

Predicting Hong Kong secondary school students' meaning in life: Based on PISA 2018

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This study aimed to explore the direct impact of parental autonomy support and school belonging on the meaning of life from the positive psychology perspective and to verify whether self-efficacy can contribute to the meaning of life based on social cognitive theory. The participants were 7529 Hong Kong secondary school students in grades 10 to 12 from the PISA 2018 survey. This study applied structural equation modeling to verify the mediating effect of self-efficacy on the relationship between parental autonomy support, school belonging, and meaning in life. In addition, This study found no significant differences between boys and girls in a multi-group model comparison. The results indicate that both boys and girls need parental autonomy support and school belonging to enhance their self-efficacy and thus enhance their meaning in life. This study also provided a new perspective and research theoretical model for positive psychology to improve secondary school students' meaning in life.

Keywords: positive psychology; meaning in life; parental autonomy support; school belonging; self-efficacy

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Introduction

In positive psychology, meaning in life is a central concept that reflects individuals' significance and purpose in their existence. This aspect of positive psychology goes beyond pursuing happiness and subjective well-being to explore the deeper dimensions of a fulfilling and purposeful life (Leontiev, 2013). Frank proposed that meaning in life means that individuals understand the meaning and value of their lives and clearly understand future life goals and directions. He also found that if individuals lack meaning in life, they may exhibit boredom, emptiness, and depression. In contrast, if individuals realize the significance of their existence and the importance of their actions, they can live healthier and more fulfilling lives (Frankl, 1984). Identity theory considers adolescence a prime time for developing identity and meaning in life (Erikson, 1975). According to the World Health Organization, an adolescent is any person who is between 10 and 19 years old (World Health Organization, 2011). At this stage, adolescents have transitioned from a relatively dependent and naive childhood to a stage where they begin to search for questions such as "Who am I?" and "What do I want from life?". This results from the physical, emotional, and psychological changes that increase the ability to deal with more abstract concepts and take on more personal responsibility (Negru-Subtirica et al., 2016; Soleimanpour, 2017). However, research has found that many Hong Kong adolescents appear to lack meaning in life and show signs of poor mental health, such as depression (Cheung, 2015) and suicide (Abraham, 2017). Therefore, research on how to improve Hong Kong adolescents' meaning in life is very important.

The main living environment for adolescents is family and school. As the living environment in which adolescents are in close contact, families and schools are microscopic systems that can significantly affect their psychological and behavioral development and even affect their life course (Aldridge et al., 2020). Regarding the family environment, research in positive psychology has explored the impact of parental autonomy support on various aspects of adolescents' well-being, including their meaning in life (Kocayörük et al., 2015; Vansteenkiste et al., 2018). Parental autonomy support means that parents accept their children's viewpoints, acknowledge their children's feelings, and allow their children to make free choices (Ryan et al., 2015). This study proposes Hypothesis 1: parental autonomy support positively predicts meaning in life.

In addition, the school climate plays a crucial role in shaping students' overall well-being, and a positive school climate can contribute to a sense of purpose, belonging, and fulfillment (Ma, 2003). School belonging is a crucial aspect of a positive school climate and significantly shapes students' overall well-being and academic success (Budge et al., 2020). It refers to how students feel personally accepted, respected, included,

and supported in their school environment (St-Amand et al., 2017). Hernández et al. (2017) found when students feel school belonging, they are more likely to explore and express their identities, and the support and acceptance they receive within the school community contribute to a positive self-identity and meaning in life. This study proposes Hypothesis 2: school belonging positively predicts meaning in life.

Positive psychology acknowledges setting and pursuing meaningful goals for a fulfilling life. Self-efficacy plays a central role in goal achievement, as individuals with higher self-efficacy are more likely to set challenging goals and exert effort to attain them (Schunk & DiBenedetto, 2021). Self-efficacy refers to an individual's belief in their capability to execute actions necessary to achieve a specific goal or outcome (Bandura, 2000). Moreover, Bandura (2000) found that the support of others is an influencing factor of an individual's self-efficacy in social cognitive theory (SCT). When an individual encounters difficulties, the support and encouragement of others will improve the individual's self-efficacy. Parents are considered one of the important sources of social support for individuals (Karwowski & Barbot, 2016). Therefore, based on SCT, this study proposes Hypothesis 3: Self-efficacy mediates the relationship between parental autonomy support and meaning in life.

