Examining the Influence of Meaning in Life and Social Connectedness on Adolescents' Career Self-efficacy

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Acknowledgements

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Abstract

Alfred Adler considered social interest may contribute to an individual's sense of belonging and sense of significance. The concepts of meaning in life, social connectedness, and career self-efficacy are closely related to the sense of contribution, sense of belonging, and tasks of life. The study reported here was conducted with 2,638 Chinese adolescents (mean age = 14.92, SD = 1.32) to investigate associations among variables of meaning in life, social connectedness, and career self-efficacy. Results suggested that *presence* of meaning, as compared to *searching for* meaning, appears to have a stronger degree of association with self-efficacy in career exploration, work habits and talent development. Furthermore, both dimensions of meaning in life had indirect effects on self-efficacy in career exploration, work habits and talent development through the mediating variable of connectedness to parents, peers, school, and teachers. Limitations of the study are discussed, and implications for future research and for school-based counseling programs are identified.

(154 words)

Keywords: Career exploration, Chinese, Meaning in life, Self-efficacy, Social connectedness, Talent development, Work habits

Adler (1931) considered social interest contributes to individuals' sense of belonging and sense of significance through engagement in work, friendship and intimacy. Three key variables explored in this study are 'social connectedness', 'meaning in life' and 'career self-efficacy'. Social connectedness is the term applied to positive relationships that an individual develops with parents, siblings, teachers, peers, employers, and significant others. Social connectedness is said to involve empathy, cooperation, mutual support, and opportunities for developing autonomy and social interest (Frank & Shoshana, 2019; Sweeney, 2009). Within Social Cognitive Career Theory, such connection is regarded as a critical element for career development (Lent et al., 2002). For students involved in career planning and preparation, the importance of connectedness to family and school—and the security and support that this brings to them—is well established (Ginevra et al., 2015; Kracke, 1997).

The term 'meaning in life' refers to people's understanding of the world in which they live, and their role, purpose and value within it. It includes their personal identity, their feeling of worth, and their ability and willingness to contribute to society (Steger, 2009). Meaning in life is something that everyone seeks and that develops over time. For individuals who have already acquired meaning in life, it is usual to refer to this state as 'presence of meaning'. In those who have not yet fully acquired meaning, the term is 'searching for meaning'.

To date, few studies have focused directly on relationships between an individual's 'meaning in life' and their career-related outcomes. For example, Dik et al. (2015) have suggested that positive emotions, hope, and perceiving a 'calling in life' can exert a valuable influence on career choices. Similarly, Duffy and Sedlacek (2010) found that 'career calling' (having a perceived purpose and passion for specific forms of work) was moderately correlated with meaning in life among college students. It has also been found that having meaning in life can result in a state of subjective well-being (Ho et al., 2010; Shrira et al.,

2011), positive self-esteem (To et al., 2014), and career decision-making self-efficacy (Lewis et al., 2018). Thus, it could be conjectured that meaning in life may be associated with higher levels of career self-efficacy. Career development during adolescence will be further explored below from the perspectives of individual psychology and social cognitive theory.

Career Self-efficacy

Savickas (1997) suggested that career development in schools needs now to include the promotion of 'career adaptability'. This involves preparing students to accept the fact that their career paths may have to change several times during a working life, in response to ever-changing opportunities and challenges in this technological and knowledge-based era. As a first step, counselors could use structured interviews to connect with the students, to collect data concerning the student's career aspirations, and to detect whether they are very firm in their choice of future path or whether they reveal willingness to be flexible (Savickas, 2009). Savickas (2019) suggested that Adlerian career style counseling could help individuals explore their favorite leisure activities, school subjects, interests and talents as one possible path to clarifying their career choices.

