Research article

Sense of life purpose is related to grades of high school students via academic identity

Mariya Yukhymenko-Lescroart a,*, Gitima Sharma b

a Department of Curriculum and Instruction, California State University, Fresno, Fresno, USA
b Department of Counselor Education and Rehabilitation, California State University, Fresno, Fresno, USA

ABSTRACT

The aim of this observational study was to examine the extent to which sense of life purpose of high school students was related to their grades directly and indirectly via academic identity. Two hundred and thirty-four high school students completed a survey with measures of sense of life purpose, academic identity, and grades. Results from structural equation modeling showed that the direct relationship between sense of life purpose and grades was non-significant. Yet, sense of life purpose was related to grades indirectly via academic identity. These findings indicated that high school students who have a clear sense of life purpose also have a strong academic identity, which is positively related to their grades. These structural relationships were mostly invariant across gender (male, female), grade level (sophomore, senior), and post-graduation plans (educational, non-educational), but also indicated that purpose played an important role in academic identity of high school students with non-educational goals. Overall, results indicated that life purpose can be salient to grades of high school students. The practical implication of this work is in encouraging school teachers, counselors, and other stakeholders to implement educational approaches, discussions, and interventions that can help students clarify and develop their sense of life purpose.

1. Introduction

Academic achievement plays an important role in influencing not only school students’ current educational success but also their long-term goals achievement, career success, and overall sense of wellbeing (Pizzolato et al. 2011; Zuffianó et al., 2013). For decades, researchers have explored the individual- and systemic-level factors that promote students' academic performance. Among individual-level factors, the academic performance of high school students, which most often is measured with grades and grade point average (GPA), has been examined through a number of academic predictors including students’ cognitive abilities (Roth et al., 2015), intelligence (Roth et al., 2015), motivation (Kriegbaum et al. 2018), achievement goals (Daniels et al., 2009), goals-setting (Burns et al., 2018), and self-efficacy (Diseth et al., 2012).

Weber et al. (2016) also found that apart from cognitive abilities, students’ character strengths, such as hope, self-regulation, love, and similar constructs, play a very important role in strengthening their school-related positive affect, which in turn supports students’ positive school functioning and academic achievement. One of the character strengths that scholars have consistently focused upon is sense of life purpose, which recent research has is a significant predictor of academic outcomes such as college access, degree commitment, and college persistence particularly among college students (e.g., Sharma & Yukhymenko-Lescroart, 2018; Yukhymenko-Lescroart and Sharma, 2020b). However, there is lack of research on the relationship between sense of life purpose and academic performance among high school students. The present study sought to explore the relationships between high school students’ sense of life purpose, academic identity, and academic performance.

2. High school students’ sense of life purpose

Sense of life purpose is a multidimensional construct that is fundamental to adolescents’ identity development (Erikson, 1968) and encompasses dimensions of intentionality, direction, goal-setting, and desire to make a difference in the world beyond self (Damon et al., 2003). Based on Damon et al.’s (2003) dimensions of purpose and Ikeda’s (2017) philosophy of human revolution that focuses on people’s inherent
capacity to actualize their life’s goals, Sharma and Yukhymenko-Lescroart (2022) defined purpose as “people’s underlying intention behind achieving their life’s most important goals that, when fulfilled, might not only actualize a positive change in their own life, but also in society at large” (p. 2). Specifically, in relation to high school students, Machell et al. (2016) described purpose as a future-oriented framework that motivates adolescents to resist antisocial behavior and instead engage in prosocial behaviors.

Being in high school is an important time period in life when students begin to establish a strong sense of identity and purpose (Erikson, 1968). Research has shown that sense of life purpose provides high school students with the hope and motivation that is needed to persevere on the path of their educational goals despite various hardships and moments of uncertainties (Damon et al., 2003; Sharma et al., 2017). When students feel motivated and driven by a strong sense of life purpose, they are more likely to aspire towards academic success and achieve higher GPA (Pizzolato et al., 2011; Yeager and Bundick, 2009).

Pizzolato et al. (2011) implemented a purpose-focused educational program to help high school students develop plans, set goals, and learn skills for achieving their long-term aspirations. Pizzolato et al. (2011) further found that helping students identify their life purpose also increased their GPAs in comparison to the start of the intervention. Research among high school students has further shown that youth are less likely to engage in at-risk behaviors, more likely to demonstrate resilience, and more likely to pursue educational goals when they experience a strong sense of life purpose (Benard, 1991; Machell et al., 2016; Nkyi, 2015). Balthip et al. (2017) found that adolescents with a life purpose demonstrate deeper awareness about their long-term aspirations and stronger commitment to achieve their current goals. Similarly, Machell et al. (2016) reported that high school students with strong sense of life purpose invest greater effort towards fulfilling their future expectations.