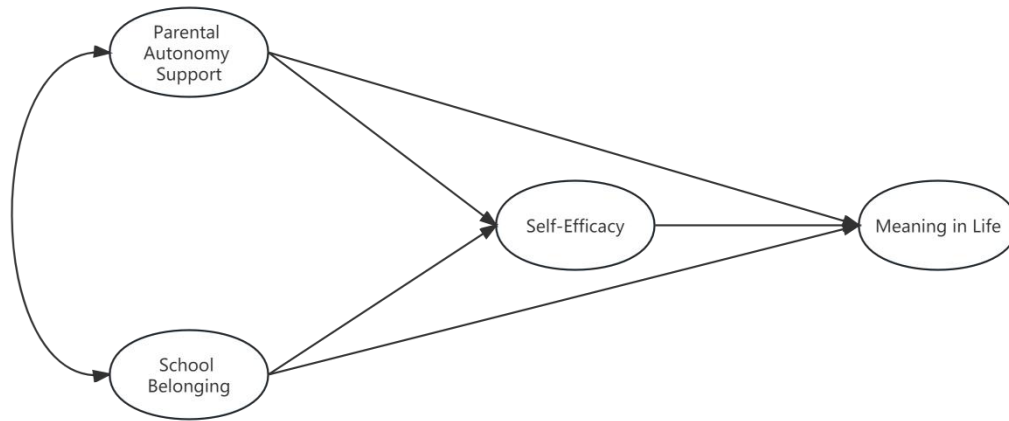
A strong school belonging contributes to students' resilience when faced with challenges (Ungar et al., 2019). Believing that they are part of a supportive community helps students view challenges as opportunities for growth rather than insurmountable obstacles, and this resilience positively influences their self-efficacy (Kitt, 2018). In addition, Yuen et al. conducted self-efficacy surveys among primary and secondary school students in Hong Kong from 2006 to 2012. They found that students' self-efficacy declined with age, and self-efficacy was related to good family, peer relationships, and student autonomy (Yuen et al., 2012). Therefore, based on SCT, this study proposes Hypothesis 4: Self-efficacy mediates the relationship between school belonging and meaning in life.

The OECD Programme for International Student Assessment (PISA) is a collaborative effort among OECD Member countries and non-member partner countries. The assessment is forward-looking: rather than focusing on the extent to which these students have mastered a specific school curriculum, it looks at their ability to use their knowledge and skills to meet real-life challenges. In addition, PISA uses Student Questionnaires to collect information from students on various aspects of their home, family and school background, and School Questionnaires to collect information from schools about various aspects of organization and educational provision in schools. This study uses the PISA 2018 survey student questionnaire in Hong Kong, China.

In summary, this study aims to explore the direct effect of parental autonomy support and school belonging on adolescents' meaning in life from the perspective of positive psychology and the mediating

effect of self-efficacy on the relationship between parental autonomy support, school belonging, and meaning in life. Moreover, This study also conducted a multi-group model comparison between boys and girls. This study improves adolescents' meaning and realizes their self-worth through relationship effects. The research model of this study is shown in Figure 1.

Figure 1. Research model



Literature review

1. Parental Autonomy Support and Meaning in Life

Parental autonomy support contributes to adolescents' sense of identity, competence, intrinsic motivation, and alignment with personal values; this parenting style creates an environment that fosters adolescents' overall well-being and their ability to find meaning in life (Fantinelli et al., 2023 Lin et al., 2021). Kealy et al. (2020) explored the relationship between parental autonomy support and the meaning of life in adolescents' childhood. The results showed that parental autonomy support was positively related to the sense of meaning in life, and optimism and identity mediated the relationship between the two in parallel.

