The Power of Purpose: Unpacking the Impact of Purpose in Life, Academic Self-Concordance, and Mindfulness on Academic Satisfaction.

Eliza Brickenden

S4644794

Department of Psychology, University of Groningen

PSB3E-BT15: Bachelor Thesis

Group 23

Supervisor: Simon Dalley

Second evaluator: Dr. Laura Ballato

In collaboration with: Johannes Humpf, Lycke de Jong, Floris Durivou, Remko Joostens, Ioannis

Peristianis

June 27, 2024

Abstract

Academic satisfaction plays an important role in student mental well-being (Franzen et al, 2021). Identifying the factors that increase academic satisfaction can help to enhance educational experiences for students and foster a positive state of mental wellbeing (Warren, 2016). This study aimed to investigate a moderated mediation pathway where purpose in life acts as predictor variable, academic self-concordance as the mediator, and academic satisfaction as the outcome variable. Mindfulness was the moderating variable. A sample of N=184 undergraduate students participated in the study. The study had a cross-sectional design whereby participants completed a self-report questionnaire measuring levels of purpose in life, academic self-concordance, academic satisfaction, and mindfulness. The questionnaire was administered online via SONA study using Qualtrics software (Qualtrics, Provo, UT). Statistical analyses of the data were conducted using statistical software SPSS (Version 28) and the PROCESS extension as defined by Hayes (2022), specifically Models four and seven were used. The moderated mediation was found to be non-significant. However, an exploratory mediation pathway found to be significant in which higher purpose in life was associated with increasing academic self-concordance and, following this, greater academic satisfaction. The results from this study highlight the significant role that purpose in life and academic self-concordance have in enhancing academic satisfaction. These insights may be taken into account in various other contexts outside the academic realm. Further research into the area may lead to the creation of purpose-driven interventions for the improvement of well-being.

The Power of Purpose: Unpacking the Impact of Purpose in Life, Academic Self-Concordance, and Mindfulness on Academic Satisfaction.

Forty-four percent of university students in the Netherlands struggle with anxiety, depression, or other mental disorders (DUB Utrecht, 2022). The university experience, especially for first-year students, presents mental challenges as they navigate new educational and social settings, often leading to psychological strain and feelings of anxiety (Osamika et al, 2021). Various external and internal factors can counteract these negative psychological states, one of which being academic satisfaction. Student academic satisfaction is perceived as: "a favourable cognitive state influenced by a student's positive educational experience" (Franzen et al, 2021). Low academic satisfaction is associated with negative psychological states whereas high scores are strongly associated with psychological well-being and academic success (Franzen et al, 2021) (Nauta, 2007). It is therefore important to identify factors that facilitate the development of academic satisfaction. Purpose in life is thought to be among one of the contributing factors because of its effects on academic self- concordance (Hill & Burrow, 2012) (Lewis, 2020). Hence, we propose in this study that integrating the notion of academic satisfaction into the theoretical framework of life purpose could be beneficial. Our primary aim was to investigate whether academic satisfaction stems from pursuing self-concordant academic goals, which are chosen and structured by a central, self-organizing life aim, termed "purpose in life" (Kashdan et al., 2023). A study conducted in 2011 found a positive association between a sense of purpose and academic satisfaction (Duffy, 2011). It can be stipulated that this association is mediated by the concept of selfconcordance, such that with a high sense of purpose in life a student will experience greater academic self-concordance which subsequently increases their academic satisfaction. A self-concordant state is achieved when a person's everyday goals and current objectives align with their interests and core values (Wan et al, 2021).

The secondary aim of this study is to explore whether mindfulness may be an active moderator in this mediation effect., strengthening the connection between purpose in life and goal self-concordance. Mindful individuals make self-concordant goals (Smyth et al, 2020). This is because mindful individuals possess an awareness of their internal and external world (Xiao et al, 2017). If this

heightened self-awareness is present in a student, it may promote the selection of self-concordant goals due to a greater understanding of personal value and desire insight. The moderated mediation model holds significant interest and relevance today, given the previously mentioned challenge of student mental health.