Empirical studies have also shown that sense of life purpose plays an important role in contributing to young people's overall wellbeing, life satisfaction, reduced depressive symptoms, sense of confidence, connection, and positive relationship with society (Abdul Kadir and Mohd, 2021; Chen and Cheng, 2026; Damon et al., 2003), which in turn could contribute to their academic performance. In relation to educational and college outcomes, two recent longitudinal studies showed that when high school students' sense of life purpose is oriented towards actualizing their career aspirations such as gaining expertise to excel in their chosen profession, they are more likely to apply for college (Sharma et al., 2017) and complete their college education (Sharma et al., 2021). Experimental studies among high school students have also shown the positive role of purpose in increasing students' wellness (Balthip et al., 2022).

Overall, purpose plays an important role in determining academic, career, and wellbeing-oriented outcomes among youth including their academic grades (Pizzolato et al., 2011). As a motivational force, sense of life purpose can inspire youth to use their time and abilities to actualize their most cherished goals that can benefit themselves and also world beyond themselves (Damon et al., 2003). It is therefore possible that high school students might be more likely to receive higher academic grades when their sense of life purpose and identity resonate more closely with their academic endeavors. The results of this study will help in further highlighting the relationship between high school students’ sense of life purpose, academic identity, and academic performance.

### 2.1. Academic identity and academic performance

High school marks a pivotal developmental time-period when youth develop prominent dimensions of identity (Brown et al., 2014). These dimensions of identity encompass academic identity and life purpose. Academic identity can be defined as the centrality of the student roles such as doing well in school and academic commitments to the sense of self (Yukhymenko-Lescroart, 2014). Welch and Hodges (1997) defined academic identity as “a dimension of a larger, global self-concept and is central to academic performance and achievement motivation” (p. 37). Research has shown a positive relationship between academic identity and academic performance as students perceive themselves as capable of completing academic tasks (Graham and Anderson, 2008). Being confident in self and identifying purpose in their actions to achieve a goal ultimately leads to academic success, life satisfaction, and high levels of self-esteem (Butler et al., 2022). Preparing students to face academic rigor early on also prepares students for college (Brown et al., 2014). In a study with college students, incoming freshman full-time first-time students with a strong academic identity had higher grades at the end of their freshman year (Yukhymenko-Lescroart and Sharma, 2020b).

Based on an ecological lens, the impact of outside influences on academic identity is significant (Brown et al., 2014). Bronfenbrenner's (1979) ecological systems theory highlights various environmental influences that could impact students' academic identity development including students’ immediate environment of school, friends, and family. Brown et al. (2014) further examined school characteristics that support academic identity formation and goal development. Three characteristics that strengthen opportunities for students to develop academic identity include: (a) teacher-student relationships, (b) behavior management policies, and (c) challenging learning environments. It is therefore important to promote positive teacher-student relationships to foster academic identity (Brown et al., 2014; Butler et al., 2022). Students who feel like they are of importance, are cared for, and helped by teachers to reach their full potential are beneficial to their academic achievement and identity. Students reported that receiving motivating comments from teachers encouraged them to excel academically and develop goals for the future (Brown et al., 2014).

The way schools manage student behavior also impacts how a school is a mechanism of change and inspire students to strengthen their academic identity (Brown et al., 2014). High school students have expressed that having challenging learning environments support them in developing positive academic identity and future educational goals (Brown et al., 2014). Research has further shown that school and extracurricular activities promote academic identity in relation to students’ future educational plans (Brown et al., 2014; Shamah, 2011).

### 2.2. Connecting sense of life purpose, academic identity, and academic performance

Although there is a lack of research on the relationship between academic identity and sense of life purpose, there are several conceptual linkages between the two constructs. For instance, both academic identity and life purpose are identity-related constructs. They both also serve as motivational forces for adolescents to strive towards current and future educational goals.