2. School Belonging and Meaning in Life

Baumeister (2005) contends that the human desire for belonging and the ability to understand large systems of meaning are intricately linked in human psychology. School belonging is a predictive factor for meaning in life; as emerging adults spend considerable time in school improving their personal abilities or career preparation, establishing stronger social connections with school may enhance their life goals (Lambert et al., 2013). School belonging plays a crucial role in developing a student's identity. When students feel accepted and valued within the school environment, they are more likely to explore and develop their sense of self, and this process of identity development contributes to more meaning in life (Delouche, 2022).

3. Parental autonomy support and self-efficacy

Sha et al. took a science class as a research context. They found that parental autonomy support influences student learning by influencing their learning interest and self-efficacy in the traditional teaching context. It's found that the influence of parental autonomy support on self-efficacy is greater than that of learning interest (Sha et al., 2016). Weisskirch (2013) found that parents who support autonomy encourage their children to take the initiative and make decisions independently, fostering a sense of independence and competence and contributing to higher levels of self-efficacy. In addition, autonomy-supportive parents provide positive feedback and recognize their children's efforts and achievements. This positive reinforcement enhances a child's belief in their capabilities, reinforcing a sense of self-efficacy (Froiland, 2021).

4. School belonging and self-efficacy

A strong school belonging is often associated with positive social interactions with peers and teachers, and these interactions provide opportunities for positive feedback and reinforcement, contributing to the development of self-efficacy (Tannert & Gröschner, 2021). Korpershoek et al — (2020) found that when students feel at school, they are more likely to engage in academic activities with enthusiasm, and active participation in learning experiences and academic achievements can boost their confidence in their academic abilities, enhancing their academic self-efficacy. School belonging contributes to developing a positive and secure identity; when students feel connected to their school, they are more likely to explore and develop their sense of self, which can positively influence self-efficacy (Rich & Schachter, 2012).

5. Self-efficacy and Meaning in Life

DeWitz et al. (2009) indicated that students with strong self-efficacy are more likely to set challenging but attainable goals and work persistently toward their achievement, contributing to a sense of purpose and meaning in their endeavors. Students with high self-efficacy are better equipped to cope with setbacks and failures; they view challenges as opportunities to learn and grow rather than insurmountable obstacles, and this resilience in the face of adversity contributes to a more positive outlook on life and a greater meaning in life (Bannink, 2014). Forgeard and Benson (2019) recognized that individuals with high self-efficacy are more engaged in their academic and extracurricular activities, and active engagement in meaningful pursuits contributes to a sense of purpose and fulfillment.

Methodology

1. Study Participants

Participants are Hong Kong secondary school students in grades 10 to 12 from the PISA 2018 survey. Finally, 7,529 samples remained for analysis after excluding data with incomplete or missing responses. The sample contained 3,764 (50%) female respondents and 3,765 (50%) male respondents.

2. Measures

We covered the following construct variables to verify the research model using the PISA Hong Kong student questionnaire.

First, the parental autonomy support was measured by three questions: "My parents support my educational efforts and achievements." The items were rated along a four-point Likert-type scale (from 1 = Strongly disagree to 4 = Strongly agree). Therefore, the higher the response score, the more parental autonomy support. The overall Cronbach's α was .904.

Second, the school belonging was measured by six questions, such as "I feel like an outsider (or left out of things) at school." The items were rated along a four-point Likert-type scale (from 1 = Strongly agree to 4 = Strongly disagree). Therefore, the higher the response score, the higher the school belonging. The overall Cronbach's α was .829.

Third, self-efficacy was measured by five questions, such as "I usually manage one way or another." The items were rated along a four-point Likert-type scale (from 1 = Strongly disagree to 4 = Strongly agree). Therefore, the higher the response score, the higher the self-efficacy. The overall Cronbach's α was .785.

