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Spirituality as predictors of career adaptability among Chinese youths: a cross-sectional study

Joe Hok-Ko Pong

the Faculty of Management and Hospitality, Technological and Higher Education Institute of Hong Kong, Hong Kong, China

ABSTRACT

This research examined the relationship between spiritual well-being and the career adaptability of Chinese youths in Hong Kong. Cross-sectional data collected from one university consisted of 461 students (204 males, 257 females; ages 19–23). The participants were asked to complete the Spiritual well-being questionnaire (SWBQ) to evaluate the status of their spiritual wellbeing (including the personal and communal, environmental, and transcendental domains) and Career Adapt-Abilities Scale (CAAS) to assess their career adaptability in the areas of concern, control, curiosity, and confidence. The study found that the personal and communal domains of spiritual well-being were positively associated with career adaptability in all domains. Hierarchical Regression analysis also showed that personal and communal domains of spiritual well-being explained 38.5%, 39.6%, 11.2% and 48.7% of the variance in Chinese youth's concern, control, curiosity and confidence of career adaptability respectively. The personal and communal domain were the strongest predictor of career adaptability.

Introduction

Youths experience substantial physical, mental, physiological and spiritual changes as they progress from adolescence to adulthood (Yonker, Schnabelrauch, and DeHaan 2012). In particular, college students are at a crucial change in which they explore more about themselves and their aspirations. As they mature, they grapple with a number of dilemmas in their career, such as exploring and developing their career tracks (Duffy and Blustein 2005). Generally, people focus on acquiring new information and honing their competencies when they enter university and subsequently seek jobs upon graduation. However, they tend to overlook other factors, such as their compatibility with various occupations and circumstances, as well as their spiritual well-being along the way.

Career adaptability is one's aptitude in handling shortcomings and shifts in his/her career (Savickas and Porfeli 2012a). Meanwhile, one's spiritual well-being can be gauged through four specific domains, namely, relationships with self, others, environment and transcendence (Fisher 2021). Sony and Mekoth (2017) revealed that workplace spirituality has a beneficial effect on job satisfaction and job performance. The study of Shava and Chinyamurindi (2021) found that workplace spirituality has a significant impact on both mental and physical health. Shava and Chinyamurindi (2021) indicated that spirituality plays a moderating role in the relationship between workplace spirituality and employee health. Also, the spiritual well-being of employees can not only be seen as a reliable signal of psychological distress (Leung, Pong, and van Wouwe 2021) but also as an accurate predictor of burnout (Pong 2022).

Spiritual well-being and career adaptability are closely correlated given the influence of spirituality in helping young individuals navigate their careers (Lips-Wiersma 2002). Spirituality positively affects one's career aspirations, growth and contentment (Lips-Wiersma 2002). Moreover, in finding suitable career paths, students strive to achieve their dreams not only on the basis of their interests but also through a combination of acquired knowledge and skills (Savickas and Porfeli 2012a).

Previous studies (e.g., Coetzee and Harry 2014; Paramentier, Pirsoul, and Nils 2019) have searched for the link between one's emotional intelligence and career adaptability, as well as the correlation between an individual's adversity quotient and career adaptability (e.g., Shalihah, Yudianto, and Hidayati 2018; Tian and Fan 2014). Meanwhile, some related studies (e.g., Pong 2017; Walker and Dixon 2002) have looked into the association between spirituality and one's abilities, such as student's academic performance. In addition, a number of empirical studies in psychology have demonstrated the positive correlation of spirituality with multiple facets of life, such as recovery from illness, coping with stress, illnesses, mortality, self-esteem and overall satisfaction with life (Anand, Jones, and Gill 2015; Deb et al. 2020). However, scant research has explored spirituality and career adaptability (Duffy and Blustein 2005), particularly within the context of Chinese individuals in Asia-Pacific regions.

As career shifts have recently become conspicuous, thus compelling people to make efforts to adapt to such changes. To address these transitions, career adaptability has aided people in navigating their future as well as cultivated the needs of various industries with quick solutions to career-related changes (Rottinghaus et al. 2012).

Purpose of the study

This research enriches the existing literature by examining the ability of multiple dimensions to predict spiritual well-being in career adaptability. As such, the current undertaking examines youths in Asia-Pacific regions within the Chinese cultural context to mark the relationship between spiritual well-being and career adaptability using previous empirical studies. Moreover, spiritual well-being and career adaptability are among the crucial resources and outcomes among Chinese university students, with the former being expected to forecast the latter. Hence, this current work addresses the following research questions:

Research Question 1: Is spiritual well-being associated with career adaptability among Chinese university students?

Research Question 2: If so, can spiritual well-being predict career adaptability?

Theoretical framework

Career adaptability is the competency through which one self-regulates to manage psychological assets and social interactions (Savickas and Porfeli 2012a). Duffy and Blustein (2005) identified a positive correlation between one's religiosity and spirituality, which were measured by the Spiritual Assessment Inventory (SAI) (Hall and Edwards 2002), and career adaptability, which was gauged using the Commitment to Career Choices Scale (CCCS) (Blustein, Ellis, and Devenis 1989) and the Career Decision Self-Efficacy (CDSE) scale (Taylor and Betz 1983). Moreover, the same study demonstrated that as religiosity and spirituality increase, higher levels of career adaptability may also increase.

