 60*, 570-585.
- Snyder, C. R. (2002). Hope theory: Rainbows in the mind. *Psychological Inquiry, 13*(4), 249-275.
- Snyder, C. R., LaPointe, A. B., Jeffrey Crowson, J., & Early, S. (1998). Preferences of high- and low-hope people for self-referential input. *Cognition & Emotion, 12*(6), 807-823. doi:10.1080/026999398379448
- Snyder, C. R., Lopez, S., Shorey, H., Rand, K., & Feldman, D. (2003). Hope theory, measurements, and applications to school psychology. *School Psychology Quarterly, 18*(2), 122-139. doi:10.1521/scpq.18.2.122.21854
- Snyder, C. R., Rand, K. L., & Sigmon, D. R. (2002). Hope theory. In C. R. Snyder, & S. Lopez (Eds.), *Handbook of positive psychology* (pp. 257 – 276). Oxford, UK: Oxford University Press
- Snyder, C. R., Sympson, S. C., Ybasco, F. C., Borders, T. F., Babyak, M. A., & Higgins, R. L. (1996). Development and validation of the state hope scale. *Journal of Personality and Social Psychology, 70*, 321-335.

- Snyder, C. R. (1994). *The psychology of hope: You can get there from here*. New York: Free Press.
- Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology, 53*(1), 80-93. doi:10.1037/0022-0167.53.1.80
- Steger, M. F., Kawabata, Y., Shimai, S., & Otake, K. (2008). The meaningful life in japan and the united states: Levels and correlates of meaning in life. *Journal of Research in Personality, 42*(3), 660-678. doi:10.1016/j.jrp.2007.09.003
- Steger, M. F. (2009). Meaning in life. In S. J. Lopez & C. R. Snyder (Eds.), *Oxford handbook of positive psychology* (2nd ed., pp. 679–687). New York, NY: Oxford University Press.
- Trevisan, D. A., Bass, E., Powell, K., & Eckerd, L. M. (2017). Meaning in life in college students: Implications for college counselors. *Journal of College Counseling, 20*(1), 37-51. doi:10.1002/jocc.12057
- Weinberg, C. M. (2013). Hope, meaning, and purpose: Making recovery possible. *Psychiatric Rehabilitation Journal, 36*(2), 124-125. doi:10.1037/prj0000011
- Yalçın, İ., & Malkoç, A. (2015). The relationship between meaning in life and subjective well-being: Forgiveness and hope as mediators. *Journal of Happiness Studies, 16*(4), 915-929. doi:10.1007/s10902-014-9540-5