The Social Cognitive Theory (Bandura, 2001) suggests that high school students’ academic identity and life purpose might be connected since human agency involves the “extension of agency through intentionality and forethought, self-regulation by self-reactive influence, and self-reflectiveness about one’s capabilities, quality of functioning, and the meaning and purpose of one’s life pursuits” (p. 1). Accordingly, students who feel driven to achieve a life purpose anchored in their own sense of identity and intentionality, might be more likely to engage in actions that can help them to achieve their life’s important goals. Moreover, adolescence is a critical time period when young people start to make efforts to deepen their own understanding about their self-identity and life purpose based on heightened sense of meaning, ideology, and future-orientatedness (Dalton, 2001). Previous research has shown that developing purpose aids students in establishing identities, especially during adolescence (Shamah, 2011). Possessing a sense of life purpose serves as a
developmental asset for adolescents to establish identity (Burrow and Hill, 2011). Exploring empirical relations between high school students' sense of identity, life purpose, and academic performance can help in promoting educational initiatives that can support adolescents' identity development and academic achievement.

Research has also shown that students' underlying motivations, goals, and life purpose orientations play an important role in promoting their academic engagement (Elliot and Thrash, 2001; Sharma et al., 2021). Further, developing clarity about the ultimate purpose to which a high school student wants to dedicate their life to, supports the development of motivating belief systems that ensure adolescents' success towards achieving their educational goals (Brown et al., 2014; Damon, 2008). Similarly, academic identity also plays a critical role in motivating students to pursue their current and future academic goals (Yukhymenko–Lescroart and Sharma, 2020b). Further, students with a strong academic identity report a higher presence and search for meaning in life (Luzzeri and Chow, 2020). Moreover, academic identity is more motivating when students' sense of self resonates with the experiences provided in learning environments (Oyserman and Destin, 2010). When students' identity and experiences are congruent, they also experience greater meaning behind and persistence towards completing their academic tasks (Oyserman and Destin, 2010). Life purpose plays an important role in shaping students' sense of self and identity since knowing who we are often resonates with what we want to dedicate our lives to (Erikson, 1968). Thus, based on identity-based motivation model (Oyserman and Destin, 2010), we suggest that students' whose life purpose is related to their academic identity, might see more congruence between their sense of self and academic engagement and therefore might be more likely to achieve higher academic performance.

In addition, purpose for high school students is often connected with their career aspirations (Balthip et al., 2017; Sharma et al., 2017), which they can achieve through pursuing education. In a study with Thai adolescents, Balthip et al. (2017) found that participants life purpose was closely associated with their desired future career, which then motivated them to achieve educational success. Indeed, high school students with career-focused purpose orientations are more likely to apply for college (Sharma et al., 2017) and complete their postsecondary education (Yukhymenko–Lescroart and Sharma, 2020b). In a study with incoming first-time full-time freshman students, altruistic life purpose was shown to positively predict their academic identity (Yukhymenko–Lescroart and Sharma, 2020b). Thus, it is reasonable to posit that high school students with a clear sense of life purpose would be likely to hold strong academic identity. The results of this study will clarify the empirical connections between academic identity and sense of life purpose.

### 2.3. The present study

In sum, studies have suggested that sense of life purpose is related to general academic success of high school students (e.g., Pizzolato et al., 2011; Machell et al., 2016; Sharma et al., 2017, 2021). Therefore, it is possible that sense of life purpose of high school students is related with their grades. Additionally, because sense of life purpose plays an important role in academic identity (e.g., Erikson, 1968; Yukhymenko–Lescroart and Sharma, 2020b), and academic identity has been shown to be highly relevant to academic performance (e.g., Graham and Anderson, 2008; Yukhymenko–Lescroart and Sharma, 2020b; Yukhymenko–Lescroart, 2021), it is also possible that sense of life purpose of high school students is related to their grades indirectly via academic identity. Specifically, an indirect relationship between sense of life purpose and grades through academic identity would be possible if sense of life purpose is significantly related to academic identity and, in turn, academic identity is significantly related to grades. Therefore, the following hypotheses were made: (a) academic identity would be positively predicted by sense of life purpose (hypothesis 1), (b) grades would be positively predicted by academic identity (hypothesis 2), and (c) grades would also be positively predicted by sense of life purpose directly (hypothesis 3a) as well as indirectly via academic identity (hypothesis 3b).

### 3. Method

#### 3.1. Participants

Two hundred thirty-four high school students, including 116 sophomores, three juniors, and 115 seniors, participated in this observational study. There were 110 male and 120 female students, and four students who identified as “other” but declined to specify their gender. In this sample, 175 (74.8%) students reported that they had education-related plans after graduation, such as planning to apply to a college or a professional school, and 59 (25.2%) students reported having non-educational related future plans.