Within Social Cognitive Theory, it is believed that perceived self-efficacy greatly influences motivation, critical thinking, aspirations, and the ability to overcome adversity (Bandura et al., 2001). Self-efficacy is attained mainly by reflecting upon personal accomplishments, and is often reinforced by a number of social and contextual factors such as positive and supportive feedback from parents, friends, and teachers (Lent et al., 2002). Higher self-efficacy also appears to be significantly related to hardiness and resilience in stressful situations (Huang, 2015) and can thus be an asset when facing the challenge of planning and setting out on a career path (Taveira & Moreno, 2003).

Studies have supported the role of self-efficacy in career exploration (Ochs & Roessler, 2004; Rogers & Creed, 2011). For example, Betz and Voyten (1997) found that higher self-efficacy and optimistic career-outcome expectations, increased career exploratory intentions and actions of college students. A positive relationship between self-regulation and self-efficacy has also been found (Bembenutty & White, 2013; Kitsantas & Zimmerman, 2009; Pajares, 2002).

Social Cognitive Career Theory (Lent et al., 2002) provides a solid framework for understanding links between personal, behavioral and external factors in the career choice process. Within this process, meaning in life, social connectedness, and career exploration may contribute to self-efficacy (Guan et al., 2015; Jiang, 2017; Lent et al., 2016; Rogers & Creed, 2011; Sheu et al., 2010). Social Cognitive Career Theory supports an indirect relationship between social connectedness, meaning in life and career exploration, but a more direct relationship is also possible. The education program developed by Thompson and Feldman (2010) successfully promoted college students' sense of vocational calling, through helping them explore meaning and purpose in life. Social Cognitive Career Theory has also helped explain the career choice process, including planning and exploration of options. The theory is based on the roles played by personal attributes, environmental factors and behavioral variables. Under personal attributes, it is suggested that three factors interact and influence career decision-making — namely, goals, self-efficacy and outcome expectations (Knight, 2015; Lent et al., 2002). Social Cognitive Career Theory has also enlightened understanding of career development while also providing theory-derived counseling strategies for helping individuals extend their occupational options, overcome barriers, and improve self-efficacy for career exploration (Brown & Lent, 1996). Career exploration in senior schools should help students capitalize on their strengths, and should fully support talent development (Yuen et al., 2010).

Talent Development, Work Habits and Career Exploration

A very important consideration in career planning is the presence of any specific talents a student may have, and how these talents may relate to a particular career path. Cross and Cross (2017) have recently proposed that Erikson's Psychosocial Stage Theory has relevance for adolescents' talent development in schools. The school curriculum, plus the school climate that is created, should foster students' ego strength, willpower, purpose in life, and fidelity. These attributes are all important if individuals are to reach their full potential

Talent development is described as a complex and dynamic process that is not the product solely from nature or nurture (Simonton, 2001). Talents need to be recognized and encouraged from childhood to adulthood (Olszewski-Kubilius et al., 2015b; Yuen et al., 2010). It is strongly believed that talents develop best in environments that are stimulating and supportive (Barab & Plucker, 2002). This applies not only to school or college environment but also to family settings (Chan, 2005). A positive correlation has been reported between parental support and students' career exploration (Ali & Saunders, 2006; Kracke, 1997).

From an individual's perspective, talent development requires sustained effort to accomplish desired goals (Olszewski-Kubilius et al., 2015a). In school, it is common to refer to this sustained and purposeful effort as acquiring 'positive work habits.' A recent study found that work habits, together with conscientiousness, self-discipline, and persistence are strong personality factors leading to higher academic achievement (Dumfart & Neubauer, 2016). Work persistence in particular, has been shown to relate to an individual's internal locus of control and self-efficacy, leading to better task performance (Strauser et al., 2002). Based on Social Cognitive Theory, it is reasonable to hypothesize that work habits and self-efficacy are both positively related to talent development and thus are important in career exploration.

To maximize students' potential by developing their talents, a supportive social network of peers, family members, teachers and school community is required. Also necessary in the individual are feelings of self-efficacy—that is the ability to identify one's own strengths, possess a positive attitude toward overcoming challenges, and confidence in coping skills (Olszewski-Kubilius et al., 2015a).

