Disentangling the Roles of Purpose in Life, Mindfulness, and Academic Self-concordance on Academic Harmonious Passion: A Moderated Mediation Analysis

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Abstract

This study examined the relationships between purpose in life, mindfulness, academic self-concordance and harmonious passion. It was hypothesized that academic self-concordance would mediate the relationship between purpose in life and harmonious passion. A moderated mediation model was predicted suggesting that with increased purpose in life there would be higher academic self-concordance and greater harmonious passion. In addition, it was hypothesized that mindfulness would moderate this mediation pathway such that the mediation pathway would be stronger for those high in mindfulness. Data was collected through a digital questionnaire on a convenience sample of 184 first-year psychology students. A PROCESS bootstrap moderated mediation analysis (Hayes, 2022) showed no support for the proposed model. However, an additional PROCESS bootstrap mediation analysis (Hayes, 2022) was carried out predicting that with greater purpose in life there would be more academic self-concordance and greater harmonious passion. The results supported the hypothesis, indicating that students with a high sense of purpose in life set goals that align with their purpose and experience greater harmonious passion. These findings add to the current knowledge about the academic benefits of purpose in life and may be useful in developing interventions to increase academic satisfaction and general student well-being.

Keywords: purpose in life, mindfulness, academic self-concordance, harmonious passion

Disentangling the Roles of Purpose in Life, Mindfulness, and Academic Self-concordance on Academic Harmonious Passion: A Moderated Mediation Analysis

The majority (56%) of students in the Netherlands experience a large amount of stress and almost half (44%) experience symptoms of anxiety or depression (Trimbos-instituut, 2023). It is therefore necessary to examine the factors that could promote student well-being. In this regard, Purpose in Life (PL) has been linked to a variety of positive outcomes, such as better coping with stressors related to college (Pfund et al., 2020) and healthier general psychological functioning (Kashdan et al., 2023). However, there is little research examining the mechanisms through which PL exerts its influence. With this in mind, the primary aim of this study is to examine whether PL can promote positive well-being in the form of Harmonious Passion (HP) through Academic Self-concordance (ASC). This will be done by examining a mediation pathway with PL as the predictor variable, ASC as the mediator and HP as the outcome variable. A secondary aim is to investigate whether this mediation pathway is moderated by mindfulness such that mindfulness enhances the effect of PL on ASC, since mindfulness is theoretically and empirically linked to greater ASC (Smyth et al., 2020).

Purpose in life and goal selection

PL can be defined as a central and self-organizing life aim, and is derived from one's values (Kashdan et al., 2023). Values are guiding principles representing what one finds meaningful (Reilly et al., 2019), such as helping others or being kind. According to Kashdan et al., (2023), the difference between PL and values is that PL is a higher order life aim derived from one's values, whereas values are merely a representation of what one finds meaningful. For example, one might value fairness and being helpful, resulting in a PL of increasing gender equality. PL is self-organizing in the sense that it motivates one to direct energy and resources towards goals that align with their life aim and away from other goals,

which happens because it is more motivating to dedicate resources towards goals that seem to contribute to purpose-related progress (Kashdan et al., 2023). Indeed, setting goals is a fundamental aspect of PL, since PL functions as a broad overview which one can direct their daily goals and behaviors to (Lewis, 2020). This means that PL guides one in their daily goals and behaviors (Kashdan et al., 2023; Lewis, 2020). There are many academic benefits associated with PL, such as increased perseverance for one's studies (Hill et al., 2016), more academic engagement (Greenway, 2006), and higher educational accomplishments (Hill & Weston, 2019).