Lastly, the meaning in life was measured by three questions: "Does my life have a clear meaning or purpose." The items were rated along a four-point Likert-type scale (from 1 = Strongly disagree to 4 = Strongly agree). Therefore, the higher the response score, the higher the meaning in life. The overall Cronbach's α was .846.

Results

1. Descriptive statistics and correlation among variables

The means, standard deviations, and correlations were measured on the main variables, such as parental autonomy support, school belonging, self-efficacy, and meaning in life. The details are shown in Table 1. According to the basic principle of normal distribution, in this study, the absolute skewness value of the sample data was less than 3, the absolute kurtosis value was less than 7, and the sample data was normally distributed (West et al., 1995). The mean for parental autonomy support was 3.33, the mean for school belonging was 2.91, the mean for self-efficacy was 2.92, and the mean for meaning in life was 2.79. In addition, the correlation between variables was statistically significant.

Table 1
Statistics and correlations among variables

	Parental Autonomy Support 1	School Belonging 2	Self-Efficacy 3	Meaning in Life 4
1	1			
2	.275**	1		
3	.276**	.371**	1	
4	.238**	.318**	.477**	1
M	3.33	2.91	2.92	2.79
SD	.62	.53	.46	.66
Skewness	-.96	-.32	-.04	.23
Kurtosis	1.79	.44	-.04	1.01

*Note: **p < .01*

2. Differences between male and female

Findings revealed significant differences between boys and girls in most variables. As Table 2 shown, For parental autonomy support, girls are significantly higher than boys ($t=1.98$); For self-efficacy, boys are significantly higher than girls ($t=9.43$); For meaning in life, boys are significantly higher than girls ($t=2.41$). In addition, there is no difference between boys and girls in school belonging.

Table 2
Independent samples t-test between

boys and girls

Variables	Male (n=3,765)		Female (n=3,764)		t-value
	M	SD	M	SD	
Parental Autonomy Support	3.31	.62	3.34	.62	-1.98*
School Belonging	2.92	.55	2.90	.52	1.84
Self-Efficacy	2.97	.47	2.87	.44	9.43***
Meaning in Life	2.81	.68	2.77	.63	2.41*

*Note: *p < .05; ***p < .001*

3. Research model test

This study utilized structural equation modeling analyses to verify the mediating effect of self-efficacy on the relationship between parental autonomy support, school belonging, and meaning in life.

It can be seen from Table 3 that the fit of the research model for all the samples was $\chi^2/DF=14.625$ ($p=.000$). Hu and Bentler indicated that χ^2 is sensitive to sample size, even for the same model, differences will occur due to different sample sizes, and consider CFI, TLI, and RMSEA index together for evaluation (Hu & Bentler, 1999). CFI =.974>.90, TLI=.966>.90, RMSEA=.043<.08, which met the acceptance criterion (Bentler, 1990; Carmines et al., 1981; Steiger, 1998).

Table 3
Fit indices for the research model

Model	DF	χ^2/DF	CFI	TLI	RMSEA
research model	106	14.625***	.974	.966	.043

*Note: ***p < .001*

As shown in Table 4, all the path coefficients were significant. Specifically, parental autonomy support had a significant positive direct effect on meaning in life ($\beta=.050$, $p<.001$), and school belonging had a significant positive direct effect on meaning in life ($\beta=.111$, $p<.001$). Furthermore, parental autonomy support had a significant positive predictive effect on self-efficacy ($\beta=.143$, $p<.001$), school belonging had a significant positive predictive effect on self-efficacy ($\beta=.339$, $p<.001$), and self-efficacy had a significant positive predictive effect on meaning in life ($\beta=.646$, $p<.001$).