Previous studies have demonstrated that career adaptability was specified as the dependent variable (Eryilmaz and Kara 2020; Yuen and Yau 2015; Zhao, Li, and Zhang 2022) and spiritual well-being was regarded as the independent variable (Farshadnia et al. 2018; Fernando and Chowdhury 2010). Besides, the study of Yuen and Yau (2015) indicated that a positive relationship exists between these variables, and the career adaptability f 12- and 17-year-old adolescents could be predicted by meaning in life, and connectedness with others. The study of Fernando and Chowdhury (2010) showed that spiritual well-being is correlated with and predictive of ethical orientations in decision making such as idealism among business executives.

The hypothesised conceptual model of the study is shown in Figure 1. This model suggests that spiritual well-being (including specific domains) is positively associated with career adaptability (including particular dimensions). Also, in this model, it is proposed that spiritual well-being is predictive of career adaptability based on the findings of studies (e.g., Yuen and Yau 2015) which indicated that parts of (such as meaning in life, and connectedness with others – closely similar to personal-communal) spiritual well-being were found to be a good predictor of career adaptability.
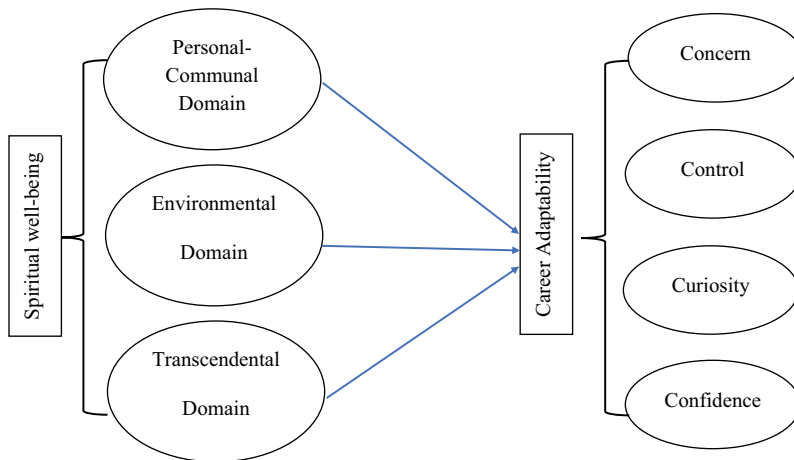
Figure 1. The hypothesised conceptual model.

Definitions and models of spiritual well-being (SWB)

Spirituality and religion are often correlated (Lindholm and Astin 2006; Tacey 2004). As a broader concept, spirituality is one's transcendental relationship with a higher entity (Marcoen 1994). Moreover, it is a set of values informing an individual's way of life (Laukhof and Werner 1998). Mattis (2002) further explained that spirituality entails how one seeks to achieve his/her aspirations, how thoughts are developed and how one finds meaning and purpose.

Religion and spirituality are typically used interchangeably (Lindholm and Astin 2006) despite spirituality being beyond religion (Jones 2018). As such, spirituality does not merely pertain to aspects of religion (Palmer 2003). The correlation between the two has been debated for decades (Ammerman 2013), but no definitive conclusion has been established.

Spiritual health and spiritual well-being

Spiritual health is crucial to one's overall well-being. It entails the merging of the body, mind and spirit and one's connection with people, the environment and transcendence, which leads to harmony within one's self (Fisher 2021). Hence, spiritual well-being signals one's relationship with spirituality and spiritual health (Jaberi et al. 2019), much like a person's physical state and breathing indicate one's physical health (Ellison 1983).

Spiritual well-being fuses all related human aspects, thereby striking a balance among these dimensions and fostering harmonic interrelations (Jaberi et al. 2019). Given these aspects, Fisher (1998) posited that spiritual well-being is dynamic, and it can be observed through the harmony of four domains, namely, personal, communal, environmental and transcendental. The personal domain expresses the meaning, purpose, and

direction of life. The communal domain refers to relationships and inter-actions with others. The environmental domain means that nature and humans are united in obligation and gratitude. The transcendental domain deals with the relationship and communication between people and the transcendent (Gomez and Fisher 2003). Fisher (2013) further amended his Spiritual Well-being Questionnaire (SWBQ) to include higher powers, God, deities, ancestors and the higher self in the transcendental part of the scale.

Validation of SWBQ

Fisher (1998) formulated the Spiritual Health and Life-Orientation Measure (SHALOM), which included 20 items divided equally among the four facets of spiritual well-being. To test the scale, he invited respondents to provide two answers for each item, one for their ideal answers and another based on their experiences. Questions on people's lived experiences became part of the Spiritual Well-being Questionnaire (SWBQ)

In turn, this scale has been extensively used by scholars worldwide, including Chinese (Fisher and Wong 2013), Hebrew (Elhai et al. 2018), Persian (Biglari Abhari et al. 2018), Brazilian (Nunes et al. 2018) and Portuguese (Valdivia, Alves, and Rocha 2020) researchers. Various works (e.g., Biglari Abhari et al. 2018; Fisher 2021; Nunes et al. 2018) have provided strong support for the domain and global structural validity, as well as good convergent and discriminant validity, of this questionnaire through exploratory factor analysis (EFA) and multi-group confirmatory factor analysis (CFA). Moreover, researchers have proven the generally high internal consistency, composite reliability and variance of the questionnaire. Thus, the current study opted to use SWBQ.