It is proposed in this paper that the benefits related to PL stem from choosing academic goals that are self-concordant, which means that they align with one's core values (Sheldon & Elliot, 1999). For example, following this logic, students with a core value of helping people would be more likely to be motivated, engaged, and successful if they chose an academic degree related to helping people as opposed to a degree that is not related to helping people. It is theorized that PL increases ASC, or setting academic goals that align with one's core values, by promoting a conscious selection of goals, directing students' attention to cues that align with their purpose, and strengthening their self-control and executive functioning (Lewis, 2020). This theory is supported by findings of a study by Fishbach and Shah (2006), which showed that students resist temptations by automatically avoiding stimuli related to the temptation and directing their attention towards stimuli related to an overarching goal. As mentioned before, such an overarching goal is often closely related to one's PL and therefore students' PL may guide their attention away from temptations and towards stimuli related to their PL (Lewis, 2020). This then results in continued pursuit of academic goals that align with students' PL and thus their core values (Lewis, 2020). This theory is in line with the self-concordance model (Sheldon & Elliot, 1999), which suggests that goals that are self-concordant, meaning they align with one's core

values, promote sustained effort and are more rewarding when completed. This means that according to the self-concordance model (Sheldon & Elliot, 1999), students that set academic goals that align with their PL and thus their core values, such as choosing an academic degree that suits their PL, put more effort into their studies and experience more satisfaction upon completing their academic goals. Based on the theory by Lewis (2020) and Sheldon and Elliot (1999), it is hypothesized in the current study that with increased PL there will be greater ASC.

Academic self-concordance and harmonious passion

Sheldon and Elliot (1999) theorize that attaining self-concordant academic goals is more rewarding because it supports fulfillment of the three basic human needs according to the self-determination theory (Ryan & Deci, 2020): autonomy, competence and relatedness. According to Ryan and Deci (2020), fulfilling these needs leads to increased intrinsic motivation, which is motivation that comes from interest and enjoyment from within oneself, as opposed to from external factors (Ryan & Deci, 2020). Intrinsic motivation seems to be highly beneficial, as it has been linked to many academic benefits such as higher academic performance (Taylor et al., 2014) and more academic engagement (Froiland & Worrel, 2016). This means that, according to the self-determination theory (Ryan & Deci, 2020), students who experience autonomy, competence, and relatedness have more intrinsic motivation and therefore tend to perform better academically (Froiland & Worrel, 2016; Ryan & Deci, 2020; Taylor et al., 2014).

According to Sheldon and Elliot (1999), ASC may help fulfill the need for autonomy. Autonomy can be described as "a sense of initiative and ownership in one's actions" (Ryan & Deci, 2020) and increases when one's actions come from personal interest and values, as opposed to external control such as punishments or rewards (Ryan & Deci, 2020). Therefore, students' need for autonomy would be fulfilled if they felt like their actions were motivated

by their own interests and values, leading to increased intrinsic motivation (Ryan & Deci, 2020). This theory is supported by many studies that have shown academic benefits related to increased autonomy, such as higher grades (Guay & Vallerand, 1997) and higher perceived competence (Black & Deci, 2000). Students' sense of autonomy may be increased through ASC, because students high in ASC set academic goals that align with their core values, which means these goals are motivated from within and are therefore autonomous (Ryan & Deci, 2020). According to Sheldon and Elliot (1999), having these autonomous goals means that students spend more time exerting autonomous behavior, which is behavior that is meaningful and freely chosen (Sheldon & Elliot, 1999), fulfilling the students' need for autonomy. For example, a student high in ASC may choose to take an extra course for their studies because they value being a good student. Since this goal aligns with the student's values, it is autonomously motivated. Studying for the course is therefore autonomous behavior, fulfilling the student's need for autonomy according to Sheldon and Elliot's (1999) theory.

As mentioned before, ASC increases students' sense of autonomy through choosing academic goals that align with their core values, leading to more autonomous behavior (Sheldon & Elliot, 1999). This increase in autonomous behavior as a result of ASC may increase HP, which is "an autonomous internalization that leads individuals to choose to engage in the activity that they like" (Vallerand et al., 2003). HP is a specific type of general passion, which can be defined as a strong drive toward an activity that one likes, finds important, and invests time and energy in (Vallerand et al., 2003). This means that in order to develop passion for an activity, the activity needs to be important in one's life, liked, and spent time on on a regular basis (Vallerand et al., 2003). According to Vallerand et al. (2003), passion stems from an incorporation of a representation of an activity that someone likes into their own identity. For example, someone who has a passion for studying geography