Purpose in Life and Academic Satisfaction

The variables create a moderated mediation pathway which ultimately begins with purpose in life as predictor variable and academic satisfaction as outcome variable. A sense of purpose is a meaningful internal feeling; possessing a purpose in life means possessing a self-organising construct that provides a definitive objective towards which a person can advance (Bronk et al, 2009). Purpose in life has been investigated as a predictive factor across various contexts, revealing that a defined sense of purpose enhances overall life satisfaction (Kashdan et al, 2023). It is a predictor of positive mental and physical health, and its presence is shown to increase overall well-being (Kashdan, 2023). Several prior studies also demonstrate that a sense of purpose in the career domain correlates with heightened levels of job satisfaction (Wrzesniewski et al, 1997). Evidently, purpose in life affects well-being and satisfaction in various domains. With this in mind, the current study aims to investigate if the effect translates into the academic realm, hypothesizing that high levels of purpose in life enhance feelings of academic satisfaction. Due to the broad nature of these concepts, various other factors may play a role in this pathway. One of relevance is self-concordance. This study explores the direct association of purpose in life to academic satisfaction including the indirect association mediated by self-concordance. Self-concordance occurs when a person acts consistently in line with their ultimate interests and values (Peng & Wang, 2021). In this study we focus on goals; self-concordant goals align with a person's internal motivations (Sheldon & Elliot, 1999). This concept overlaps with characteristics of purpose in life; we predict that those with a higher purpose in life, in turn, are more self-concordant, which leads to greater academic satisfaction. Hence, self-concordance will be used as a mediator in our model.

Purpose in Life and Academic Self concordance

Purpose in life serves as a fundamental aspect of personal identity, providing a broad guiding framework that directs the pursuits of everyday goal attainment (Lewis, 2020). Goals are considered self-concordant when individuals pursue them due to internal motivations and drives (Sheldon & Elliot, 1999). The concept of purpose, which contains factors such as the embodiment of values and aims contains clear links to the concept of self-concordance (Burrow & Hill 2011); To illustrate the Self Concordance Model as proposed by Sheldon and Elliot, 1999, postulates that the concordance of goals to one's values and identified aims are key factors that promote long term effort to obtain these goals (Sheldon & Elliot, 1999). To elaborate, people are drawn to goals that align with key values and characteristics and away from non-concordant ones (Deci & Ryan, 2000). Hence it can be seen that a higher sense of identity and life aim, factors involved in purpose in life, increase the self-concordance of a person i.e. the active pursuit of self-relevant goals in everyday life (Kashdan & McKnight (2009). To illustrate further, the Life Engagement Test assesses the factor of purpose in life by evaluating the degree to which individuals actively engage in goals and activities directed towards their perceived purpose (Scheier at al, 2009). This shows that perhaps purpose in life increases a participant's engagement and selection of everyday self-concordant goals. A higher purpose in life also promotes self-regulation and control, two key factors that influence self-concordance (Galla and Duckworth, 2015) as those higher in self-regulation have a greater ability to maintain the effort achieving selfconcordant goals even if easier short-term options which violate these goals may seem rewarding. For instance, a study indicated that perceiving tempting stimuli could potentially trigger the activation of higher-order goals (Fishbach et al, 2003). Hence, we predict that with an increasing sense of purpose in life, there will be greater academic goal self-concordance.

Academic Self-concordance and Academic Satisfaction

Reaching goals yields a satisfying sense of accomplishment (Emmons, 1996). An increase in wellbeing is shown by Brunstein, 1993 as a long-term effect of goal attainment. Self-concordance is a factor that affects this level of satisfaction. When goals are self-concordant they are aligned with one's passions and personal values and often evoke a deeper sense of fulfilment and satisfaction compared to those pursued solely out of obligation or external pressures (Sheldon & Elliot, 1999). The Self

concordance model encompasses elements that facilitate both the pursuit and accomplishment of goals, as well as factors that link goal achievement to alterations in overall life satisfaction (Sheldon & Elliot, 1999). Individuals with a strong self-concept and self-concordance have the potential to optimize need satisfaction (Csikszentmihalyis, 1993). Hence self-concordance appears to increase satisfaction in various aspects of life. One of these aspects may be academic satisfaction. Watermans 2004 research found that undergraduates who experienced various activities as "personally expressive" i.e. aligning with values encountered greater enjoyment in those pursuits. Self-determination theory adds to the explanation as to why people should feel greater academic satisfaction because of greater academic goal self-concordance. According to Self-Determination Theory, humans have three essential needs for optimal development, one of which is autonomy (Deci & Ryan, 2017). Research suggests that students who exhibit autonomy tend to achieve higher levels of academic success and satisfaction (Heliyon, 2023). The factors of intrinsic motivation and an internal locus of control are what create a sense of autonomy, these factors are also a key part of self-concordance, which demonstrates how the variable goal self-concordance may also contribute to greater academic satisfaction. It is evident that when goals are autonomous and aligned with the self0, there are positive effects on the satisfaction of needs (Wan et al, 2021). In the academic context of this study, we predict that with increase in academic goal selfconcordance there will be heightened academic satisfaction for students.