Definitions and models of career adaptability

Career adaptability is one's preparedness to address job transitions and condi-tions (Super and Knasel 1981). Furthermore, it entails workers' successful man-agement of their career growth (Savickas 1997). Thus, the psychosocial structure of career adaptability involves people's required resources when handling current and future career-related changes (Savickas 1997, 2005).

As part of the concepts and assumptions on career adaptability, one's resources help develop his/her adaptive behaviours (Savickas 2005). These resources help people acquire strategies to self-regulate and develop psychoso-cial skills, thus allowing them to cultivate their roles in the professional realm, as well as in their personal work, overall career path and life (Porfeli and Savickas 2012).

Career adaptability has multiple dimensions, such as character, enthusiasm, readiness, gifts, lifestyles and attitudes (Hartung, Porfeli, and Vondracek 2008).

To examine these dimensions further, Savickas (1997) developed four main aspects of career adaptability, namely, concern, control, confidence and curiosity, or the 4Cs.

Firstly, concern entails how one understands, prepares and plans what he/she needs to pursue his/her career path. Secondly, control is one's perceptions of self-sufficiency and resoluteness in making future career plans. Thirdly, curiosity gauges one's tendency to seek self-development. Lastly, confidence is one's self-reliance in addressing career-related problems effectively (Savickas and Porfeli 2012a).

Hence, career adaptability is a tool to determine how well one is able to manage changes in one's career, uphold resilience and follow through on promises (Buyukgoze-Kavas 2016; Ginevra et al. 2018). Four methods have been predominantly used to measure career adaptability: the Career Adapt-Abilities Scale (CAAS) (Savickas and Porfeli 2012a), the CAAS Short Form (Maggiori, Rossier, and Savickas 2017), the Career and Work Adaptability Questionnaire (CWAQ; Nota, Ginevra, and Soresi 2012) and the Career Adaptability Inventory (CAI; Ferreira and Coetzee 2013; Ferreira, Coetzee, and Masenge 2013).

The CAAS was developed by Savickas and Porfeli (Savickas and Porfeli 2012a) and has since been validated in studies worldwide, including those from China (Tien et al. 2014), Switzerland (Johnston et al. 2013), Italy (Di Maggio et al. 2015) and Turkey (Akın et al. 2014; Buyukgoze-Kavas 2014; Öncel 2014).

Meanwhile, various studies (e.g., Maggiori, Rossier, and Savickas 2017; Savickas and Porfeli 2012a) have established solid support for EFA and multi-group CFA for domain and global structural validity, good convergent and discriminant validity, as well as high internal consistency and composite reliability.

The current study used the CAAS-China Form, which has been confirmed to be identical to the International Form, including the four-domain structure in the international version (Hou et al. 2012).

Research on spiritual well-being and career adaptability

Changing careers is filled with uncertainty, and the unpredictability of such a situation can take a toll on one's well-being, emotions and responses to change. Nevertheless, spiritual health and well-being, which can be achieved through participation in religious practices, volunteerism and the pursuit of a healthy lifestyle, can help individuals curb the negative effects of career shift (Pong 2018). Much like a person recovering from an illness by seeking proper treatment, fostering good spiritual health can help people easily overcome adversity. Hence, a higher level of spiritual well-being can make one feel at peace when dealing with uncertainty (Leung, Pong, and van Wouwe 2021).

Method

Participants

This study collected data from 461 Chinese university students in a chosen university in Hong Kong in 2021 ($n = 242$) and in 2022 ($n = 219$). These participants were pursuing a business degree at a university, and all the respondents were local Chinese students who were raised and received education in Hong Kong. In particular, the students were in their fourth year of schooling and were expected to graduate soon.

Among the highlights of this research was career adaptability. Hence, business students in the sample of participants were suitable options for this study because these students would be working in a wide range of industries upon graduation. Furthermore, the chosen university had the largest number of business students in Hong Kong. Given these factors, the research samples were easy to secure and allowed for a more objective analysis.

Demographics

The surveys collected information on the participants' gender, age, household income and parents' highest educational attainment.

Spiritual well-being questionnaire (SWBQ)

The SWBQ (Fisher 2013, 1998) uses a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree) to measure the perceived importance of 20 statements in one's everyday life or lived experience. The 20 items are equally divided among four areas of spiritual well-being: personal (e.g., a sense of identity), communal (e.g., forgiveness towards others), environmental (e.g., harmony with the environment) and transcendental (e.g., personal relationship with the Divine/God).

In the Chinese context, a three-domain model is used, in which the personal and communal domains are combined on the basis of factor analysis (Pong 2022; Pong, Leung, and Lung 2020). Pong et al. (2020) explained that the interrelatedness of personal cultivation and social harmony are Confucian values that are deeply rooted in the Chinese population. Chinese tradition emphasises family unity and harmonious relationships with others (Hofstede 2001). By contrast, Western cultures tend to place higher value on individualism (Parker, Haytko, and Hermans 2009). Thus, four-model is suitable for population samples from the western countries.