internalizes this into their own identity by viewing themselves as a "geography student", making the activity a part of who they are (Vallerand et al., 2003). Vallerend et al. (2003) propose a dualistic model in which there are two types of passion, distincted by the way the representation of the activity is internalized in one's identity. If the internalization was autonomous, meaning one autonomously and intrinsically chose the activity and the activity aligns with one's core values, this results in HP (Vallerand et al., 2003). By contrast, if the internalization was controlled, meaning it either came from external reasons or uncontrollable excitement for the activity, this results in obsessive passion (Vallerand et al., 2003). This means that the type of motivation for the activity is crucial for the type of passion one develops: autonomous motivation leads to HP, while external motivation leads to obsessive passion (Vallerand et al., 2003). ASC may promote HP in this process, since ASC means that students set academic goals that align with their core values, meaning the activities related to the chosen goals are autonomously motivated (Sheldon & Elliot, 1999). This in turn increases intrinsic motivation (Ryan & Deci, 2020), which supports the conditions for the development of passion such as liking the activity, finding it important, and doing it on a regular basis (Ryan & Deci, 2020; Vallerand et al., 2003). The passion that develops from this is harmonious, since the activity aligns with one's core values and is therefore autonomously motivated (Vallerand et al., 2003). For example, a student with high ASC who values helping others may choose an academic degree that aligns with this value, such as Psychology. Because this degree aligns with their values, studying for the degree is autonomously motivated, increasing their intrinsic motivation (Ryan & Deci, 2020). This intrinsic motivation makes it more likely that they will regularly spend time studying, find studying important, and like studying (Froiland & Worrel, 2016; Stoeber et al., 2011). Therefore the conditions for passion to develop are met, allowing for a passion to develop (Vallerand, 2003). This passion will be harmonious because the student was autonomously motivated to

study, as their degree aligns with their values (Vallerand et al, 2003). HP has been linked to many benefits for students such as higher dedication and engagement for one's studies (Stoeber et al., 2011), enhanced academic performance (Shen, 2024; Bélanger & Ratelle, 2020), and better well-being (Philippe et al., 2009), making its development a relevant subject in increasing student well-being and performance. The current study hypothesizes that with increased ASC there will be greater HP, predicting a full mediation pathway suggesting that with more PL there will be higher ASC, and thus greater HP.

Mindfulness as a moderator of the relationship between PL and ASC

So far, a mediation pathway was predicted suggesting that with more PL there will be higher ASC and thus greater HP. However, this effect may be stronger for those who are higher in mindfulness, which is attention to what is happening internally and externally in the present (Brown & Ryan, 2003). Mindfulness may moderate the effect of PL on ASC, since mindful individuals seem to be more aware of their PL and the extent to which their academic goals are autonomous and self-concordant (Smyth et al., 2020). As mentioned before, PL provides a higher life aim based on one's values (Kashdan et al., 2023), towards which students can set their academic goals (Lewis, 2020). This means that PL helps students select academic goals which are self-concordant, meaning they align with the students' values (Lewis, 2020). However, mindfulness may play a role in this process as well: since mindful students are more aware of their inner world (Brown & Ryan, 2003), they may have more insight into their core values (Shapiro et al., 2006). This enhanced insight helps to set goals that align with those core values and are thus self-concordant (Sheldon, 2014). Since PL is a higher aim based on one's values (Kashdan et al., 2023) which may help students set self-concordant academic goals (Lewis, 2020), increased mindfulness may strengthen the relationship between PL and ASC as it helps students be more conscious about their values (Smyth et al., 2020) and therefore their PL. In addition, mindful students may be more

continuously reflective on whether the goals they are already pursuing align with their core values, meaning they are more likely to stop pursuing goals that are not self-concordant and continue pursuing goals that are (Smyth et al., 2020). This theory is supported by findings of several studies in which greater mindfulness was associated with enhanced self-awareness (Brown & Ryan, 2003), setting more self-concordant goals (Smyth et al., 2020), and behaving in concordance with intrinsic values (Warren, 2017). Therefore, it is predicted in the current study that mindfulness will moderate the relationship between PL and ASC such that the relationship between PL and ASC will be stronger for those high in mindfulness. The full predicted moderated mediation model is shown in figure 1.