#### 3.2. Measures

##### 3.2.1. Sense of life purpose

Students responded to the items of the Revised Sense of Purpose Scale (SOPS-2, Sharma and Yukhymenko-Lescroart, 2019), which utilizes a 7-point response scale ranging from 1 = strongly disagree to 7 = strongly agree. The SOPS-2 consists of 14 items that assess awakening to purpose (e.g., I Recent activities are helping me to awaken to my life’s purpose), awareness of purpose (e.g., I have a clear understanding of my life’s purpose), and altruistic purpose (e.g., I want to spend my life making a positive impact on others). Sharma and Yukhymenko-Lescroart (2019) reported reliability estimates to be .87 for awakening to purpose, .94 for awareness of purpose, and .88 for altruistic purpose. The items of this scale have been examined for factorial validity, convergent validity, divergent validity, and reliability with results indicating that the SOPS-2 can be used as a valid and reliable measure of three specific dimensions or a general construct of sense of life purpose (Yukhymenko-Lescroart and Sharma, 2020a). Overall, prior studies provided a strong evidence of reliability, construct validity, factorial validity, criterion validity, and measurement invariance of the SOPS-2 (Sharma and Yukhymenko-Lescroart, 2019; Yukhymenko-Lescroart and Sharma, 2020a).

##### 3.2.2. Academic identity

Students also completed the academic identity subscale of the Academic and Athletic Identity Scale (AAIS, Yukhymenko-Lescroart, 2014), which is a valid and reliable 5-item measure of the centrality of academic identity to students’ sense of self (e.g., Being a capable student). These items use the following 7-point response scale with all points labeled: 1 = not central, 2 = slightly central, 3 = somewhat central, 4 = central, 5 = very central, 6 = extremely central, and 7 = the central core. The items of this scale were examined for factorial validity and reliability with results providing evidence of strong psychometric properties. Yukhymenko–Lescroart (2014) reported reliability estimates to be .93 for academic identity.

##### 3.2.3. Grades

Students reported on their current grades, which measured their academic performance, using a 6-point scale: 1 = below Cs, 2 = mostly Cs, 3 = mostly Bs and Cs, 4 = mostly Bs, 5 = mostly As and Bs, and 6 = mostly As.

##### 3.2.4. Procedure

Institutional approval was obtained for this study following the university’s policies and procedure on research with human subjects. The approval from the school was also obtained according to the policy. Participants were recruited from one high school located in the Central Valley in California during 2021 Spring and Fall semesters. Specifically, we established a connection with one teacher and participants were recruited from all classrooms taught by the teacher during the data collection period. To minimize potential source of bias, surveys were voluntary and confidential. Students were offered an extra credit for its
completion, regardless of whether or not they provided parental consents and student assents, allowing all students to earn the extra credit. However, for the purposes of research, only responses for those students, for whom both parental consents and student assents were obtained, are included in this study following the policies and regulations. Parental consents and student assent informed sheets included all required information related to the purpose of the study, data storage procedures, and time commitments according to the policy and procedures of the research approval bodies. Additionally, this information was verbally explained to students by the teacher. The survey was administered online using Qualtrics management software during a class period with only one recruitment email being sent with no follow-ups. The survey consisted of previously developed and validated scales and a brief demographic section. The functionality of the Qualtrics survey was tested by the researcher prior to distributing the links to the survey to the participants. The Qualtrics management software utilized a two-step verification process and the collected data in Qualtrics were accessible only by one researcher who was responsible for the data collection process; once downloaded, the data were deidentified and stored on a password-protected computer. A total of 361 students were invited to provide responses to the survey, 261 opened the link to the survey, and 254 submitted their responses to the survey. Of them, no consents and/or assents were obtained for responses from 17 students. Additionally, three students did not indicate whether they assented to the use of their data for research purposes. Thus, 20 collected responses were not included in the data analysis, resulting in an overall 64.8% response rate of the total students invited and 89.7% of the students who opened the survey link.

3.2.5. Data analysis
Analyses were performed using Mplus, version 8.7 (Muthén & Muthén, 2012–2021). Preliminary analyses consisted of screening data for missingness, testing factorial structure of each measure by employing confirmatory factor analysis (CFA) to inspect the validity and reliability of each measure, and estimating an overall a measurement model to further examine factorial validity of the measures. Observed items of sense of life purpose were specified to represent their intended three latent factors, which, in turn, were specified to represent a second-order factor of sense of life purpose. The items of academic identity were used to specified their intended latent factor. The measure of grades was specified as a latent factor with a single indicator. The analyses were performed using robust maximum likelihood estimation method. The fit of the models was assessed by examining several indices following guidelines in the literature for models with 12–30 variables with sample sizes of under 250 (Hair et al., 2019): root mean square error of approximation (RMSEA ≤ .08), comparative fit index (CFI ≥ .97), (TLI ≥ .97), and standardized root mean square residual (SRMR ≤ .08). Internal consistency of each measure was evaluated based on construct reliability estimates (CR ≥ .70), which are typically used in conjunction with the CFA models (Hair et al., 2019).