In this study, the Cronbach's alphas were 0.99 for the personal and communal dimension, 0.97 for the environmental dimension and 0.97 for the transcendental dimension. Moreover, principal component analysis was used to indicate the suitability of the three-domain model in our sample (Kaiser – Meyer–Olkin value = 0.85; significance of Bartlett's test of sphericity at $p < 0.001$). Exploratory factor

Table 1. Rotated component Matrix[a].

	Component		
	Personal and communal	Environmental	Transcendental
SWBQ1: A love of other people	**.940**	−.016	.040
SWBQ2 : Personal relationship with the Divine/God	−.007	.013	**.980**
SWBQ3 : Forgiveness towards others	**.956**	−.037	−.021
SWBQ4 : Connection with nature	−.126	**.936**	−.002
SWBQ5 : A sense of identity	.948	−.046	.009
SWBQ6 : Worship of the Creator	−.010	.025	**.975**
SWBQ7 : Awe at a breathtaking view	−.041	**.963**	−.006
SWBQ8 : Trust between individuals	**.955**	−.100	.077
SWBQ9 : Self-awareness	**.934**	−.119	.079
SWBQ10 : Oneness with nature	−.108	**.961**	−.015
SWBQ11 : Oneness with God	.064	.072	**.942**
SWBQ12 : Harmony with the environment	.000	**.976**	−.006
SWBQ13 : Peace with God	.101	−.156	**.855**
SWBQ14 : Joy in life	**.931**	−.089	.057
SWBQ15 : Prayer in life	.028	.008	**.965**
SWBQ16 : Inner peace	**.971**	−.050	.025
SWBQ17 : Respect for others	**.977**	−.031	−.005
SWBQ18 : Meaning in life	**.966**	−.021	.004
SWBQ19 : Kindness towards other people	**.964**	−.070	.039
SWBQ20 : A sense of 'magic' in the environment	−.067	**.908**	−.009

Note: Items loaded on each factor are in boldface.

analysis (EFA) was performed using the varimax rotation. Exploratory factor analysis also determined three factors with eigenvalues > 1.0. These factors corresponded to the personal and communal, environmental and transcendental dimensions, with variances of 46.81%, 22.20% and 22.061%, respectively. Table 1 presents the factor loadings for the model.

Career adaptability: the career adapt-abilities scale (CAAS) – China form

Savickas & Porfeli (Savickas and Porfeli 2012a) originally developed and validated the Career Adaptability Scale (CAAS), which consists of six items from each of four subscales, including concern, control, curiosity, and confidence. The CAAS – Chinese Form, which was validated by Hou et al. (2012) as identical to the original form (Savickas and Porfeli 2012a), is also a 24-item scale that measures individuals' self-reports to career shifts using different methods or strategies. Through a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree), participants answer 24 questions, which are divided equally into four domains, on their development. These areas are concern (e.g., planning how to achieve my goals), control (e.g., taking responsibility for my actions), curiosity (e.g., exploring my surroundings) and confidence (e.g., Performing tasks efficiently). In the current study, the Cronbach's alphas for these domains were 0.96, 0.98, 0.97 and 0.98, respectively. Moreover, principal component analysis confirmed the suitability of the four domains identified in previous studies (e.g., Hui et al. (2018) and Ye (2015) for use in the current study's sample (Kaiser – Meyer–Olkin value = 0.92; significance of Bartlett's test of sphericity at

Table 2. Rotated component Matrix[a].

	Component			
	Confidence	Curiosity	Concern	Control
1. Thinking about what my future will be like	.088	.135	**.825**	.370
2. Realising that today's choices shape my future	.084	.165	**.884**	.224
3. Preparing for the future	.106	.147	**.856**	.299
4. Becoming aware of the educational and career choices that I must make	.038	.237	**.874**	.234
5. Planning how to achieve my goals	.083	.249	**.816**	.190
6. Concerned about my career	.142	.184	**.868**	.240
1. Keeping upbeat	.194	.266	.256	**.856**
2. Making decisions by myself	.240	.258	.342	**.803**
3. Taking responsibility for my actions	.246	.277	.295	**.813**
4. Sticking up for my beliefs	.260	.132	.331	**.834**
5. Counting on myself	.231	.247	.299	**.844**
6. Doing what's right for me	.239	.208	.297	**.868**
1. Exploring my surroundings	.012	**.887**	.210	.228
2. Looking for opportunities to grow as a person	.079	**.906**	.092	.217
3. Investigating options before making a choice	.035	**.906**	.155	.207
4. Observing different ways of doing things	.068	**.930**	.165	.197
5. Probing deeply into questions I have	.016	**.884**	.195	.171
6. Becoming curious about new opportunities	.107	**.906**	.263	.091
1. Performing tasks efficiently	**.952**	.046	.001	.200
2. Taking care to do things well	**.937**	.095	.101	.158
3. Learning new skills	**.931**	.096	.116	.167
4. Working up to my ability	**.927**	.061	.184	.159
5. Overcoming obstacles	**.930**	.017	.053	.191
6. Solving problems	**.931**	−.004	.069	.208

$p < 0.001$). In addition, exploratory factor analysis determined four factors with eigenvalues > 1.0, which corresponded to confidence, curiosity, concern and control, which accounted for 49.401%, 19.79%, 12.45% and 7.43% of variance, respectively. Table 2 presents the factor loadings for the four-factor model in the current sample.