Numerous studies have identified the positive contribution of good work habits — in particular persistence and conscientiousness. These attributes are significantly related to career exploration and planning (Lent et al., 2016; Li et al., 2015; Zimmerman, 2013). Fuchs et al. (1994) have observed that teachers' expectations for students' work habits do influence better achievement and establish a constructive teacher-student interaction.

There may be gender differences in the relative importance and role of persistence and conscientiousness. For example, conscientiousness has been found to be significantly higher in girls than boys (Soto, 2016); and females are reported to exhibit higher levels of career exploration than males (Patton et al., 2004). However, females more often experience higher levels of stress when faced with decision making (Taveira et al., 1998). Personal factors have also shown a relationship to work habits and talent development— for example, parents' education level may influence the extent to which they provide good role models for a strong work ethic and persistence when faced with obstacles (Bank et al., 1990).

Social Connectedness

Adler suggested human beings are socially embedded, with individuals having a fundamental need to belong and to link meaningfully within the social world (Adler, 1927;1930). He describes 'social interest' as a person's kinship with other living beings and a sense of belonging in the human community (Adler, 1956). Adler also suggested that social interest is the key to finding meaning in life through engaging in 'life tasks' (Adler, 1935).

These life tasks could be thought of as working towards making a meaningful contribution to society (Dinkmeyer et al., 1987; Dreikurs & Mosak, 1967; Mosak & Dreikurs, 1967).

Review of empirical research evidence supports this human need to belong and its influence on individuals' emotional responses and well-being (Baumeister & Leary, 1995; Gere & MacDonald, 2010). When individuals feel this sense of belonging, equity and inclusiveness they will build social connectedness by engaging in the tasks of life through interaction with others (Ferguson, 2010: McNamara et al., 2017). Failure to develop a sense of belonging and social connectedness is associated with self-doubt, depression and at-risk behaviors (Baumeister & Leary, 1995; Steger & Kashdan, 2009).

How strongly an individual feels connected to and supported by significant others is associated with development of self-efficacy, feelings of self-worth, meaning in life, motivation, resilience, and confidence. Writers have suggested that sense of belonging is associated with meaning in life and possessing positive emotions (Fong Lam et al., 2015; Lambert et al., 2013). An individual's emotional well-being is considered positively associated with connectedness to parents (Conner et al., 2016), to school (Resnick et al., 1997), to teachers (Golaszewski et al., 2018) and to peers (Karcher, 2008; Rawlings & Stoddard, 2017). It appears that meaning in life, connectedness, and life skills development are reciprocally associated (Yuen et al., 2020). A survey involving students in Hong Kong has indicated that adolescents' career confidence is predicted by their school connectedness and their understanding of 'meaning in life' (Yuen & Yau, 2015). It has been found that perceived social connectedness is positively related to career exploration and career path preparation (Cheung & Arnold, 2010; Hirschi et al., 2011; Turan et al., 2014). Career-related support from teachers in particular is known to play an important role in students' career exploration. Mother-daughter relation with good communication and independence contribute to high career self-efficacy (Mao et al., 2012).

Meaning in Life

Meaning in life is closely related to a person's sense of their own contribution to society and to a sense of belonging (Adler, 1931). Possessing meaning in life provides an individual with purpose and a feeling of self-worth that gives a sense of control in life. This meaning in life assists one in setting standards and values to judge human action and to set our own goals. Frankl (1969) suggested that meaning in life will tend to differ across people and situations, and meaning is unique to each individual. For research purposes, a standardized scale has been developed to investigate this construct, namely the *Meaning in Life Questionnaire* (Steger et al., 2006). The instrument assesses two major aspects identified as 'presence of meaning in life' and 'search for meaning in life.'

Possessing meaning in life has been found to be a protective factor against drug use, unsafe sex, inadequate exercise, and diet control (Brassai et al., 2011). In a sample of Hong Kong adolescents, meaning in life is also associated with life satisfaction (Ho et al., 2010), volunteering behaviors (Law & Shek, 2009), career adaptability, and connectedness with parents, peers and teachers (Yuen & Yau, 2015).