To address study objectives, the structural model was tested to examine (a) whether academic identity was predicted by sense of life purpose, (b) whether grades were predicted by academic identity, and (c) whether grades were also predicted by sense of life purpose directly and indirectly via academic identity (see Figure 2). Indirect relationship between sense of life purpose and grades was possible, but not definite, if both conditions were satisfied: sense of life purpose was a significant predictor of academic identity and academic identity was a significant predictor of grades as recommended in the literature (e.g., Asparoukhov and Muthén, 2021; Bollen and Stine, 1990; Shute and Bolger, 2002), the indirect relationship between sense of life purpose and grade was tested by utilizing a bootstrapping procedure, which included 2,000 bootstrapping samples, to obtain asymmetrical 95% confidence intervals. In the final step, structural invariance of the estimated coefficients was investigated across gender (male, female), grade level (sophomores, seniors), and post-graduation plans (educational, non-educational) based on the Wald test of parameter constraints. Following recommendation in the methodological literature for structural invariance, prior to structural invariance testing, measurement invariance was examined first for configural, metric, and scalar invariance using the cutoff values for changes in CFI (i.e., .01) and in RMSEA and SRMR (i.e., .015) that were suggested by Chen (2007).

4. Results
4.1. Preliminary analyses

Missing data ranged from 0 to 1.3% on individual items (a total of eight values, 0.2% of the total data) and were assumed to be missing at random. A second-order confirmatory factor analysis (CFA) model on the 14 items of sense of life purpose showed a good fit to the data: χ² (74, N = 234) = 96.2, p = .043, RMSEA = .036, 90% CI (.007, .055), CFI = .988, TLI = .985, SRMR = .029. All first and second-order loadings were significant and above .54. Composite reliability for the second-order sense of life purpose factor was .84. The CFA model for academic identity items also showed a good model fit: χ² (5, N = 234) = 15.0, p = .010, RMSEA = .092, 90% CI [.041, .148], CFI = .981, TLI = .962, SRMR = .030, with factor loadings being above .74. The estimate of composite reliability was .94.

A measurement model, which included 14 items of sense of life purpose specified as a second-order latent factor of purpose, five items specified as a latent factor of academic identity, and grades. Correlations were: r (232) = .46, 95% CI [.33, .60], p < .001 between academic identity and sense of life purpose, r (232) = .64, 95% CI [.55, .72], p < .001 between academic identity and grades, and r (232) = .22, 95% CI [.08, .36], p = .002 between sense of life purpose and grades.

4.2. Main analysis

In the next step, structural model was tested to investigate study hypotheses as shown in Figure 2. Specifically, this model allowed to examine (a) whether academic identity was predicted by sense of life purpose, (b) whether grades were predicted by academic identity, and (c) whether grades were also predicted by sense of life purpose directly and indirectly via academic identity (see Figure 2). Since it was a saturated model, its fit was the same as the fit of the measurement model.

The model explained 21.6% of the variance in academic identity, which was significantly predicted by sense of life purpose, β = .46, SE = .07, 95% CI [.33, .60], p < .001. Additionally, 41.2% of the variance was explained in grades. Grades were significantly and positively predicted by academic identity, β = .68, SE = .05, 95% CI [.59, .77], p < .001. In contrast, sense of life purpose was not a significant direct predictor of student grades, β = -.09, SE = .06, 95% CI [-.20, .02], p = .107. Yet, indirect relationship via academic identity between sense of life purpose and grades was significant, β = .32, SE = .05, 95% CI [.21, .42], p < .001. These results suggested that academic identity played a role of a mediator: it was fully mediating the relationship between sense of life purpose of high school students and their grades.