Procedure

This study was approved by the Research Ethics Committee of the author's affiliated institution. Furthermore, this research used convenient and snowballing sampling. Online questionnaires via electronic Google Forms were used to disseminate cross-sectional surveys and collect data from March 1 to 31, 2021 and from March 1 to 31, 2022, respectively.

Emails were sent to the targeted participants with the help of their lecturers and programme leaders. These emails contained a hyperlink that led participants to an online survey website. The survey included an informed consent form and a set of questions. Given that Hong Kong is predominantly bilingual, the questions were written in Chinese and English. In addition, participants were only allowed to answer the survey once. As an added measure, browser cookies were used to prevent duplicate responses.

The survey was self-administered, anonymous and confidential and had a response rate of 61.5%. That is, out of 750, 461 Chinese students from the university in Hong Kong accomplished the questionnaire.

The total time to answer the questionnaire was approximately 15 minutes. Before answering the survey, the students were informed about the purpose of the study. The form clarified that participating in the study was voluntarily and that anyone could withdraw from the study without any consequences. Moreover, the participants were told that all data collected were confidential and that no compensation would be given. Upon approval of the terms, the students submitted a written informed consent to confirm their participation.

This study adopted SPSS Version 25 to analyse data. Then, coding errors and illogical data values were amended through data cleaning. In the end, the process had no missing data.

Results

Descriptive statistics

Pearson correlation, *t* tests, one-way ANOVA and hierarchical regression analysis were employed. Table 3 presents the descriptive statistics and the results of the examination of demographic differences on the overall scores of the SWBQ and CAAS. Similarly, the *t* tests did not find any significant differences in the total scores or dimension scores of spiritual well-being and career adaptability between samples from 2021 and 2022 ($p > 0.05$) or based on participants' gender. Thus, the two samples from 2021 and 2022 were combined. However, regarding the demographic questions about religion, a series of t-tests found significant differences on the mean scores of SWB and CAAS in specific domains between students with religious beliefs and students without religious beliefs.

Also, one-way ANOVAs revealed no significant differences in the mean scores for career adaptability, including concern, control, curiosity, and confidence between participants' part-time work experience and ages. Although One-way ANOVAs showed there were significant differences in the average scores of spiritual well-being in the personal-communal domain for participants of different ages.

87% of the participants had a monthly household income between HK $38,001 and HK$58,000, higher than the HK$28,300 median monthly household income in 2018. Meanwhile, their parents attained at least secondary education. Table 4 reveals that 72.9% and 71.8% of the participants' fathers and mothers, respectively, reached post-secondary education level or above.

Table 5 demonstrates the scores on the SWBQ and the CAAS as well as their correlations. The scores revealed that prospective graduates' personal and communal dimension in spiritual well-being had a statistically significant

Table 3. Statistics: monthly household income and parental highest education level.