The Hong Kong Context

For the past twenty years, educators in Hong Kong have been charged with greater responsibility for strengthening the post-school prospects of students in secondary schools. In the year 2000, the Curriculum Development Council in Hong Kong proposed reforms and improvements to the existing nine years of education for all students (Cheng, 2009). In particular, more emphasis was to be given to 'whole-person' development that extends well beyond attention to academic subjects and examinations, and looks ahead to students' future beyond school. To facilitate this new emphasis in practice, other learning experiences were to

be strengthened in the senior secondary curriculum, including more physical education, aesthetic awareness, leadership skills, moral education, and career and life planning education.

In terms of preparing students for their future lives beyond school, teachers and counseling professionals are expected now to play a greater role in helping to develop their talents and supporting their career planning (Hong Kong Education Bureau, 2009). All teachers are required also to help promote students' self-management and autonomy, because it is now widely accepted that good work habits and autonomy are important for talent development and for career planning during the adolescent stage.

Following the reforms proposed in 2000, later research in Hong Kong has found that structured counseling and guidance programs, a guidance curriculum of activities for groups, individual student planning, and peer support schemes are now implemented to some level in Hong Kong schools (Yuen et al., 2007; Yuen et al., 2010). However, schools vary in the extent to which these activities and interventions are successfully implemented. Interviews with teachers have revealed that teachers are now engaged in more conversations with students to explore life meaning, goals and pathways in study and work (Yuen, Lee, et al., 2020). Focus group interviews with adolescents revealed that they tend to interpret meaning in life as equivalent to 'having a plan for a career' and 'setting life goals' (Yuen, Chung, et al., 2020).

The present study

Adlerian individual psychology and Social Cognitive Career Theory have identified (using mainly American and European samples) direct and indirect links between meaning in life, social connectedness to peers, family, school and teachers, and self-efficacy in work habits, talent development and career exploration. The present study explored such relationships among Grade 8 and Grade 10 Chinese adolescents in Hong Kong.

Hypotheses

The purpose of the study was to examine indirect effects of meaning in life on career self-efficacy (including talent development, work habits, and career exploration) through the intermediate variable of connectedness to parents, school, peers, and teachers. The following hypotheses were generated, based on the information summarized above.

Hypothesis 1: Meaning in life dimensions (*presence of meaning* and *search for meaning*) would be positively associated with self-efficacy in talent development, work habits, and career exploration.

Hypothesis 2: Meaning in life would be positively associated with connectedness to parents, school, peers, and teachers.

Hypothesis 3: Connectedness to parents, school, peers, and teachers would be positively related to self-efficacy in talent development, work habits and career exploration.

Hypothesis 4: Meaning in life would have indirect effects on self-efficacy in talent development, and work habits and career exploration, via the mediating role of connectedness to parents, school, peers, and teachers.

The nine variables assessed in the study were thus: self-efficacy in work habits, self-efficacy in talent development, self-efficacy in career exploration, meaning in life (presence of and search for meaning in life), connectedness to parents, connectedness to school, connectedness to peers, and connectedness to teachers.

Method

Participants

The first author applied to the Human Research Ethics Committee of the university to conduct the study. After approval was granted, the research team contacted the secondary

schools. One hundred schools were randomly selected from the Education Bureau's list of secondary schools in various regions of Hong Kong. Eighty schools agreed to participate in the study returned completed questionnaires (response rate of 80%). In each school, classes of students were selected randomly and invited to participate in the survey. No compensation was involved. The questionnaires were in traditional Chinese. In total 2,638 Chinese secondary-school adolescents from Grade 8 and Grade 10 completed the scales applied in this paper (1,254 boys; 1,361 girls, plus 23 who did not record their gender). The average age of the sample was 14.92 years with a standard deviation of 1.32. Results of Monte Carlo simulation showed that the power of detecting small to medium mediation effects with such sample size is 100.0%.