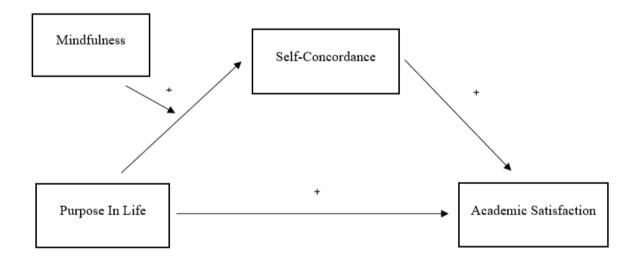
Mindfulness as Moderator

This study predicts a mediation pathway in which a strong sense of purpose in life enhances academic self-concordance, which in turn increases academic satisfaction. Yet we further hypothesize that this pathway may be stronger for some students in comparison to others. The variable that may amplify this difference between students is mindfulness. Mindfulness can be described as the conscious awareness of one's internal sensations and external occurrences unfolding in the present moment (Brown et al, 2007). We predict that with increasing levels of mindfulness a person will experience greater self-concordance and thus greater academic satisfaction. Specifically, we predict mindfulness to act as a moderating variable on the relationship between purpose in life and academic self-concordance. Therefore, students with higher mindfulness levels may experience an amplified relationship between

their purpose in life and self-concordance levels i.e. the moderator will increase the mediation pathway. Mindfulness facilitates self-concordant goals by enhancing self-awareness and helping individuals align their actions with their intrinsic values and motivations (Warren et al, 2018). The greater access to one's thoughts and feelings mindfulness brings enhances one's sense of identity (Maclean & Thorne, 2003). The complex system of identity, which encompasses elements like meaning and purpose, helps individuals align their actions with their true selves, leading to more self-concordant behaviour (Warren et al., 2017). Mindfulness has also been seen to overlap with self-regulation, a key factor in maintaining self-concordance (Short et al, 2016). Thus, we predict that an individual with high levels of mindfulness will experience a stronger relationship between purpose in life and self-concordance in comparison to their less mindful counterpart. In summary this paper will examine the mediation pathway as explained above with the inclusion of mindfulness as a moderator.

Figure 1

Visual representation of predicted moderated mediation model pathway



Method

Participants

The participants of this study consisted of first year psychology students studying at the University of Groningen in the Netherlands. A sample size N=201 was achieved yet 17 participants

were excluded due to missing data, this left a total sample size of N=184 participants. The samples age range was between 17 and 27 years old with M=20 and SD=2. The sample consisted of 130 women, 49 men, two of "other" gender and three participants who preferred not to state a gender.

Measures

Purpose in life

Purpose in life was measured using Hill et al's (2016) Purpose in Life scale. The scale consists of four items being: "There is a direction in my life", "My plans for the future match with my true interests and values", "I know which direction I am going to follow in my life" and "my life is guided by a set of clear commitments". Participants rated each item using a five-point scale, from 1 (strongly disagree) to 5 (strongly agree). The higher the rating on each item the stronger the participants' sense of possessing a purpose in life. In previous studies the internal reliability consisted of α = 0.84, similarly in this study the internal reliability was a= 0.84.

Mindfulness

We measured students perceived levels of mindfulness using Mieir et al's (2023) Single Item Mindfulness Scale (SIMS). This is a short single item scale that indicates a participant's acceptance of the present moment. The single item that participants answered was "I am a mindful person". Participants report their level of mindfulness using a Likert scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree), with a higher score indicating a higher perceived level of mindfulness. Regarding internal validity, the measure demonstrated a strong correlation with existing multi-item measures of trait mindfulness, exhibiting medium to large effect sizes (Aron et al., 2013; Meier et al., 2023).