Factors	N (%)	P&C M (SD)	Environ M (SD)	Trans M (SD)	SWB overall M (SD)	Concern M (SD)	Control M (SD)	Curiosity M (SD)	Confidence M (SD)	CAAS Overall M (SD)
All	461 (100%)	3.19 (0.66)	2.21 (0.63)	2.99 (0.40)	2.89 (0.36)	3.73 (0.54)	3.54 (0.55)	2.77 (0.71)	3.80 (0.72)	3.46 (0.46)
Year of data collection										
2021	242 (52.5%)	3.19 (0.66)	2.24 (0.63)	2.98 (0.39)	2.91 (0.38)	3.72 (0.51)	3.54 (0.56)	2.79 (0.71)	3.80 (0.73)	3.48 (0.46)
2022	219 (47.5%)	3.20 (0.65)	2.15 (0.63)	2.99 (0.41)	2.88 (0.35)	3.75 (0.58)	3.55 (0.54)	2.74 (0.70)	3.78 (0.70)	3.43 (0.43)
		$t = 1.27$	$t = -.130$	$t = -1.47$	$t = -0.69$	$t = 1.21$	$t = 0.26$	$t = 0.45$	$t = 1.23$	$t = 1.08$
Age										
19	138 (29.9%)	3.39 (0.64)	2.24 (0.66)	2.99. (0.42)	3.00 (0.36)	3.81 (0.55)	3.65 (0.51)	2.86 (0.68)	3.91 (0.79)	3.56 (0.43)
20	219 (47.5%)	3.05 (0.64)	2.19 (0.61)	2.99 (0.41)	2.82 (0.35)	3.64 (0.55)	3.47 (0.57)	2.72 (0.71)	3.72 (0.69)	3.39 (0.46)
21	84 (18.2%)	3.24 (0.69)	2.20 (0.64)	2.98 (0.36)	2.91 (0.38)	3.84 (0.55)	3.55 (0.56)	2.76 (0.75)	3.78 (0.69)	3.48 (0.48)
22	15 (3.3%)	3.26 (0.49)	2.12 (0.63)	3.03 (0.31)	2.92 (0.30)	3.61 (0.56)	3.53 (0.48)	2.73 (0.68)	3.93 (0.76)	3.45 (0.45)
23	5 (1.1%)	2.96 (0.71)	2.36 (0.50)	2.96 (0.09)	2.81 (0.35)	3.63 (0.51)	3.60 (0.55)	3.00 (0.84)	3.87 (0.74)	3.53 (0.58)
		$F_{(4,460)} = 6.22^{**}$	$F_{(4,460)} = 0.33$	$F_{(4,460)} = 0.055$	$F_{(4,460)} = 5.91^{**}$	$F_{(4,460)} = 3.37$	$F_{(4,460)} = 2.29$	$F_{(4,460)} = 0.93$	$F_{(4,460)} = 1.58$	$F_{(4,460)} = 2.94$
Gender										
Male	204 (44.3%)	3.15 (0.69)	2.31 (0.65)	2.96 (0.36)	2.89 (0.38)	3.75 (0.56)	3.54 (0.57)	2.79 (0.69)	3.75 (0.73)	3.46 (0.47)
Female	257 (55.7%)	3.22 (0.63)	2.13 (0.60)	3.01 (0.42)	2.90 (0.35)	3.71 (0.52)	3.54 (0.53)	2.76 (0.72)	3.83 (0.70)	3.46 (0.45)
		$t = -1.18$	$t = 3.16^{*}$	$t = -1.45$	$t = -0.11$	$t = 0.69$	$t = -0.04$	$t = 0.39$	$t = -1.07$	$t = -0.08$
Religious beliefs										
Yes	239 (51.8%)	3.53 (0.56)	2.18 (0.60)	2.97 (0.38)	3.05 (.33)	3.90 (0.53)	3.73 (0.45)	2.87 (0.69)	4.11 (0.70)	3.65 (0.40)
No	222 (48.2%)	2.87 (0.58)	2.24 (0.65)	3.00 (0.42)	2.75 (0.34)	3.56 (0.49)	3.37 (0.58)	2.68 (0.71)	3.50 (0.60)	3.28 (0.44)
		$t = -12.4^{**}$	$t = 1.03$	$t = 0.73$	$t = -9.97^{**}$	$t = -7.11^{**}$	$t = -7.53^{**}$	$t = -2.95^{*}$	$t = -10.05^{**}$	$t = -9.60^{**}$
Part-time work experience										
<1 year	116 (25.2%)	3.18 (0.68)	2.22 (0.64)	3.01 (0.45)	2.90 (0.37)	3.75 (0.54)	3.53 (0.53)	2.78 (0.69)	3.77 (0.72)	3.46 (0.45)
1<Y<2	115 (24.9%)	3.20 (0.65)	2.13 (0.62)	3.02 (0.37)	2.89 (0.39)	3.73 (0.54)	3.53 (0.56)	2.76 (0.69)	3.80 (0.72)	3.46 (0.47)
2<Y<3	115 (24.9%)	3.20 (0.68)	2.2 (0.63)	2.97 (0.36)	2.91 (0.37)	3.74 (0.53)	3.54 (0.57)	2.80 (0.74)	3.81 (0.71)	3.48 (0.46)
>3	115 (24.9%)	3.19 (0.62)	2.19 (0.62)	2.95 (0.4)	2.88 (0.32)	3.69 (0.55)	3.56 (0.53)	2.74 (0.73)	3.79 (0.73)	3.45 (0.47)
		$F_{(3,460)} = 0.02$	$F_{(3,460)} = 1.17$	$F_{(3,460)} = 1.00$	$F_{(3,460)} = 0.18$	$F_{(3,460)} = 0.24$	$F_{(3,460)} = 0.95$	$F_{(3,460)} = 0.15$	$F_{(3,460)} = 0.06$	$F_{(3,460)} = 0.07$

Note: $N = 461$. CAAS = Career Adapt-Abilities Scale. The CAAS subscales are concern, control, curiosity, and confidence. The Spiritual well-being (SWB) subscales are P&C = personal and communal; Environ = environmental; Trans = Transcendental. SWBQ = Spiritual well-being questionnaire.
$^{*}p < 0.01.$ $^{**}p < 0.001.$

Table 4. Descriptive statistics: participants' demographics and their relationship with Spiritual Well-being and career adaptability ($N = 461$).

Monthly family income	N (%)	Cumulative Percentage
(1) Below HKD$28,300	9 (2%)	2%
(1) From HKD$28,300 to HKD$38,000	23 (5%)	6.9%
(1) From HKD$38,001 to HKD$48,000	220 (47.7%)	54.7%
(1) From HKD$48,001 to HKD$58,000	181 (39.3%)	93.9%
(1) Above HKD$58,000	28 (6.1%)	100%
Remark: HK$ 7.78 = US$ 1		
Father's highest education level		
(1) Secondary education level	125 (27.1%)	27.1%
(1) Tertiary education level, including diploma, associate degree, and bachelor's degree	157 (34.1%)	61.2%
(1) Postgraduate education level	179 (38.8%)	100%
Mother's highest education level		
(1) Secondary education level	130 (28.1%)	28.2%
(1) Tertiary education level, including diploma, associate degree, and bachelor's degree	314 (68.1%)	96.3%
(1) Postgraduate education level	17 (3.7%)	100%

relationship with all areas of career adaptability. In particular, curiosity was near moderate (Pearson's r values: 0.338), while concern, control and confidence were strong (r: from 0.621 to 0.698). These outcomes entailed that when the scores for the personal and communal domain of spiritual well-being were higher, the scores on each career adaptability subscale also increased.