Figure 1

Proposed moderated mediation model
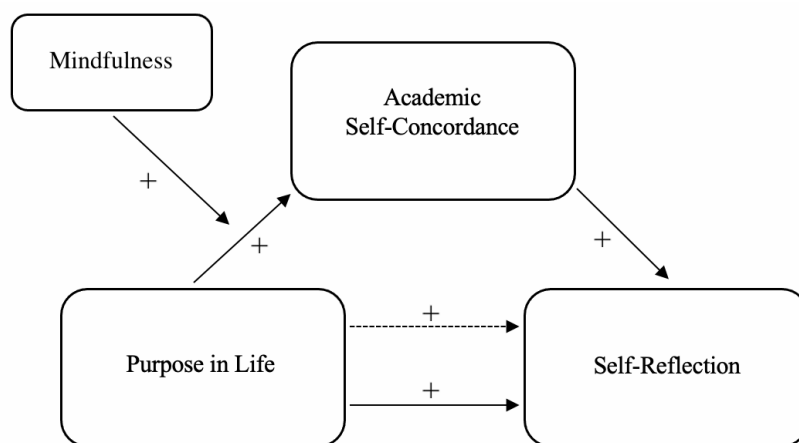
Methods

Participants

The participants of this study originally consisted of 201 first year psychology students studying at the University of Groningen in the Netherlands and following the course Academic Skills. Seventeen participants were removed due to incomplete answers, leaving the study with $N = 184$ participants. The sample consisted of 129 women (70.11%), 49 men (26.63%) and 6 participants of an undescribed sex (3.26%). Hundred twenty-one participants

were of Dutch nationality (65.76%), 16 of German nationality (8.70%) and 46 participants

claiming other nationalities (25%). The ages of participants ranged from 17 to 35 years old

($M = 19.8$, $SD = 2.0$).

Measures

Purpose in Life

PL was operationalized using Hill et al.'s (2016) Purpose in Life Scale. The scale

consists of four items such as: "there is a direction in my life" and "my plans for the future

match with my true interests and values". Participants rated each item using a five point

scale, from 1 (strongly disagree) to 5 (strongly agree). A higher overall rating indicates a

higher PL. Hill et al. (2016) reported a reliability of $\alpha = .84$. In the current study, Cronbach's

alpha was also .84.

Academic Self-concordance

The variable self-concordance was operationalized using Sheldon & Elliot's (1999)

method. Participants were asked to write down three academic goals they are currently

pursuing. Examples of participant responses include "I want to pass all my exams" and

"prepare the lectures I'm attending". To assess the self-concordance of these goals,

participants then rated their reason for pursuing each goal in terms of intrinsic, identified,

external and introjected on a scale from 1 (not at all for this reason) to 7 (completely for this

reason). The intrinsic reason participants rated was "because of the fun and enjoyment that it

provides you." The identified reason was "because you believe it's an important goal to have."

The external reason was "because somebody else wants you to, or because you'll get

something from someone if you do it" The introjected reason was "because you would feel

ashamed if you did not". A self-concordance variable was calculated for each participant by

summing the scores for all three goals for identified and intrinsic reasons and subtracting the

scores for introjected and external reasons (Sheldon & Elliot, 1999). The resulting variable

provides a relative autonomy index in which a higher value indicates higher autonomy and thus self-concordance (α = .80; Sheldon & Elliot, 1999). In the current study, Cronbach's alpha was .7.

Harmonious Passion

HP was operationalized using the HP subscale of the Passion Scale by Vallerand et al. (2003). The scale was adapted in this study to measure HP for university studies. It consists of 7 items such as: "my university studies allow me to live a variety of experiences" and "for me my university studies are a passion, that I still manage to control". Each item was rated on a 7-point likert scale ranging from 1 (do not agree at all) to 7 (completely agree). According to Vallerand et al. (2003), reliability is acceptable (α = .79). In the current study, Cronbach's alpha was .84.

Mindfulness

Students' perceived level of mindfulness was operationalized using the Single-Item Mindfulness Scale (Meier et al., 2023). This scale consists of the item "I am a mindful person" and indicates the participant's acceptance of the present moment. 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. The scale has been found to be reliable and valid through several studies with cross-sectional, short longitudinal, and daily diary designs by Meier et al. (2023), as it correlated with several other measures of mindfulness in medium to large effect sizes.