4.3. Structural invariance across gender, grade level, and post-graduation plans

First, measurement invariance (configural, metric, scalar) was tested for the overall measurement model, which was established across gender (male, female), grade level (sophomores, seniors), and post-graduation plans (educational, non-educational) based on the changes in CFI,
Therefore, it was possible to test for structural invariance. Testing for structural invariance showed that the structural paths across gender and grade level were invariance, suggesting that the structural results could be generalized for male and female, sophomore and senior high school students and, thus, providing additional validity for the study findings. Tests of structural invariance across post-graduate plans showed that one path was not invariant as indicated by the Wald test, $\chi^2 (1, N = 234) = 4.39, p = .036$. Specifically, sense of life purpose was a stronger predictor of academic identity for students with non-educational post-graduation plans, $\hat{\beta} = .69, SE = .08, 95\% CI [.53, .85], p < .001$, than for students with educational plans, $\hat{\beta} = .35, SE = .07, 95\% CI [.20, .49], p < .001$. This finding indicated that sense of life purpose played a salient role in students’ academic identification especially for students with
non-educational future goals: compared students who were planning to go to college, for students who were not planning to apply to a college or a professional school, sense of life purpose played a much greater role in the strength of their academic identity.

5. Discussion

Purpose in life has been suggested as an important factor in high school students’ well-being (Chen and Cheng, 2020), college- (Sharma et al., 2017; Sharma et al., 2021), and career-outcomes (Kosine et al., 2008), as well as academic identity (Yukhymenko-Lescroart and Sharma, 2020b). Yet, the role of having a sense of life purpose has not yet been considered in examining grades of high school students. This study considered the concept of sense of life purpose in examining high school students' grades. Specifically, the current study investigated whether sense of life purpose was related to high school students’ grades directly as well as indirectly via academic identity.

5.1. Sense of life purpose is related to academic identity

Findings provided support to hypothesis 1 that academic identity is predicted by sense of life purpose, suggesting that high school students who have a clear sense of life purpose strongly identify themselves as students. This finding is consistent with the previous research on the relationship between life purpose and academic identity (e.g., Yukhymenko-Lescroart and Sharma, 2020b) as well as propositions that life purpose plays a salient role in shaping one’s sense of self and identity (Erikson, 1968). A strong sense of life purpose can result in a robust identification with academics. One explanation is that high school students might see pursuing their education as a way to realize their sense of life purpose through their future careers. Therefore, high school students who have a good understanding of their life purpose care about succeeding in academics. Another explanation is that students who believe that their life has a purpose that they can fulfill, are more likely to believe in their life's potential and actively pursue their goals including their academic aspirations (Ildada, 2010). Some qualitative studies have indeed shown that students who felt clearer about their life’s purpose and the role of education in fulfilling that purpose, expressed stronger academic identity and motivation (e.g., Sharma and De Alba, 2018; Sharma et al., 2021).

5.2. Academic identity is related to grades

The present study’s findings also supported hypothesis 2 that academic identity is associated positively with grades. Consistent with previous studies (e.g., Graham and Anderson, 2008; Yukhymenko-Lescroart and Sharma, 2020b), findings showed that high school students who strongly identify as students report earning higher grades compared to their counterparts whose identity is not as strongly connected with their academics. Academic identity can also be considered a component of self-concept, leading to high level of commitment to school, including personal and social components, such as including exhibiting effort in doing homework, spending more time studying, persisting through difficulties, taking advantage of academic support, having friends who have high academic expectations.

5.3. Sense of life purpose is related to grades via academic identity

Findings showed that even though the correlation between sense of life purpose and grades was positive and significant, it became non-significant when academic identity was controlled for in the main analysis. Thus, hypothesis 3a was not supported. Yet, sense of life purpose was related to grades indirectly through academic identity, supporting hypothesis 3b. This highlights that the positive relationship between sense of life purpose and grades is mainly because of strong academic identity. According to Yukhymenko-Lescroart (2014), academic identity assesses how central student roles and commitments such as doing well in school and getting good grades are to students’ sense of self. Previous research has consistently shown the positive role of academic identity in motivating high school students to achieve their current and future goals (e.g., Brown et al., 2014; Graham and Anderson, 2008; Yukhymenko-Lescroart and Sharma, 2020b). The results of this study have further highlighted the salient role of academic identity in promoting academic performance. Overall, one way to interpret this finding is that when students are able to see congruence between their life purpose and their sense of self within the academic context, they may be more likely to achieve higher academic performance and greater academic success.

6. Practical implications

Because findings showed that sense of life purpose predicted academic performance indirectly via academic identity, high school students with a clear sense of life purpose are likely to have better grades because of a stronger academic identity. The results of this study have, therefore, supported conceptual assumption that students with strong sense of life purpose might be more likely to feel committed to their current academic roles and further engage in actions that can help them to achieve their educational goals. The practical significance of this study lies in supporting school students’ purpose development in relation to their academic identity to promote their academic performance. Doing so might further help in strengthening the congruence between students’ sense of self, academic goals, and learning experiences, leading to stronger academic identity and engagement (Oyerman and Destin, 2010).