Academic Self-Concordance

To measure the variable academic self-concordance, we used Sheldon & Elliots's (1999) relative autonomy index. The measurement in this context consists of participants writing down 3 academic goals they are currently pursuing and then assessing the level of motivation internalization based on self-determination theory. This includes categorizing their motivation to pursue the goal as

either external or autonomous. Participants were provided with a list of possible reasons for creating a goal. They then indicated on a Likert scale how accurately each reason captured their initial motivation when creating the goal. This process was repeated for all goals respectively. The reasons fell into the category of external motivation or autonomous motivation. An example of an external reason for creating a goal was: "because somebody else wants you to, or because you'll get something from someone if you do" and an example of an autonomous reason for creating a goal was: "because you believe its an important goal to have". Goals created were then rated on a Likert scale from 1 (not at all for this reason) to 7 (completely for this reason). A metric for goal self-concordance was determined by subtracting the mean of external items from the mean of autonomous items for each individual goal. A positive difference shows a concordance between the goals and the participant. The higher the value the higher the level the self-concordance. Contrastingly a negative difference relays an absence of self-concordance and the higher the negative the higher the level of un-self-concordance present in a participant. In previous studies the internal reliability was found to be α =0.8 in this study was α = 0.6.

Academic satisfaction

Academic satisfaction was measured using from Renshaw & Bolognino's (2016) College Student Subjective Wellbeing questionnaire subscale on academic satisfaction. The subscale contains four items, some examples of which are: "I have had a great academic experience at this college" and "I am satisfied with my academic achievements since coming to college". Participants rated these items based on their personal agreement with each statement using a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The higher the participants score the items the higher their subjective academic satisfaction. The currents study's internal reliability level consisted of α = 0.88. Previous studies internal reliability level also consisted of a= 0.88.

Procedure and Design

The ethics committee of the university approved of all measures related to the study. Participants were recruited through convenience sampling, leveraging the mandatory research participation component for first-year psychology students at the University of Groningen. The survey

was a non-supervised self-report questionnaire administered online using Qualtrics (Qualtrics, Provo, UT). The survey had an approximate completion time of 20 minutes. As it was not supervised the survey could be completed in the participants location of choice. Informed consent was given at the beginning of the study. Incentives in the form of course credits were provided to the participants to encourage participation in the study. Demographic information was requested from participants as was information on our studies variables. The variables being assessed in the survey consisted of: self-concordance, mindfulness, academic satisfaction and purpose in life of participants

Data analysis

A moderated mediation analysis was executed, employing Model 7 as defined by Hayes (2022). In this model, the mediating role of self-concordance in the relationship from purpose in life to academic satisfaction was assessed, taking mindfulness into account as a potential moderator. The presence of a significant moderated mediation could be found by viewing the index of moderated mediation. The indirect effect of the moderator in the pathway was also viewed. The statistical analysis SPSS (Version 28) and the PROCESS extension by Hayes (Version 4) were employed for data exploration. The PROCESS analysis uses a bootstrapping method whereby 5000 samples are conducted to generate predicted relationships.

Results

Descriptive statistics and assumption checks

The final data set for statistical analysis included N=184 participants. Descriptive statistics of the variables can be found in Table one. The correlation between academic satisfaction and purpose in life and self-concordance was significant, as was the correlation between self-concordance and purpose in life. Assumption checks were carried out. After thoroughly examining the QQ plots, scatter plots, and residual plots, no significant violations of the assumptions were detected (See Figure 2 in Appendix). Assumption checks for the moderated mediation were also carried out. The assumption of normality was found to be robust by using the bootstrapping method in Hayes PROCESS of statistical analysis. Uncorrelatedness of residuals was apparent with a Durbin-Watson number of 1.996.

Multicollinearity was not present in the variables with all having a VIF of below 10. The Huber white assumption check was used to control for the potential heteroscedasticity in the data. The assumption of linearity was met for all variables as can be seen by examining the residual scatterplot (See Figure 3 in Appendix).

Table 1Pearson Correlations, Means, and Standard Deviations

		1		2	3	4	
1.	PIL	-					
2.	AS	0.21**		-			
3.	SC	0.33**		0.28**	_		
4.	MM	-0.01		0.04	-0.1	-	
Mean		3.49	4.72		1.36	5.63	
SD		0.79	1.19		1.59	1.64	

Note. PIL: Purpose in Life; AS: Academic Satisfaction; SC: Academic Self Concordance; MM: Mindfulness.

SD: Standard deviation.