Measures

The *Meaning in Life Scale* (Steger et al., 2006) was used to measure the extent to which the participants have realized meaning in their lives (*presence of meaning*) or are motivated to seek for the meaning of their lives (*search for meaning*). Cronbach's alpha reliability coefficients for *presence* and *search* subscales were .84 and .87 respectively in this study.

The Chinese version of the *Hemingway Measure of Adolescent Connectedness – Short Form* (Karcher & Sass, 2010; Yuen & Yau, 2015) was utilized to measure students' perceptions of connectedness to parents, school, teachers, and peers. This instrument contains 4 subscales to measure the 4 domains of connectedness. Cronbach's alpha reliability coefficients of the dimensions in this study were parents = .81, school = .74, peers = .68, and teachers = .74.

The 18-item *Career and Talent Development Self-Efficacy Scale* (Yuen et al., 2010) was used to measure self-efficacy in career exploration, talent development, and work habits of

the participants. Cronbach's alpha reliability coefficients for the dimensions in this study

were career exploration = .89, talent development = .85, and work habits = .83.

Data Analysis

To test Hypotheses 1, 2 and 3, correlation analyses were conducted. Bias-corrected

bootstrap analysis was used to identify indirect or mediated effects in this study. Prior studies

(Hayes, 2013; MacKinnon et al., 2007) have cited this technique as one of the most

empirically supported to detect mediation effects. To test Hypotheses 4, bootstrap analyses at

95% CI based on 5,000 bootstrapped resamples via the INDIRECT Macro of SPSS were

carried out.

Results

Table 1 summarizes the descriptive statistics, reliability analyses, and correlation

analyses. Findings indicated that domains of meaning in life, connectedness dimensions, and

career and talent development self-efficacy are all positively correlated (r =.28 - .59).

[INSERT TABLE 1 HERE]

Hypothesis 1 was fully supported, because meaning in life dimensions (presence of and

search for meaning) positively predicted all dimensions of career and talent development self-

efficacy (career exploration, talent development, and work habits and values) (r =.32 - .59).

Hypothesis 2 was supported because meaning in life positively predicted connectedness

to parents, school, peers, and teachers (r =.25 - .43).

Hypothesis 3: most of the hypothesized direct effects were supported (except for the

paths from connectedness to teachers to work habits), as connectedness to parents, school,

peers, and teachers positively predicted career self-efficacy domains (r =.35 - .54). It appears

that connectedness to *school* had the strongest associations with all dimensions of career self-efficacy.

Hypothesis 4: Before conducting mediation analysis via INDIRECT Process Macro in SPSS, assumptions for using regression-based analyses were tested by inspecting normality, multicollinearity, and independence of errors. Normality was confirmed by absolute ratios of skewness and kurtosis falling within acceptable values. It is unlikely that multicollinearity is an issue because the zero-order correlation coefficients of meaning in life dimensions to connectedness dimensions and talent development self-efficacy did not exceed .70. Also, the variance inflation factors were lower than .10. Support the assumption of homoscedasticity in the present study was confirmed after reviewing the concentration of error along the regression line from the dataset, where the distribution of errors or variance was deemed comparable in the independent and mediating variables.

In general, results supported the hypothesized indirect effects. Table 2 and Table 3 report the results regarding effects of: a) meaning in life dimensions on connectedness; b) meaning in life to career self-efficacy; and c) connectedness to career self-efficacy.

Table 2 showed the positive and significant direct effects of presence of meaning in life on the four subscales of career self-efficacy (β = .04 - .06, p < .001), the positive and significant effects of presence of meaning in life on the mediator, i.e. four subscales of social connectedness (β = .03 - .04, p < .001), and the positive and significant effects of the mediator on the four subscales of social connectedness (β = .07 - .34, p < .01). Table 3 showed the positive and significant direct effects of search for meaning in life on the four subscales of career self-efficacy (β = .02 - .12, p < .001), the positive and significant effects of presence of meaning in life on the mediator, i.e. four subscales of social connectedness (β = .03, p < .001), and the positive and significant effects of the mediator on the four subscales

of social connectedness (β = .05 - .46, p < .01), except the effects of connectedness to teachers on work habits, which was positive but not significant (β = .05, p > .05).