Table 4
Significance verification for the research model

Path			β	B	S.E.	C.R.
Parental Autonomy Support	→	Meaning in Life	.0	.	.0	4.353**
			50	055	11	*
School Belonging	→	Meaning in Life	.1	.	.0	7.256**
			11	113	15	*
Parental Autonomy Support	→	Self-Efficacy	.1	.	.0	13.872*
			43	192	10	**
School Belonging	→	Self-Efficacy	.3	.	.0	25.453*
			39	424	13	**
Self-Efficacy	→	Meaning in Life	.6	.	.0	28.668*
			46	528	23	**

Note: *** $p < .001$

This study applied bootstrapping to test the mediating effect of self-efficacy on the relationship between parental autonomy support, school belonging, and meaning in life, and the sampling times were 5,000. As seen in Table 5, the total effect of self-efficacy on the relationship between parental autonomy support and meaning in life was .156, and the indirect effect was .101, the effect ratio was 64.74%. The total effect of self-efficacy on the relationship between school belonging and meaning in life was .336, and the indirect effect was .223; the effect ratio is 66.37%.

Table 5
Mediation effect test of the structural model

Path	Estimate	Effect ratio	Bootstrap 5,000 times
			95% CI Bias-corrected

			Low er	Upper
Parental Autonomy Support→Self-Efficacy→Meaning in life	.101	64.7 4%	.082	.121
Parental Autonomy Support→Meaning in life	.055	/	.025	.083
Total indirect effect	.156		.126	.186
School Belonging→Self-Efficacy→Meaning in life	.223	66.3 7%	.199	.249
School Belonging→Meaning in life	.113	/	.076	.148
Total indirect effect	.336		.302	.367

4. Multi-group model comparison between boys and girls

This study measured whether the results of the research model applied to both boy and girl groups. This study adopted the method of multi-group comparing in structural equation modeling, setting an unconstrained model (M1) and measurement weights model (M2). It was found that the model fit of the multi-group analysis was confirmed to be suitable. Still, compared with M1, M2's $\Delta\chi^2=5.272$, $\Delta df=5$, $p=.384>.05$. The results indicated no significant difference between M1 and M2.

Discussion

This study analyzed the effect of parental autonomy support and school belonging on meaning in life. It extended the literature by investigating the potential mediating effect of self-efficacy in this relationship.

Firstly, this study compared the differences between boys and girls and found that boys received significantly lower parental autonomy support than girls. As it is argued that Chinese girls tend to report a more positive relationship with their parents than boys (Shek, 2008), girls tend to have a more positive understanding of their relationship with their parents. Moreover, boys have significantly higher self-efficacy and meaning in life than girls, and this result is consistent with the survey conducted by Morony et al. (2013) and Xie et al. (2023) on the self-efficacy and meaning in life of Hong Kong secondary school students. The Chinese culture and social system are greatly influenced by collectivism and Confucianism, which expect people to conform to norms rather than show uniqueness and individuality (Luo et al., 2013). The emphasis of Chinese culture on social norms may lead to gender differences in self-efficacy and is influenced by the

traditional division of labor. Females are expected to be family-centered rather than working outside (Chan, 2022), resulting in lower self-efficacy and meaning in life among females than males.

Secondly, Hypothesis 1 and 2 verified that parental autonomy support and school belonging positively predicted meaning in life. The findings were consistent with the results of Fantinelli et al. (2023) and Delouche (2022). More support from parents during adolescence can contribute to the enhancement of children's meaning in life. Supportive parenting, which includes emotional support, encouragement, guidance, and respect for autonomy, has been associated with various positive outcomes, including developing a sense of meaning and purpose for adolescents. Parents who provide autonomy support allow their children to make decisions, express their individuality, and explore their interests. This support for autonomy is linked to greater control and ownership over one's life, contributing to developing a meaningful life narrative. In addition, school is a significant environment for identity formation during adolescence. A sense of belonging allows students to explore and express their identities in a supportive context. Acceptance and recognition within the school community contribute to a more coherent and positive sense of self, fostering meaning in life.