** ρ < 0.1.

Moderated mediation analysis

A moderated mediation was conducted by using the PROCESS data analysis model 7 created by Andrew F. Hayes. An advantage of this model is the use of bootstrapping which is resilient to non-linearity and heteroscedasticity. Output also becomes highly accurate with this method due to the process's method of resampling data multiple times. The model was shown to be insignificant with the

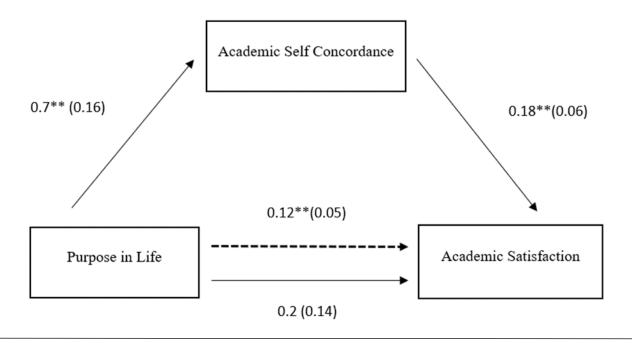
index of moderated mediation having a 95% CI of [-0.0669, 0.0213]. The proposed model that purpose in life affects academic self-concordance which in turn creates academic satisfaction with the relation between purpose in life and self-concordance being moderated by mindfulness levels is henceforth rejected. However, given the positive correlation between the measured variables with academic satisfaction it may be that purpose in life affects academic satisfaction independently. Thus, a further mediation pathway was conducted to test this new hypothesis. The mediation pathway predicts that purpose in life, as the independent variable, enhances academic self-concordance, which subsequently leads to increased academic satisfaction. We only carried out one analysis and did not include mindfulness as it lacked correlations with the other variables.

Mediation Analyses

The mediation model conducted was to test whether purpose in life affected academic satisfaction through the mediator of self-concordance. This model was shown to be significant, containing (R^2 = 0.1). The direct effects of purpose in life (β =0.2, SE=0.14, 95% CI [-0.07, 0.47], p< 0.15) on academic satisfaction were non-significant. The direct effect of self-concordance (β =0.18, SE= 0.06, 95% CI [0.05, 0.3], ρ < 0.01) on academic satisfaction was significant. The indirect effect was significant having 95% CI [0.03, 0.22]. See Figure 3 for the mediation pathway analysis of purpose in life on academic satisfaction with self-concordance as mediator.

Figure 4

Mediation model of the relationship between Purpose in Life and Academic Satisfaction with Self Concordance as mediator.



Note: Coefficients of the interactions are presented.

The dashed line indicates the indirect effect of Purpose in life on Academic Satisfaction

Standard errors are present in brackets.

Discussion

The primary aim of this study was to examine a moderated mediation pathway. In this pathway, we hypothesized that a strong sense of purpose in life enhances students' academic self-concordance, which subsequently increases their academic satisfaction. Mindfulness moderates this mediation pathway by strengthening the impact of purpose in life on academic self-concordance. Unfortunately, the predicted moderated mediation was found to be non-significant. This led to the examination of the data beyond our initial hypothesis. We conducted an additional mediation pathway which contained purpose in life as independent variable, self-concordance as mediator variable and academic satisfaction as outcome variable. This mediation pathway was found to be significant, highlighting that the presence of a purpose in life leads to an increase in self-concordance, ultimately leading to an increase in academic satisfaction. This significant pathway confirmed our expectations and aligned with results in similar areas of research.

The moderated mediation may not have been successful due to a variety of reasons. One key reason could be attributed to how the variable mindfulness was operationalized. In this regard, mindfulness was found to have non-significant correlations with the other variables in this study. This could potentially be attributed to the one-item measure of mindfulness used: the Single Item Mindfulness Scale (SIMS) (Meier et al, 2022). The concept of mindfulness encompasses many areas such as introspection, self-regulation and internal awareness (Baer, 2003) (Warren et al, 2017). Due to these broad aspects, the full scope of the variable may not be captured in the one-item measure used. The measure may not have captured the participants' mindfulness levels accurately, in particular those aspects that reflect the selection and construction of self- concordant academic goals. Certain aspects of mindfulness such as introspection and self-awareness are essential to the choice of goals and the construction of academic self-concordance (Deci & Ryan, 2000). Hence, if the measure of mindfulness did not capture these aspects, the relation mindfulness has to academic satisfaction could not be captured in this study. Also

Contrastingly the mediation pathway created was significant. The presence of significant correlations between purpose in life, academic self-concordance and academic satisfaction led to the creation of the further mediation pathway. Purpose in life was significantly correlated with self-concordance, which was hence significantly correlated with academic satisfaction. Purpose in life can be defined as: "a central, self-organizing life aim that organizes and stimulates goals, manages behaviours, and provides a sense of meaning." (Kashdan & McKnight, 2009). This is highly interconnected with the theme of self-concordance as purpose can be seen as a goal manager which helps people to act in accordance to obtaining their goals in everyday life. A clear sense of purpose creates autonomous forms of motivation in students, this may drive them to pursue goals that are inherently meaningful to them (Lewis, 2020). This heavily overlaps with the variable self-concordance, a concept which according to the Self Concordance model (Sheldon & Elliot, 1999) motivates people to take action to behave in ways that bring them closer to the attainment of their inner values and goals. Purpose in life drives people to take part in self-concordant behaviour i.e. behaviour that is congruent with goal attainment. The presence of a purpose in life increases a person's ability to self-regulate,

which is key to self-concordance as it involves focusing energy on goal attainment behaviour and ignoring potential distractors (Kashdan & Elliot, 2009). This previous research highlights why a significant correlation was found in this study between purpose in life and academic self-concordance.