[INSERT TABLE 2 HERE]

[INSERT TABLE 3 HERE]

Connectedness to parents, school, peers, and teachers also mediated a link of meaning in life to all domains of career self-efficacy (Table 4 and Table 5).

Table 4 showed all the indirect effects of presence of meaning in life on career self-efficacy via connectedness domains were positive and statistically significant, i.e. indirect effects ranged from .002 to .015, and all BCa 95% CI did not include the null value of zero. Table 5 showed all the indirect effects of search for meaning in life on career self-efficacy via the three connectedness domains of parents, school and peers were positive and statistically significant, i.e. indirect effects ranged from .003 to .015, and all BCa 95% CI did not include the null value. However, the indirect effects on career self-efficacy via connectedness to teachers was not statistically significant, i.e. the BCa 95% CI included the null value.

[INSERT TABLE 4 HERE]

[INSERT TABLE 5 HERE]

In particular, indirect effects of presence of meaning in life on career self-efficacy via connectedness domains ranged from .002 to .015, with the smallest lower bound of BCa 95% CI = .001 and highest upper bound of BCa 95% CI = .018. At the same time, indirect effects of search for meaning in life on career self-efficacy via connectedness to parents, school and peers ranged from .003 to .015, with the smallest lower bound of BCa 95% CI = .001 and highest upper bound of BCa 95% CI = .018. These findings suggest that connectedness could serve to enhance the indirect effect of meaning in life on adolescents' self-efficacy in career exploration, development of talent, and positive work habits.

Discussion

This study investigated associations among self-efficacy in work habits, talent development, career exploration, meaning in life and connectedness in 8th and 10th grade adolescents in Hong Kong. These variables were all found to be significantly and positively interrelated. The results indicated that a stronger presence of and search for meaning in life was related to greater talent development, work habits and career exploration. This finding also supported a view that stronger presence and search for meaning in life was related to stronger connectedness. Adolescents' talent development, work habits and career exploration were therefore influenced by the strength of their meaning in life and school connectedness. These results are consistent with the notion that Confucian cultural heritage continues to influence learning and students' development in Asia (Rao & Chan, 2019); and also justifies why Adlerian concepts can be applied in counselling, parenting and education in Confucian cultural communities (Wu, Kao & Lam, 2017). Both Adler and Confucius considered that education and development of individuals can really only occur within social relationships (Mairet, 1929; McGee, Huber & Carter, 1983). In Confucian culture, individuals are expected to self-cultivate, honor their family, and help to make a peaceful world (Legge, 1893).

The suggestion has been made that the higher an individuals' sense of belonging, the higher will be that person's career confidence (Stoltz et al., 2013). In this study, self-efficacy in talent development could be predicted by measures of connectedness and meaning in life, thus supporting hypothesis 4. The significant association among connectedness, meaning in life and talent development in this study was consistent with the model for talent development suggested by Olszewski-Kubilius et al. (2015b). Connectedness and meaning in life could significantly predict positive work habits. Academic self-regulation was predicted by academic efficacy, self-concepts in moral, family, social and intellectual aspects, and fear of failure of middle school students (Chong, 2007). In a study of university students by Strauser et al. (2008), 'work personality' was predicted by psychological well-being (which

comprised autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance). Self-efficacy was positively linked to positive work personality (Strauser et al., 2002). This study provided supporting evidence for a relationship between meaning in life and positive work habits among adolescents. It was believed that students' self-efficacy played a significant role here, and parental support was directly related to self-efficacy (Kim, 2014).