Thirdly, Hypothesis 3 verified that self-efficacy mediated the relationship between parental autonomy support and meaning in life. Parental autonomy support empowers students to make choices, solve problems, and take responsibility for their actions. Students learn to navigate challenges, make decisions, and develop effective problem-solving skills through this process. These experiences contribute to the development of self-efficacy, as individuals recognize their capacity to influence outcomes through their actions. Developing self-efficacy through parental autonomy support enhances resilience and adaptability (Develos-Sacalan & Bozkus, 2018). Students who believe in their ability to cope with difficulties are more likely to view challenges as opportunities for growth rather than insurmountable obstacles. This adaptive mindset is linked to a greater meaning in life.

Fourthly, Hypothesis 4 verified that self-efficacy mediated the relationship between school belonging and meaning in life. School belonging provides students with positive experiences of social connectedness and acceptance within the school community. When students feel a sense of belonging, they are more likely to engage in school activities and academic pursuits. Positive experiences contribute to the development of self-efficacy as students gain a sense of competence and mastery in various domains. School belonging is often associated with social support from peers, teachers, and other school community members (Allen et al., 2018). Positive social interactions and feedback contribute to students' belief in their ability to navigate social situations successfully. This social support enhances self-efficacy, which, in turn, influences their overall meaning in life.

Fifthly, the models in this study did not differ significantly between the boys and girls groups. The results indicate that both boys and girls need parental autonomy support and school belonging to enhance their self-efficacy and thus enhance their meaning in life. According to gender schema theory, the gender-differentiated use of control and autonomous support strategies by parents may be influenced by gender role stereotypes (Canevello, 2020). When parents have traditional attitudes towards gender roles, they are more likely to exhibit gender-differentiated parenting styles, thereby reinforcing behaviors that are consistent with gender roles (such as stricter or physical control over boys than girls and gentler control and guidance over girls than boys) (Endendijk et al., 2016). Challenging stereotypes and promoting equitable and supportive parenting practices for both boys and girls is an important step toward fostering healthy adolescent development. Stereotypes that dictate stricter demands and restrictions for boys can contribute to gender-based expectations that may not align with the diverse needs and capabilities of individual children. Promoting a more inclusive and supportive approach to parenting benefits not only boys but also contributes to breaking down gender-based expectations that limit the potential of individuals at every stage of life.

Conclusion

As anticipated, self-efficacy mediates between parental autonomy support, school belonging, and meaning in life. This study takes parental autonomy support and school belonging as independent variables, self-efficacy as a mediator variable, and meaning in life as a dependent variable, which validates SCT and provides a new perspective and research theoretical model for positive psychology.

References

- Abraham, A. (2017). It's time to talk openly with Hong Kong's youth about suicide and stress. *South China Morning Post*, 4.
- Aldridge, J. M., McChesney, K., & Afari, E. (2020). Associations between school climate and student life satisfaction: resilience and bullying as mediating factors. *Learning Environments Research*, 23, 129-150.
- Allen, K., Kern, M. L., Vella-Brodrick, D., Hattie, J., & Waters, L. (2018). What schools need to know about fostering school belonging: A meta-analysis. *Educational Psychology Review*, 30, 1-34.