There are several ways through which school teachers and counselors can help students to reflect upon and further strengthen their sense of life purpose and academic identity. For instance, school counselors and teachers can engage in life crafting techniques that incorporate goal-setting (Schippers and Ziegler, 2019) and use self-reflective tools such as the Revised Sense of Purpose Scale (Sharma and Yukhymenko-Lescroart, 2019; Yukhymenko-Lescroart & Sharma, 2020) to help students reflect upon their sense of purpose. School personnel could also consider integrating purpose-centered discussions within classroom to help students articulate the nature and role of their life purpose (Sharma et al., 2021). Further on, school personnel could facilitate purpose-centered counseling and educational interventions that can help them to set academic and career goals that align with their life purpose and further discuss the value of high school education in fulfilling their life’s purpose. Research has also shown that students with stronger academic self-efficacy, report greater sense of purpose (Cai and Lian, 2021). With regard to academic identity, as per Bronfenbrenner’s (1979) ecological systems theory and Brown et al.’s (2014) research, school personnel could foster students’ academic identity through strengthening teacher-student relationships, providing challenging learning environments, and motivating students to set future educational goals and fulfill their highest potential.
7. Limitations and future directions

While the current study added to the body of literature on the indirect relationship via academic identity between sense of life purpose and academic performance, it has also limitations that should be acknowledged. One limitation is the self-reported nature of academic performance. Future studies can consider using other measures of academic performance, including standardized test scores. Another limitation is the observational design, which does not allow for causal inferencing. While the structural relationships that were tested in this study were consistent with the theoretical suppositions and prior empirical studies, the direction of identified relationships cannot be definite because of the observational nature of data. It would be informative, therefore, to examine the current findings in a longitudinal study by testing the identified relationships using longitudinal designs with multiple data collection time points. For example, students' sense of life purpose, academic identity, and grades can be recorded at the beginning, in the middle, and at the end of an academic year. Despite the limitations, the study has its strengths, one of which is the novel connection between sense of life purpose and grades through academic identity. Cultivating students' sense of life purpose has been acknowledged as a critical humanizing practice that can strengthen students' overall sense of wellbeing and ability to persevere towards their short-term and long-term goals (e.g., Kosine et al., 2008; Sharma and Yukhymenko-Lescroart, 2022). Given the importance of sense of life purpose, future studies should continue considering the relationship between sense of life purpose and various other academic, career, and well-being-oriented outcomes. Future studies can also focus on implementing and evaluating the effectiveness of purpose and academic identity centered interventions in increasing school students' academic performance. In essence, more attention should be given to the sense of life purpose of high school students and a number of academic and general well-being outcomes—both in practice and future research.

8. Conclusions

Sense of life purpose plays a crucial role in the lives of people, including high school students. This study examined how high school students’ sense of life purpose is related to their academic performance directly and indirectly through academic identity. The results showed that while sense of life purpose did not directly predict academic performance, it emerged as an indirect predictor of grades via academic identity. High school students with a clear sense of life purpose reported a strong academic identity, which in turn was positively related to their grades. The results from structural invariance testing showed that these results can be generalized to male and female sophomore and senior high school students high school students who have educational and non-educational post-graduate plans. The practical significance of this work is in encouraging school teachers, counselors, and other stakeholders to implement educational approaches, discussions, and counseling interventions that can help students clarify and develop their sense of life purpose.

Declarations

Author contribution statement

Mariya Yukhymenko-Lescroart, Ph.D: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Gitima Sharma: Conceived and designed the experiments; Wrote the paper.

Funding statement

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Data availability statement

The authors do not have permission to share data.

Declaration of interest’s statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

References

Abdul Kadir, N.B., Mohd, R.H., 2021. The SCs of positive youth development, purpose in life, hope, and well-being among emerging adults in Malaysia. Front. Psychol. 12, 641876.

Asparuhov, T., Muthen, B., 2021. Bootstrap P-Value Computation. https://www.statmodel.com/download/FAQ-Bootstrap -P-value.pdf.

Baltihi, K., McSherry, W., Petchutschatchat, U., Piriyakornont, S., Liampuntong, P., 2017. Enhancing life purpose amongst Thai adolescents. J. Moral Educ. 46 (3), 295–307.