The results from this study demonstrated that the mechanisms through which meaning in life (presence and search for) may influence self-efficacy in work habits, career exploration, and talent development, and may be associated with connectedness to parents, peers, teachers, and school. Previous literature has suggested that meaning in life can also predict desirable social outcomes (e.g., maintaining positive interpersonal relationships) (Steger et al., 2006; Stillman et al., 2011), identity commitments (Negru-Subtirica et al., 2016) and the findings here suggest that a meaningful life can operate as a catalyst for positive interactions with parents and teachers (and possibly vice versa). Teachers and counsellors in schools should always encourage the social development of children and young people through cultivating their connectedness and social interest (Dreikurs & Soltz, 1964; Sweeney, 2019).

Limitations

Two limitations need to be acknowledged. First, this was not an experimental or longitudinal study, so it is not possible to establish a causal relationship between meaning in life and connectedness with career exploration, talent development and work habits. The study looked only at associations among the eight variables on a single occasion. Second, it could also be argued that there are several other factors mentioned in previous studies related to career exploration (for example, school climate and career-related teacher support, ethnic identity) but they were not investigated in this study.

Future Research

Future investigations could include factors mentioned in previous studies related to career exploration, to explore their mediating effects on secondary school students' talent development, work habits and career exploration. The future direction of this research team is to further expand the meaning in life concept into the coherence, purpose and significance domains (Martela & Steger, 2016) and examine the relationship of meaning in life to life skills self-efficacy, with the emphasis on Chinese culture and ethnic identity.

Concluding Remarks

The results here indicate that meaning in life and connectedness can predict talent development, work habits and career exploration in adolescents in Hong Kong. It can be concluded that when individuals have identified their meaning in life, and also have well-established relationships with parents, school, peers and teachers, is of benefit to maintaining positive work habits and career exploration and talent development. Now that teachers in Hong Kong have been charged with greater responsibility for strengthening post-school career prospects of students, educators and career guidance practitioners should collaborate to develop practical strategies for enhancing students' self-efficacy and career exploration. Guidance programs in secondary schools should include activities that encourage students to reflect upon their experiences, seek a meaning in life, and develop closer connections to teachers and peers. All teachers can assist with this process, and have a major role to play in developing students' work habits and talents. Research and professional development in Adlerian principles and practices could be useful for enhancing school-based counseling that supports adolescents' search for meaningful life (Steger, 2020). Schools must always provide a supportive context for adolescents to develop their meaning in life and a sense of belonging. In particular, students will need help to recognize that later, as workers, they will be valued

contributors to society. This belief will exert a positive influence on their career self-efficacy (Carlson & Englar-Carlson, 2017; Lau, 1994; Yee, 2018; Yuen et al., 2019).

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Table 1. Descriptive statistics and correlational coefficients among the variables

Variable	r									α	M	SD
	1	2	3	4	5	6	7	8	9			
1. Presence of meaning	-									.84	22.39	5.79
2. Search for meaning	.31**	-								.87	25.53	5.24
3. Connectedness to parents	.33**	.25**	-							.81	3.49	.67
4. Connectedness to school	.43**	.29**	47**	-						.74	3.37	.58
5. Connectedness to peers	.30**	.26**	.42**	.56**	-					.68	3.51	.55
6. Connectedness to teachers	.28**	.28**	.44**	.64**	.46**	-				.74	3.43	.60
7. Career exploration	.59**	.38**	.36**	.48**	.37**	.38**	-			.89	4.14	.82
8. Talent development	.53**	.36**	.35**	.49**	.38**	.38**	82**	-		.85	4.20	.82
9. Work habits	.49**	.32**	.42**	.54**	.43**	.41**	.77**	.76**	-	.83	4.17	.81

Note: **p<.001

Table 2. Regression analyses among presence of meaning, connectedness, and career self-efficacy