Procedure

The study was approved by The Ethics Committee of the Faculty of Behavioral and Social Sciences at the University of Groningen. The sample used was a convenience sample collected through SONA, a system through which first year psychology students from the University of Groningen partake in studies in exchange for course credits (University of

Groningen, 2023). Therefore, some participants received course credit for participation. The researchers conducting the survey are part of the University of Groningen. The survey was a self report questionnaire including measures of age, gender, nationality, PL, ASC, and HP and was administered online. The questionnaire was part of a larger study on student academic performance and well-being.

Statistical Analyses

The moderated mediation model was examined using model 7 (Hayes, 2022) in PROCESS macro for SPSS (version 4.2) with 5000 bootstrap samples. First, assumptions were checked and correlations and descriptives calculated. Then the analysis was carried out, providing an index for the effect of the moderated mediation along with a 95% confidence interval. The moderated mediation index indicates the extent to which the moderator moderates the effect of the independent variable on the dependent variable through the mediator, in which a significant index indicates a significant effect of the moderator (Hayes, 2022). The model used PL as the predictor variable, ASC as the mediator variable, mindfulness as the moderator variable and HP as the outcome variable.

Results

Preliminary analysis

Of the 206 participants who originally volunteered for this study, 19 were removed due to incomplete answers. This means there was a final number of $N = 184$ participants. A casewise diagnostic ($> \pm 3$ $SD)$ was done and no outliers were found. A standardized residual plot showed no violation of homoscedasticity, scatterplots confirmed linearity, and Q-Q plots confirmed normality. There was no multicollinearity, since all correlations between the variables were below .7. Since bootstrapping is used for the moderated mediation analysis, no further checks were needed for independence of errors (Wright, 2011). Descriptive statistics and correlations between variables are shown in table 1.

Table 1

Pearson Correlations, Means, and Standard Deviations

	1	2	3	4
1. ASC	-			
2. Mind	-.100	-		
3. PL	.327**	.022	-	
4. HP	.298**	.032	.313**	-
Mean	2.71	4.53	13.98	4.69
SD	3.17	1.35	3.14	.90

Note. ASC: academic self-concordance; Mind: mindfulness; PL: purpose in life; HP: harmonious passion; SD: standard deviation

** $p < .01$.

Moderated mediation analysis

The moderated mediation was tested using model 7 (Hayes, 2022) with 5000 bootstrap samples. The index of moderated mediation was not significant as the confidence interval contained zero (95% CI [-.0143, .002]). This means that mindfulness did not significantly moderate the effect of PL on HP through ASC, which means there was no support for the proposed moderated mediation pathway. However, taking into account the found correlations between PL, ASC, and HP, it is possible that PL influences ASC and HP independently. Therefore a separate mediation pathway was examined using model 4 (Hayes,

2022), predicting that with greater PL there would be higher ASC and greater HP. Because there was no significant correlation between mindfulness and any of the other variables, mindfulness was not further explored as a predictor variable in a mediation pathway.

Mediation analysis

The mediation analysis investigated the indirect effect of PL on HP through ASC. The model was found to be significant ($F(2, 181) = 11.57$, $p < .001$) and 14% of variance in HP was explained by the predictor variables. The direct effect of PL on ASC was significant ($B = .329$, $SE = .078$, 95% CI [.176, .483], $p < .001$) as well as the direct effect of ASC on HP ($B = .062$, $SE = .021$, 95% CI [.021, .104], $p < .001$) and the direct effect of PL on HP ($B = .069$, $SE = .021$, 95% CI [.027, .111], $p = .001$). The indirect effect of ASC through PL on HP was found to be significant as well ($B = .021$, $SE = .008$, 95% CI [.007, .038]). These findings supported the predicted mediation model which stated that with greater PL there would be higher ASC and greater HP. Figure 2 shows the mediation pathway of PL on HP mediated by ASC and its coefficients.