Next hierarchical regression analyses were conducted with the demographic variables that showed significant influence, together with students' spiritual well-being, including specific domains as predictor variables for concern, control, curiosity and confidence of career adaptability as dependent variables in four analyses.

In terms of the concern dimension of career adaptability, in model 1, students' personal and communal domain of spiritual well-being was inserted into the equation, $F(1, 459) = 288.525$, $p < 0.001$. Thus, it had 38.6% of variance in the concern dimension. In Model 2, students' religious beliefs was entered into the equation, $F(2, 458) = 143.961$, $p < 0.001$, indicating no change in variance.

Through the same process, students' personal and communal domain of spiritual well-being was entered into the equation for control in model 1, $F(1, 459) = 302.690$, $p < 0.001$, which accounted for 39.7% of variance. In model 2, students' religious beliefs was entered into the equation, $F(2, 458) = 151.229$, $p < 0.001$, indicating no change in variance.

Meanwhile, students' personal and communal domain of spiritual well-being was entered into the equation for curiosity in model 1, $F(1, 459) = 59.251$, $p < 0.001$, thus accounting for 11.4% of variance. In model 2, students' religious

Table 5. Results of hierarchical regression analyses with spiritual wellbeing (SWB) in the personal and communal domains as predictors of participants' career adaptability.

Variable CAAS – Concern		β	T	F	R	R2	Δ R2	Adjusted R2
Model 1				288.525	0.621	0.386	0.386	0.385
	Personal and communal SWB	0.621	16.986					
Model 2				143.961	0.621	0.386	0	0.383
	Personal and communal SWB	0.619	14.624					
	Religious beliefs	0.01	0.124					
CAAS – Control Model 1				302.690	0.630	0.397	0.397	0.396
	Personal and communal SWB	0.630	17.398					
Model 2				151.229	0.631	0.398	0	0.395
	Personal and communal SWB	0.620	14.791					
	Religious beliefs	0.021	0.508					
CAAS – Curiosity Model 1				59.251	0.338	0.114	0.114	0.112
	Personal and communal SWB	0.338	7.697					
Model 2				29.987	0.340	0.116	0.001	0.112
	Personal and communal SWB	0.360	7.095					
	Religious beliefs	−0.044	−0.868					
CAAS – Confidence Model 1				436.978	0.698	0.488	0.488	0.487
	Personal and communal SWB	0.698	20.904					
Model 2				224.621	0.704	0.495	0.007	0.493
	Personal and communal SWB	0.648	16.902					
	Religious beliefs	0.100	2.602					

beliefs was entered into the equation, $F (2, 458) = 29.987$, $p < 0.001$, explaining an additional 0.01%.

Then, students' personal and communal domain of spiritual well-being was entered into the equation for confidence in model 1, $F (1, 459) = 436.978$, $p < 0.001$, thus accounting for 48.8% of variance. In model 2, students' religious beliefs was entered into the equation, $F (2, 458) = 224.621$, $p < 0.001$, explaining an additional 0.07%.

Discussion

Adaptability plays a significant role in one's life satisfaction and well-being (Maggiori et al. 2013). As such, longitudinal studies have established a positive correlation between career adaptability and life satisfaction and self-rated health (S., Nota, L., Ferrari, L., & Ginevra, M. C (Soresi et al. 2014). Parental influences on youth's career construction. In Handbook of career development (pp. 149–172). Springer, New York, NY)within the span of 1 year (Johnston, Maggiori, and Rossier 2016). Meanwhile, in another study using data spanning

four years, career adaptability was found to be positively linked to job satisfaction (Zacher and Griffin 2015).

This cross-sectional study has demonstrated the statistically positive and significant correlations between spiritual well-being in the personal and communal domain and the four dimensions of career adaptability. Our findings are also in line with Duffy and Blustein (2005) in terms of spirituality being a good predictor of career adaptability. Furthermore, the current work has determined that the personal and communal domain is a stronger predictor of career adaptability than the other areas of spiritual well-being. Notably, this study is the only research to have contributed evidence on the relationship between spiritual well-being and career adaptability among Chinese youths in the Asia-Pacific region.

Personal and communal

The findings of this research confirm previous studies' claims on career adaptability being positively correlated to self-confidence (Rusu et al. 2015; van Vianen et al. 2012), self-actualisation and goal pursuit (Harry and Coetzee 2013) and personal reflection and flexibility (Tolentino et al. 2013). In contrast, self-doubt has been found to be a negative predictor (Negru-Subtirica, Pop, and Crocetti 2015).

Empirical studies have also found that career adaptability and its resources are closely linked to career-related satisfaction (Chan and Mai 2015), identity (Porfeli and Savickas 2012), aspirations, exploration behaviours and decisiveness (Urbanaviciute et al. 2014) and perceived professional competence and calling (Guo et al. 2014); notably, these aspects are elements of the personal and communal domain of spiritual well-being.