- Bandura, A. (2000). Self-efficacy: The foundation of agency. *Control of human behavior, mental processes, and consciousness: Essays in honor of the 60th birthday of August Flammer*, 16.
- Bannink, F. (2014). *Post traumatic success: Positive psychology & solution-focused strategies to help clients survive & thrive*. WW Norton & Company.
- Baumeister, R. F. (2005). *The cultural animal: Human nature, meaning, and social life*. Oxford University Press.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological bulletin*, 107(2), 238.
- Budge, S. L., Domínguez Jr, S., & Goldberg, A. E. (2020). Minority stress in nonbinary students in higher education: The role of campus climate and belongingness. *Psychology of Sexual Orientation and Gender Diversity*, 7(2), 222.
- Canevello, A. (2020). Gender schema theory. *Encyclopedia of Personality and Individual Differences*, 1741-1743.
- Carmines, E. G., McIver, J. P., Bohrnstedt, G. W., & Borgatta, E. F. (1981). Social measurement: Current issues. *Analyzing models with unobserved variables: Analysis of covariance structures*, 80, 65-115.
- Chan, R. C. (2022). A social cognitive perspective on gender disparities in self-efficacy, interest, and aspirations in science, technology, engineering, and mathematics (STEM): the influence of cultural and gender norms. *International Journal of STEM Education*, 9(1), 1-13.
- Cheung, E. (2015). Depression hits half of Hong Kong secondary pupils and a quarter have considered suicide, study finds. *South China Morning Post*.
- Delouche, A. (2022). *Lekol Se Lakay? Exploring School Belonging and Ethnoracial Identity Development of Haitian Immigrant Students* (Doctoral dissertation, University of Florida).
- Develos-Sacdalan, K., & Bozkus, K. (2018). The Mediator Role of Resilience between Self-Determination and Self-Efficacy. *Online Submission*, 4(50), 49-60.
- DeWitz, S. J., Woolsey, M. L., & Walsh, W. B. (2009). College student retention: An exploration of the relationship between self-efficacy beliefs and purpose in life among college students. *Journal of college student development*, 50(1), 19-34.
- Endendijk, J. J., Groeneveld, M. G., Bakermans-Kranenburg, M. J., & Mesman, J. (2016). Gender-differentiated parenting revisited: Meta-analysis reveals very few differences in parental control of boys and girls. *PloS one*, 11(7), e0159193.
- Erikson, E. H. (1975). *Life history and the historical moment*, New York (WW Norton).

- Fantinelli, S., Esposito, C., Carlucci, L., Limone, P., & Sulla, F. (2023). The influence of individual and contextual factors on the vocational choices of adolescents and their impact on well-being. *Behavioral Sciences*, 13(3), 233.
- Forgeard, M. J., & Benson, L. (2019). Extracurricular involvement and psychological adjustment in the transition from adolescence to emerging adulthood: The role of mastery and creative self-efficacy. *Applied Developmental Science*, 23(1), 41-58.
- Frankl, V. E. (1984). *Search for meaning*. Milwaukee, WI, USA: Mount Mary College.
- Froiland, J. M. (2021). A comprehensive model of preschool through high school parent involvement with emphasis on the psychological facets. *School Psychology International*, 42(2), 103-131.
- Hernández, M. M., Robins, R. W., Widaman, K. F., & Conger, R. D. (2017). Ethnic pride, self-esteem, and school belonging: A reciprocal analysis over time. *Developmental psychology*, 53(12), 2384.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*, 6(1), 1-55.
- Karwowski, M., & Barbot, B. (2016). Creative self-beliefs: Their nature, development, and correlates.
- Kealy, D., Ben-David, S., & Cox, D. W. (2020). Early parental support and meaning in life among young adults: the mediating roles of optimism and identity. *Current Psychology*, 1-8.
- Kitt, J. (2018). Psychological Capital and the positive school environment. *LEARN Journal of the Irish Learning Support Association*, 40(1), 9-26.
- Kocayörük, E., Altıntaş, E., & İçbay, M. A. (2015). The perceived parental support, autonomous-self and well-being of adolescents: A cluster-analysis approach. *Journal of Child and Family Studies*, 24, 1819-1828.
- Korpershoek, H., Canrinus, E. T., Fokkens-Bruinsma, M., & de Boer, H. (2020). The relationships between school belonging and students' motivational, social-emotional, behavioural, and academic outcomes in secondary education: A meta-analytic review. *Research papers in education*, 35(6), 641-680.
- Lambert, N. M., Stillman, T. F., Hicks, J. A., Kamble, S., Baumeister, R. F., & Fincham, F. D. (2013). To belong is to matter: Sense of belonging enhances meaning in life. *Personality and social psychology bulletin*, 39(11), 1418-1427.
- Leontiev, D. A. (2013). Positive psychology in search for meaning: An introduction. *The Journal of Positive Psychology*, 8(6), 457-458.
- Lin, L., Wang, S., & Li, J. (2021). Association between the search for meaning in life and well-being in Chinese adolescents. *Applied Research in Quality of Life*, 16, 2291-2309.