The second path in the significant mediation pathway involved self-concordance increasing academic satisfaction in students. These two variables were found to have significant correlations with each other independent of the model. Self-concordance increases a person's pursuit of goals that are meaningful to them, this has been shown to have benefits such as a greater sense of success and satisfaction (Lewis, 2020). In this study, we wanted to see if this translates to the academic realm such that high self-concordance increases academic satisfaction. Self-concordance in everyday life has been shown to increase general well-being (Sheldon & Kasser, 1995). This is perhaps due to the reason that people have an innate desire to reach certain goals, particularly autonomous goals, and when our actions are in alignment with these goals, we feel satisfied, this is made clear by Self Determination Theory as outlined by Ryan and Deci (Deci & Ryan, 2000). Not all goals once achieved give a person the same level of satisfaction, autonomous goals are seen as more satisfying upon completion (Sheldon & Elliot, 1999). According to previous research, this may be because acting with autonomy means aligning one's actions with personal values. Achieving a goal that closely reflects these core values generates a high level of positive emotion and satisfaction (Koestner et al, 2008). In this study we succeed in showing that this translates to the academic realm such that high self-concordance increases academic satisfaction.

These results have practical significance as they may have real-world effects. For example, students' mental well-being is a concern today. Looking at the results from our study, if purpose in life and self-concordance are nurtured in potential students, then greater academic satisfaction and well-being can be created in the academic setting which improves the experience for all involved. One such way this could be done, which also warrants future research in the area could be to design curriculums that focus on purpose-driven learning. This may involve the creation of curricula that allow students to align their learning with their personal goals and values. Another future area of research that this study creates is the area of goal creation. Self-concordance was found to be highly correlated with academic

satisfaction, perhaps goal setting and alignment should be incorporated into the educational sector to help students keep their personal goals in mind when going about everyday activities. These suggestions come from the results of our study and may warrant potential future research.

Various limitations existed in this study in terms of threats to internal and external validity. The external validity may be improved by widening the pool of participants. A convenience sample was used which because of demographics resulted in most participants fitting into the WEIRD (Western, Educated, Industrialised, Rich, Democratic) category. Unfortunately, this decreased the study's generalizability; in the future a more diverse mix of participants would improve validity. Another limitation of this study was the fact it had a cross-sectional design. This means that we do not get temporal information about the causality and cannot capture how participants answers may change over time. To combat this problem a longitudinal study may be carried out in the future, where data is collected at various points in time which can help establish temporal sequences.

The final limitation of this study is theoretical. In this study, purpose was measured by assessing individuals' "sense" of purpose in life. The majority of literature in this area also explores the concept in this way. Participants were not required to concretely define what their purpose was or what their key values consisted of, rather they were asked to describe a "sense". Identifying the content and values that are within a purpose may have measured a more accurate representation of participants levels of purpose (Burrows & Hill, 2011). Future research on the area should perhaps focus on measuring purpose not in terms of a "sense" but in terms of a person's values as these are what seem to drive a person's purpose. A potential way to increase a person's capability for identifying values and so unearthing their purpose would be to take part in Acceptance and Commitment therapy. Acceptance and Commitment therapy emphasizes the importance of value clarification and how finding these values leads to a more meaningful and purposeful life (Hayes et al, 1999).