The findings of this study are also in line with the research of Rusu et al. (2015). In their study, a significant positive relationship was observed between career adaptability and extraversion, agreeableness and openness – elements associated with the communal domain of spiritual well-being. Moreover, Rossier et al. (2012) and Teixeira et al. (2012) asserted that career adaptability, as assets, is closely related to conscientiousness. Moreover, it has negative correlations with neuroticism and neurosis (Rossier et al. 2012).

The findings of the current research are also consistent with other studies that established that the personal and communal domains of spiritual well-being are strong predictors of career adaptability. For example, studies have shown that career adaptability can be predicted by high levels of self-esteem (Cai et al. 2015), self-initiative and self-reflection (Hirschi and Valero 2015), goal orientation and proactive personality (Tolentino et al. 2014), self-control, self-discipline and self-regulation (Coetzee and Harry 2014; Duffy 2010) and kindness and forgiveness to others (Coetzee and Harry 2014). Furthermore, other studies have indicated

that career-specific parental behaviours (Guan et al., Duffy 2010), positive relationships with parents (Soresi et al. 2014) and social support (Duffy 2010; Tian and Fan 2014) can positively predict career adaptability once students enter society.

Environmental domain

Although some empirical studies (e.g., Afsar, Badir, and Kiani 2016; Ferguson and Tamburello 2015) have found that environmental spirituality and career adaptability are positively correlated, the current study has not found any significant relationship between spiritual well-being and career adaptability. The current outcomes diverge from Bratman et al. (2012), who asserted that spending time in nature releases stress, improves career confidence and enhances work self-efficacy. Notably, the Law of the Jungle entails the survival of the fittest. In relation to this notion, environmental spirituality can help individuals be more adaptable and flexible (Bist and Smith 2021).

Recently, work-life balance has become a prominent priority, with people seeking tranquillity in nature, life satisfaction and enrichment (Ravenswood 2022).

At the same time, modern thought has increasingly emphasised efficiency, which often entails negative effects on the natural environment (Thompson 2010). Given these opposing ideals, the lack and destruction of the environment can affect one's spiritual well-being.

Transcendental domain

The current study has not determined any significant relationship between the transcendent domain of spiritual well-being and the dimensions of career adaptability. However, Duffy and Blustein (2005) found a significant positive correlation between religious spirituality and career adaptability. Lewis and Hardin (2002) further presented the significance of religious spirituality in career development. Individuals with stable spirituality and faith can draw meaningful support from these foundations when experiencing career-related stress, loss and shifts.

In addition, Duffy and Lent (2008) established the prominent role of religious spirituality as a predictor of career-related decision-making and self-efficacy. Individuals with a strong spiritual life are inclined to have more confidence in making career-related decisions; in turn, they tend to explore various career choices.

On the other hand, Duffy and Blustein (2005) demonstrated that extrinsic religious spirituality can influence one's career propensity. In other words, individuals who strongly support religious beliefs have a tendency to abandon their career aspirations to uphold their religious beliefs.

Limitations

Three major limitations have emerged from this study. Firstly, the sample consisting of 461 youths from a single university is small compared with the total population of university students in Hong Kong. Hence, the generalisability of the study's outcomes remains unclear. As such, researchers should replicate the results produced in this study in other parts of China, such as Tianjin, Chongqing and Shanghai.

Secondly, despite the reliability and validity of the SWBQ and CAAS in gauging spiritual well-being and career adaptability, respectively, the existing literature has not reached a consensus on the definition of terms related to these topics, such as spirituality, emotion regulation and self-emotion appraisal. Therefore, future studies should look into supplementary evidence about the participants' spiritual well-being and career adaptability by interviewing peers, teachers and supervisors. Qualitative approaches, including in-depth interviews and focus group discussions, can also help confirm and augment the findings of the current study.

Thirdly, the participants may not have been able to report their spiritual well-being and career adaptability comprehensively in the SWBQ and CAAS. Given certain social expectations and pressure, the respondents may choose a more preferable answer or the best answer instead of genuine answers informed by their experiences. Hence, this way of accomplishing the questionnaire may cause the participants to overrate or underrate themselves. In the cross-sectional design of our study, causation should be considered carefully. Therefore, longitudinal studies can help address this limitation in the future.

Finally, the generalisability of the findings might be limited because the students from one major discipline (business major) recruited in the study. It is recommended that students from other academic disciplines, such as science, social science, art, and humanities have to be recruited in the future samples. This would provide more comprehensive representation and deeper analysis of the youths.

Conclusion

The findings of this study reveal that Chinese university students who score high in the personal and communal domains of spiritual well-being also tend to manifest more concern, control, curiosity and confidence in terms of career adaptability. Such observations support the idea of integrating spiritual education into the curriculum. In doing so, students can be more ready to handle career-related shifts in the future. Some examples of activities that can be offered to students are those that encourage experiential learning, such as community service learning and work-integrated learning. In support of the implementation of such activities, the current research has provided distinctive

insights that educators can adopt to cultivate well-rounded students by fostering healthy lifestyles, stable spiritual well-being and career resilience.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Notes on contributor

Joe Hok-Ko Pong is a Lecturer at the Faculty of Management and Hospitality, Technological and Higher Education Institute of Hong Kong, Hong Kong, China. He has taught various subjects in higher education for nearly 17 years. His research interests include accounting education, life and value education, business education, spirituality and holistic education.

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