Types of paths			
Paths	β	SE	t
Direct effects			
Presence ⟶ career exploration	.06	.002	27.01***
Presence ⟶ talent development	.05	.002	21.51***
Presence ⟶ work habits	.04	.002	16.95***
Presence of meaning predicting mediators			
Presence ⟶ connectedness to parents	.04	.002	17.55***
Presence ⟶ connectedness to school	.04	.001	23.83***
Presence ⟶ connectedness to peers	.03	.002	16.09***
Presence ⟶ connectedness to teachers	.03	.002	14.54***
Mediators predicting outcomes			
Connectedness to parents ⟶ career exploration	.08	.09	3.84***
Connectedness to school ⟶ career exploration	.24	.03	7.65***
Connectedness to peers ⟶ career exploration	.09	.03	3.39**
Connectedness to teachers ⟶ career exploration	.12	.03	4.28***
Connectedness to parents ⟶ talent development	.07	.02	3.28**
Connectedness to school ⟶ talent development	.27	.03	8.38***
Connectedness to peers ⟶ talent development	.13	.03	4.68***
Connectedness to teachers ⟶ talent development	.12	.03	4.30***
Connectedness to parents ⟶ work habits	.16	.02	7.45***
Connectedness to school ⟶ work habits	.34	.03	11.90***
Connectedness to peers ⟶ work habits	.17	.03	5.99***
Connectedness to teachers ⟶ work habits	.08	.002	16.95***

Note: *** p <.001, ** p <.01,* p <.05

Table 3. Regression analyses among search for meaning, connectedness, and career self-efficacy

Types of paths	Standardized estimates		
Paths	β	SE	t
Direct effects			
Search ⟶ career exploration	.04	.003	13.65***
Search ⟶ talent development	.12	.003	12.07***
Search ⟶ work habits	.02	.003	8.46***
Search for meaning predicting mediators			
Search ⟶ connectedness to parents	.03	.002	12.98***
Search ⟶ connectedness to school	.03	.002	15.69***
Search ⟶ connectedness to peers	.03	.002	13.61***
Search ⟶ connectedness to teachers	.03	.002	14.79***
Mediators predicting outcomes			
Connectedness to parents ⟶ career exploration	.14	.02	5.97***
Connectedness to school ⟶ career exploration	.42	.03	12.51***
Connectedness to peers ⟶ career exploration	.10	.03	3.33**
Connectedness to teachers ⟶ career exploration	.05	.03	13.65***
Connectedness to parents ⟶ talent development	.12	.02	5.04***
Connectedness to school ⟶ talent development	.41	.03	12.48***
Connectedness to peers ⟶ talent development	.14	.03	4.53***
Connectedness to teachers ⟶ talent development	.07	.03	2.27*
Connectedness to parents ⟶ work habits	.20	.02	8.91***
Connectedness to school ⟶ work habits	.46	.03	14.38***
Connectedness to peers ⟶ work habits	.17	.03	5.90***
Connectedness to teachers ⟶ work habits	.05	.03	1.59

Note: *** $p < .001$, ** $p < .01$, * $p < .05$

Table 4. Results of indirect effects of presence of meaning in life on career self-efficacy via

connectedness domains

	Career exploration		Talent development		Work habits	
Mediators	Indirect effects	BCa 95% CI	Indirect effects	BCa 95% CI	Indirect effects	BCa 95% CI
Connectedness to parents	.003	.001, .005	.003	.001, .005	.006	.004, .008
Connectedness to school	.010	.007, .014	.011	.008, .015	.015	.011, .018
Connectedness to peers	.003	.001, .005	.004	.002, .006	.005	.003, .007
Connectedness to teachers	.003	.002, .005	.003	.001, .005	.002	.001, .004

Table 5. Results of indirect effects of search for meaning in life on career self-efficacy via

connectedness domains

	Career exploration		Talent development		Work habits	
Mediators	Indirect effects	BCa 95% CI	Indirect effects	BCa 95% CI	Indirect effects	BCa 95% CI
Connectedness to parents	.004	.003, .006	.004	.002, .006	.006	.005, .009
Connectedness to school	.014	.010, .017	.014	.010, .017	.015	.012, .018
Connectedness to peers	.003	.001, .005	.004	.002, .006	.005	.003, .007
Connectedness to teachers	.002	-.001, .004	.002	.000, .004	.001	-.001, .004