Conclusion

This study focused on the area of academic satisfaction. The primary aim was to explore a moderated mediation whereby purpose in life acted as independent variable, academic self-concordance

as mediator, and academic satisfaction as outcome variable, with mindfulness present as a moderator. We hypothesized that an increase in purpose in life would lead to higher levels of academic selfconcordance, which would subsequently enhance academic satisfaction. Furthermore, we anticipated that mindfulness would strengthen the relationship between purpose in life and academic selfconcordance. This moderated mediation was found to be insignificant. When further exploring the data high correlations were found between certain variables, which led us to create a separate mediation pathway whereby we predicted purpose in life would increase academic self-concordance which in turn increases academic satisfaction. This mediation pathway was found to be significant. These findings contribute to the existing field in these areas by providing evidence of the positive effect a high purpose in life and self-concordance can have on an individual. Despite the significant findings, this study has several limitations. The lack of diversity among participants limits the generalizability of the results. Future research should include perhaps a more diverse sample of participants. A longitudinal aspect should also be included to measure the temporal relationship between the variables. To conclude this study highlights the positive mediation pathway which shows how a purpose in life increases academic self-concordance which hence increases academic satisfaction. As student mental health is an area of key importance it is crucial to develop strategies that may increase the presence of these variables in students and others. Continued research in this area is essential to protect the mental well-being of these populations.

References

- Aidan P.J.Smyth, Kaitlyn M.W., Marina Milyavskaya, Anne Holding, Richard Koestner. (2020) Do mindful people set better goals? Investigating the relation between trait mindfulness, self-concordance, and goal progress. Journal of Research in Personality, Volume 88,104015, ISSN 0092-6566. https://doi.org/10.1016/j.jrp.2020.104015.
- Aron, A., Coups, E. J., & Aron, A. N. (2013). Statistics for psychology (6th ed.). Pearson Education.
- Baer, R. A. (2003). Mindfulness training as a clinical intervention: A conceptual and empirical review.

 Clinical Psychology: Science and Practice, 10(2), 125–143.

 https://doi.org/10.1093/clipsy.bpg015
- Brunstein, J. C. (1993). Personal goals and subjective well-being: A longitudinal study. Journal of Personality and Social Psychology, 65(5), 1061–1070. https://doi.org/10.1037/0022-3514.65.5.1061
- Burrow, A. L., & Hill, P. L. (2011). Purpose as a form of identity capital for positive youth adjustment. Developmental Psychology, 47(4), 1196–1206. https://doi.org/10.1037/a0023818
- Csikszentmihalyi, M. (1993). The evolving self: A psychology for the third millenium. New York: HarperCollins.
- Deci, E. L., & Ryan, R. M. (2000). The "What" and "Why" of Goal Pursuits: Human Needs and the Self-Determination of Behavior. Psychological Inquiry, 11(4), 227–268.

 https://doi.org/10.1207/S15327965PLI1104_01
- Emmons, R. A. (1996). Striving and feeling: Personal goals and subjective well-being. In P. M. Gollwitzer & J. A. Bargh (Eds.), The psychology of action: Linking cognition and motivation to behavior (pp. 313–337). The Guilford Press.
- Franzen J, Jermann F, Ghisletta P, Rudaz S, Bondolfi G, Tran NT. Psychological Distress and Well-Being among Students of Health Disciplines: The Importance of Academic Satisfaction. Int J

- Environ Res Public Health. 2021 Feb 23;18(4):2151. doi: 10.3390/ijerph18042151. PMID: 33672097; PMCID: PMC7926619.
- Galla, B. M., & Duckworth, A. L. (2015). More than resisting temptation: Beneficial habits mediate the relationship between self-control and positive life outcomes. Journal of Personality and Social Psychology, 109(3), 508–525. https://doi.org/10.1037/pspp0000026
- & Judy A. Andrews (2016) Purpose in life in emerging adulthood: Development and validation of a new brief measure, The Journal of Positive Psychology, 11:3, 237-245, DOI: 10.1080/17439760.2015.1048817

Patrick L. Hill, Grant W. Edmonds, Missy Peterson, Koen Luyckx

- Hayes, A. F., & Little, T. D. (2022). Introduction to mediation, moderation, and conditional process analysis: a regression-based approach (Third edition). The Guilford Press.

 https://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=3103926
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). Acceptance and commitment therapy: An experiential approach to behavior change. Guilford Press.
- Kashdan, T.B. i McKnight, P.E. (2009). Origins of Purpose in Life: Refining our Understanding of a Life Well Lived. Psihologijske teme, 18 (2), 303-313. Preuzeto s https://hrcak.srce.hr/48215
- Kirk Warren Brown , Richard M. Ryan & J. David Creswell (2007) Addressing Fundamental Questions About Mindfulness, Psychological Inquiry, 18:4, 272-281, DOI: 10.1080/10478400701703344
- Lewis, N.A. (2020), Purpose in life as a guiding framework for goal engagement and motivation. Soc Personal Psychol Compass, 14: 1-11 e12567. https://doi.org/10.1111/spc3.12567
- McLean, K. C., & Thorne, A. (2003). Late adolescents' self-defining memories about relationships.