- Luo, R., Tamis-LeMonda, C. S., & Song, L. (2013). Chinese parents' goals and practices in early childhood. *Early Childhood Research Quarterly*, 28(4), 843-857.
 - Ma, X. (2003). Sense of belonging to school: Can schools make a difference?. *The Journal of Educational Research*, 96(6), 340-349.
 - Morony, S., Kleitman, S., Lee, Y. P., & Stankov, L. (2013). Predicting achievement: Confidence vs self-efficacy, anxiety, and self-concept in Confucian and European countries. *International Journal of Educational Research*, 58, 79-96.
 - Negru-Subtirica, O., Pop, E. I., Luyckx, K., Dezutter, J., & Steger, M. F. (2016). The meaningful identity: A longitudinal look at the interplay between identity and meaning in life in adolescence. *Developmental Psychology*, 52(11), 1926–1936. <https://doi.org/10.1037/dev0000176>
 - Rich, Y., & Schachter, E. P. (2012). High school identity climate and student identity development. *Contemporary educational psychology*, 37(3), 218-228.
 - Ryan, R. M., Deci, E. L., Grolnick, W. S., & La Guardia, J. G. (2015). The significance of autonomy and autonomy support in psychological development and psychopathology. *Developmental psychopathology: Volume one: Theory and method*, 795-849.
 - Schunk, D. H., & DiBenedetto, M. K. (2021). Self-efficacy and human motivation. In *Advances in motivation science* (Vol. 8, pp. 153-179). Elsevier.
 - Sha, L., Schunn, C., Bathgate, M., & Ben- Eliyahu, A. (2016). Families support their children's success in science learning by influencing interest and self- efficacy. *Journal of Research in Science Teaching*, 53(3), 450-472.
 - Shek, D. T. (2008). Perceived parental control and parent–child relational qualities in early adolescents in Hong Kong: Parent gender, child gender and grade differences. *Sex Roles*, 58, 666-681.
 - Soleimanpour, S., Geierstanger, S., & Brindis, C. D. (2017). Adverse childhood experiences and resilience: Addressing the unique needs of adolescents. *Academic pediatrics*, 17(7), S108-S114.
 - St-Amand, J., Girard, S., & Smith, J. (2017). Sense of belonging at school: Defining attributes, determinants, and sustaining strategies.
- Steiger, J. H. (1998). A note on multiple sample extensions of the RMSEA fit index.
- Tannert, S., & Gröschner, A. (2021). Joy of distance learning? How student self-efficacy and emotions relate to social support and school environment. *European Educational Research Journal*, 20(4), 498-519.
 - Ungar, M., Connelly, G., Liebenberg, L., & Theron, L. (2019). How schools enhance the development of young people's resilience. *Social Indicators Research*, 145, 615-627.

Vansteenkiste, M., Aelterman, N., De Muyndck, G. J., Haerens, L., Patall, E., & Reeve, J. (2018). Fostering personal meaning and self-relevance: A self-determination theory perspective on internalization. *The Journal of Experimental Education*, 86(1), 30-49.

Weisskirch, R. S. (2013). Family relationships, self-esteem, and self-efficacy among language brokering Mexican American emerging adults. *Journal of child and Family Studies*, 22, 1147-1155.

West, S. G., Finch, J. F., & Curran, P. J. (1995). Structural equation models with nonnormal variables: Problems and remedies.

World Health Organization (WHO). (2011). *Strategic directions for improving Adolescent Health in South-East Asia Region*. Retrieved from https://apps.searo.who.int/PDS_DOCS/B4771.pdf?ua=1.

Xie, J., Wen, Z., Shen, J., Tan, Y., Liu, X., Yang, Y., & Zheng, X. (2023). Longitudinal relationship between prosocial behavior and meaning in life of junior high school students: A three- wave cross-lagged study. *Journal of Adolescence*.