Baltihi, K., Parit, P., Suwanphanhu, B., McSherry, W., Kritprach, C., 2022. Effect of a purpose in life program on the wellness of Southern Thai adolescents. J. Heal. Res. 36 (2), 265–274.

Bandara, A., 2001. Social cognitive theory: an agentive perspective. Ann. Rev. Psychol. 52, 1–26.

Benard, B., 1991. Fostering Resiliency in Kids: Protective Factors in the Family, School, and Community. Western Center for Drug-Free Schools and Communities.

Bollen, K.A., Stine, R., 1990. Direct and indirect effects: classical and bootstrap estimates of variability. Socio. Methodol. 20, 115–146.

Bronfenbrenner, U., 1979. The Ecology of Human Development: Experiments by Nature and Design. Harvard University Press.

Brown, K.L., Kanny, M.A., Johnson, B., 2014. I am who I am because of hero! School settings as a mechanism of change in establishing high-risk adolescents’ academic identities. J. Early Adolesc. 34 (2), 178–205.

Burns, E.C., Martin, A.J., Collie, R.J., 2018. Adaptability, personal best (PB) goals setting, and gains in students’ academic outcomes: a longitudinal examination from a social cognitive perspective. Contemp. Educ. Psychol. 53, 57–72.

Burnow, A.L., Hill, P.L., 2011. Purpose as a form of identity capital for positive youth adjustment. Dev. Psychol. 47 (4), 1196–1206.

Butler, N., Quigg, Z., Bates, R., Jones, L., Ashworth, E., Gowland, S., Jones, M., 2022. The Contributing Role of Family, School, and Peer Supportive Relationships in Protecting the Mental Wellbeing of Children and Adolescents. School Mental Health, pp. 1–13.

Cai, J., Lian, R., 2021. Social support and a sense of purpose: the role of personal growth initiative and academic self-efficacy. Front. Psychol. 12, 78841.

Chen, F.F., 2007. Sensitivity of goodness of fit indexes to lack of measurement invariance. Struct. Equ. Model.: A Multidiscip. J. 14 (3), 464–504.

Chen, H.-Y., Cheng, C.-L., 2020. Developmental trajectory of purpose identification during adolescence: links to life satisfaction and depressive symptoms. J. Adolesc. 80 (1), 10–18.

Dalton, J.C., 2001. Career and calling: finding a place for the spirit in work and community. N. Dir. Student Serv. 95, 17–25.

Damon, W., 2008. The Path to Purpose: How Young People Find Their Calling in Life. Free Press.

Damon, W., Menon, J., Bronk, K.C., 2003. The development of purpose during adolescence. Appl. Dev. Sci. 7, 119–128.

Daniels, L.M., Suppinsky, R.H., Pekrun, R., Haynes, T.L., Perry, R.P., Newall, N., 2009. A longitudinal analysis of achievement goals: from affective antecedents to emotional effects and achievement outcomes. J. Educ. Psychol. 101, 948–963.

Deathe, B., Danielson, A.G., Samsul, O., 2012. A path analysis of basic need support, self-efficacy, achievement goals, life satisfaction and academic achievement level among secondary school students. Educ. Psychol. 32, 335–354.

Elliot, A.J., Thrash, T.M., 2001. Achievement goals and the hierarchical model of achievement motivation. Educ. Psychol. Rev. 13, 139–156.

Erikson, E.H., 1968. Identity: Youth and Crisis. Norton & Company.

Graham, A., Anderson, K.A., 2008. I have to be three steps ahead’: academically gifted African American male students in an urban high school on the tension between an ethnic and academic identity. Urban Rev. 40 (5), 472–499.

Hair Jr., J.F., Black, W.C., Babin, B.J., Anderson, R.E., 2019. Multivariate Data Analysis, eighth ed. Cengage.

Ikeda, D., 2017. The Wisdom for Creating Happiness and Peace. Middleway Press.

Kosine, N.R, Steger, M.R., Duncan, S., 2008. Purpose-centered career development: a strengths-based approach to finding meaning and purpose in careers. Prof. Sch. Counsel. 72, 133–136.

Kriegbaum, K., Becker, N., Spinhart, B., 2018. The relative importance of intelligence and motivation as predictors of school achievement: a meta-analysis. Educ. Res. Rev. 25, 120–148.

Access to the full text of this article is restricted.

[selection of excerpts] Retrieved from.https://www.sokaglobal.org/resources/study -materials/buddhist-study/the-wisdom-for-creating-happiness-and-peace.html.