 Developmental Psychology, 39, 635–645. doi:10.1037/0012-1649.39.4.635

- Meier, B. P., Konrath, S., Fetterman, A. K., Dillard, A. J., James, C., Weinstein, E., & Bushman, B. J. (2023). Development and Validation of the Single-Item Mindfulness Scale (SIMS). Journal of Personality Assessment, 105(6), 807–819. https://doi.org/10.1080/00223891.2022.2152348
- Michael T. Warren, Laura Wray-Lake & Amy K. Syvertsen (2018) Becoming who they want to be: A cross-national examination of value-behavior concordance and mindfulness in adolescence*, The Journal of Positive Psychology, 13:6, 605-616, DOI: 10.1080/17439760.2017.1350741
- Nauta, M. M. (2007). Assessing College Students' Satisfaction With Their Academic Majors. Journal of Career Assessment, 15(4), 446-462. https://doi.org/10.1177/1069072707305762
- Osamika, B.E., Lawal, T., Osamika, A.E., Hounhanou, A. J. V & Laleye, M. (2021). Personality

 Characteristics, Psychological Wellbeing and Academic Success among University Students.

 International Journal of Research in Education and Science, v7 n3 p805-821 2021.

 https://eric.ed.gov/?id=EJ1308175
- Pressman, Sarah D. PhD; Matthews, Karen A. PhD; Cohen, Sheldon PhD; Martire, Lynn M. PhD; Scheier, Michael PhD; Baum, Andrew PhD; Schulz, Richard PhD. Association of Enjoyable Leisure Activities With Psychological and Physical Well-Being. Psychosomatic Medicine 71(7):p 725-732, September 2009. | DOI: 10.1097/PSY.0b013e3181ad7978
- Renshaw, T. L., & Bolognino, S. J. (2016). The College Student Subjective Wellbeing Questionnaire:

 A Brief, Multidimensional Measure of Undergraduate's Covitality. Journal of Happiness

 Studies: An Interdisciplinary Forum on Subjective Well-Being, 17(2), 463–484.

 https://doi.org/10.1007/s10902-014-9606-4
- Ryan D. Duffy, Blake A. Allan, Bryan J. Dik. (2011). The presence of a calling and academic satisfaction: Examining potential mediators. Journal of Vocational Behavior, Volume 79, Issue 1, ISSN 0001-8791, https://doi.org/10.1016/j.jvb.2010.11.001.

- Sheldon KM, Elliot AJ. Goal striving, need satisfaction, and longitudinal well-being: the self-concordance model. J Pers Soc Psychol. 1999 Mar;76(3):482-97. doi: 10.1037//0022-3514.76.3.482. PMID: 10101878
- Sheldon, K. M., & Kasser, T. (1995). Coherence and congruence: Two aspects of personality integration. Journal of Personality and Social Psychology, 68(3), 531–543. https://doi.org/10.1037/0022-3514.68.3.531
- Short, M. M., Mazmanian, D., Oinonen, K., & Mushquash, C. J. (2016). Executive function and self-regulation mediate dispositional mindfulness and well-being. Personality and Individual Differences, 93, 97–103. doi:10.1016/j.paid.2015.08.007
- Wan, P., Wen, T., Zhang, Y., Gao, H., Wang, J. (2021). Goal Self-Concordance Model: What Have We Learned and Where are We Going. International Journal of Mental Health Promotion, 23(2), 201–219.
- Warren, M. T., Wray-Lake, L., & Syvertsen, A. K. (2017). Becoming who they want to be: A cross-national examination of value-behavior concordance and mindfulness in adolescence*. The Journal of Positive Psychology, 13(6), 605–616.

 https://doi.org/10.1080/17439760.2017.1350741
- Wrzesniewski, A., McCauley, C., Rozin, P., & Schwartz, B. (1997). Jobs, careers, and callings: People's relations to their work. Journal of research in personality, 31(1), 21-33.

Appendix

Figure 2

QQ Plot of Normality

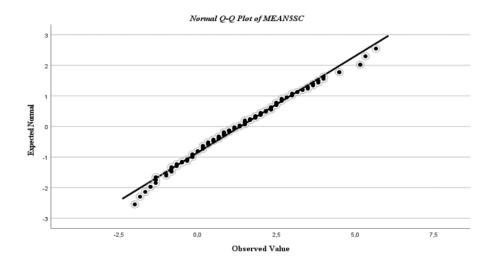


Figure 3

Partial Regression plot