Figure 2

Mediation model of the effect of PL on HP mediated by ASC
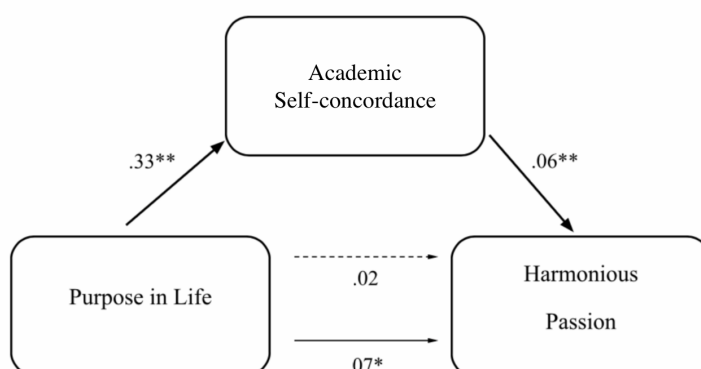
Note. Coefficients of the interactions are presented. The indirect effect is displayed by the dashed line.

*$p < .01$

****p < .001

Summary

Before carrying out the analysis, all necessary assumptions were checked and descriptive statistics obtained. Next, a bootstrap analysis was carried out using PROCESS model 7 (Hayes, 2022). The results did not support the proposed moderated mediation pathway. However, an additional moderated mediation predicting that with greater PL there would be higher ASC and greater HP was analyzed using PROCESS model 4 (Hayes, 2022). The results supported the predicted mediation model.

Discussion

In this study, a moderated mediation pathway was predicted suggesting that with more PL there would be higher ASC and thus greater HP. It was also predicted that this effect would be stronger for those high in mindfulness. Unfortunately, no support for the moderated mediation pathway was found. However, based on significant correlations between PL, ASC, and HP, an additional mediation pathway was tested suggesting that with increased PL there would be more ASC and greater HP. The results supported the mediation pathway.

The first moderated mediation pathway was not significant, as mindfulness did not correlate with the other variables. One explanation for this is that the mindfulness scale may not have sufficiently represented the concept of mindfulness, or at least not the part of mindfulness that influences goal-setting. Mindfulness was chosen as a moderator because it plays a role in selecting goals: mindful students are more aware of their inner world (Brown & Ryan, 2003), which may increase their insight into their core values (Shapiro et al., 2006). This enhanced insight helps them choose goals that align with those core values and are therefore self-concordant (Sheldon, 2014). In addition, mindful students may be more continuously reflective on whether the goals they are pursuing are self-concordant, which helps them decide whether to keep pursuing the goal (Smyth et al., 2020). Using a more

elaborate mindfulness scale may capture the part of mindfulness involved with decision-making better, allowing for a clearer view on the correlation between mindfulness and the other variables. An appropriate scale may be the Five Facet Mindfulness Questionnaire (FFMQ-15) (Baer et al., 2022), which measures mindfulness using five subscales such as 'Acting with Awareness' and 'Observing'. Some of these facets, such as the facet of Acting with Awareness, may be more important than the other facets when examining mindfulness and goal-setting specifically. Namely, being mindful may help in setting more self-concordant goals because students are more aware of their and PL and therefore choose goals that align with them (Smyth et al., 2020). However, a student may be mindful in terms of observing what their purpose is, but if they are not mindful in terms of acting on what they observe, this may still not result in setting self-concordant academic goals. For this reason, it is recommended to use a mindfulness scale that measures all facets of mindfulness in future studies to provide a more accurate image of the role of mindfulness in setting self-concordant goals.

The significant mediation pathway indicates that students higher in PL set academic goals that are more self-concordant and therefore experience greater HP. The first significant path of the mediation is in line with Lewis's (2020) theory that PL promotes a conscious selection of goals and guides one's intention towards goals that are in line with one's PL, leading to more personally meaningful goals and therefore more ASC. This indicates that because students high in PL set academic goals that are aligned with their own values, their goals are intrinsically motivated and therefore more autonomous. The second path of the mediation builds on these findings as it suggests that students that set self-concordant and therefore more autonomous academic goals experience greater HP. These findings are consistent with previous research in which autonomy predicted the development of HP (Vallerand et al., 2009) and can be explained by the self-determination theory (Ryan & Deci,

2020), which states that fulfilling the basic human need for autonomy aids the development of intrinsic motivation. Setting academic goals that are self-concordant and thus autonomous therefore also promotes HP, as increased intrinsic motivation helps meet the conditions for the development of passion such as liking the activity, finding it important, and doing it on a regular basis (Ryan & Deci, 2020; Vallerand et al., 2003), increasing chances for a passion to develop which will be harmonious due to the autonomous nature of the activities (Vallerand et al., 2003). Greater HP may improve student well-being and academic performance, as it has been linked to many benefits such as enhanced academic performance (Shen, 2024; Bélanger & Ratelle, 2020) and increased global resilience (Paquette et al., 2022). These benefits likely stem from increased intrinsic motivation due to the fulfillment of the need for autonomy (Ryan & Deci, 2020) as a result of setting goals that align with students' core values (Lewis, 2020).

The findings of the current study suggest that interventions to improve student well-being and academic performance should start by identifying students with a low sense of PL and increasing their sense of PL and ASC. This is because the findings suggested that students with more PL experienced more ASC and higher HP, which HP is linked to many benefits for academic performance and student well-being such as enhanced academic performance (Shen, 2024; Bélanger & Ratelle, 2020) and increased global resilience (Paquette et al., 2022). A suitable intervention for increasing PL and ASC may be acceptance-commitment therapy (ACT) (Hayes et al., 2006), which targets both PL and ASC by focusing on identifying one's values and developing goals and behavior that match those values (Hayes et al., 2006). This is done through several exercises in which students choose life directions across several domains of their life and are then stimulated to take action that aligns with these values through various methods such as goal-setting and exposure (Hayes et al.. 2006). ACT is backed by a body of theory and research (Hayes et al., 2006), and has been

shown effective in increasing students' well-being and time-management skills (Katajavuori et al., 2021). Since the current study found that PL and ASC are already important for first year students, it may be useful to already target students for intervention in the first year.

There are some limitations to keep in mind when interpreting the findings of this study. The first limitation is that the study was cross-sectional which means the findings are only correlational, therefore it is not possible to determine causal relationships between the variables (Morling, 2020). Further studies with longitudinal and experimental designs are needed to solve this problem (Morling, 2020). Another limitation is that the sample exists only out of first year psychology students from the University of Groningen, which means that the generalizability of the findings is limited (Morling, 2020). To improve generalizability, replications with students from different studies, countries, and years would be helpful. Furthermore it may be useful to explore the findings in life in general instead of only in the academic world. Further research is needed to gain better understanding of the causality and generalizability of the mechanism between PL, academic GSC and HP.

In addition to the limitations previously mentioned, there is another theoretical limitation: the current study only measured one's sense of PL, but did not account for the content of one's purpose, namely the kind of values that one's PL is built on. It is therefore not possible to determine whether the kind of values one's PL is based on influences the relationship between PL, ASC, and HP. One study by Crandall and Rasmussen (1975) found that students with strong values of excitement, pleasure, and comfort experienced less PL than those with a strong value of salvation, indicating that the type of value may influence the strength of one's PL. It may therefore be useful to include the type of values as a variable in future studies to gain further insight into the mechanism behind the academic benefits of PL. This may for example be done by interviewing participants on their values. In addition, ACT

(Hayes, 2006) may be useful to help participants become more conscious of their values and PL and determine what kind of values they find important.

To summarize, this study examined whether students high in PL experienced more ASC and greater HP and whether this effect was moderated by mindfulness. This predicted moderated mediation model was not significant due to absence of correlation between mindfulness and the other variables, possibly because the mindfulness scale did not fully capture the facet of mindfulness most important for goal-setting. This problem may be solved by using a more elaborate scale to measure mindfulness, such as the FFMQ-15 (Baer et al., 2022). Although the moderated mediation model was not significant, support for a positive effect of PL on HP mediated by academic GSC was found. The findings indicate that students low in PL should be targeted to increase PL and ASC to promote setting autonomous goals and therefore HP. This may help improve students' well-being and academic performance.

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