

The study of spirituality, work value and career decision-making between Christian and Non-Christian college students

Hristiyan ve Hristiyan olmayan üniversite öğrencileri arasında maneviyat, işe verilen değer ve kariyer planlama çalışması

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Abstract

An analysis indicated that for 248 Christian college students and 356 non-Christian college students in Taiwan, there are significant relationships between the total score of spirituality and the scores of career decision making (career certainty/career indecision). Also, for both Christian and non-Christian college students, a significant relationship exists between the total score of spirituality and the total score of work value. In addition, for Christian college students, "Purpose and Meaning in Life" and "Innerness or Inner Resources" jointly predict career indecision, with explained variance of 16.6%. For non-Christian college students, "Purpose and Meaning in Life" and "Spirituality" also jointly predict their condition of career indecision, with the explained variance of 15.0%. Implications and suggestions for career counseling are also discussed.

Keywords: Spirituality, work value, career decision, college students

Özet

Tayvan'da 248 Hristiyan üniversite öğrencisi ve 356 Hristiyan olmayan üniversite öğrencisi ile yapılan bir analize göre, maneviyat toplam puanları ve kariyer kararı verme (kariyer kararlılığı/kariyer kararsızlığı) toplam puanları arasında anlamlı bir ilişki bulunmuştur. Ayrıca, hem Hristiyan hem de Hristiyan olmayan öğrenciler için, toplam maneviyat puanı ve işe verilen değer arasında da anlamlı bir ilişki bulunmaktadır. Buna ek olarak, Hristiyan üniversite öğrencileri için, "hayatta anlam ve hedef" ve "içsellik ve içsel kaynaklar" birlikte kariyer kararsızlığına ait varyansın %16.6'sını yordamaktadır Hristiyan olmayan öğrenciler için, "hayatta anlam ve hedef" ve "maneviyat" da birlikte kariyer kararsızlığı durumlarına ait varyansın %15.0'ını açıklayarak yordamaktadır. Kariyer danışmanlığı için çıkarımlar ve öneriler de ayrıca tartışılmıştır.

Anahtar Kelimeler: Ruhsallık, iş değeri, kariyer kararı, üniversite öğrencileri

Introduction

In Taiwan, Buddhism and Taoism are the two main religions. Of the 23 million people in Taiwan, approximately 8 million (35%) are Buddhists while 7.55 million (33%) are Taoists. According to the official information released by the Taiwanese government, approximately 70% of the religious population falls under the Taoist system. In addition to Buddhism and Taoism, common religions in Taiwan include I-Kuan Tao, Protestant, Catholic and Mi Le Da Tao, each accounting

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for approximately 1% to 3.5% of Taiwan's total population. There are .595 million (2.6%) Christians. In fact, 81% of the people in Taiwan hold religious beliefs, with more than 50% of the populations often participating in various types of religious ceremonies and celebrations. Atheism accounts for only 18% of the population. According to findings of the study by Hsu, Chao, and Chang (2004) on the different values and religious beliefs of college students, 28.4% atheists, 70.1% are found to be theists 13.4% were Christian, 7.5% were Buddhist, and 1.5% were Taoist.

In the postmodern era, the transcendent rationality orientation considers that man does not make career decisions based on the analysis of rational thought on the conscious level but rather based on some factors “beyond rational thought”, nonlinear dynamics, such as religious belief, spirituality, calling and “meaning making” functions (Bloch, 2005; Constantine, Miville, Warren, Gainor, & Lewis-Coles, 2006; Dik & Duffy, 2009; Duffy & Blustein, 2005; Loder, 2005; Steger, Pickering, Shin, & Dik, 2010; Salsman, Brown, Brechting, & Carlson, 2005; Torrey & Duffy, 2012). Spirituality is one important element in constructing meaning in life (Hall & Chandler, 2005; Hunter & Banning, 2010; Lips-Wiersma, 2002; Steger, Frazier, Oishi, & Kaler, 2006). Personal spirituality/ spiritual health includes valuing, experiencing or expressing (a) Purpose and Meaning in Life; (b) Innerness or Inner Resources; (c) Unifying Interconnectedness; and (d) Transcendence (Howden, 1992). In short, spirituality is the making of meaning (Lips-Wiersma, 2002). Wrzesniewski, McCauley, Rozin and Schwartz (1997) distinguished man’s recognition of work as either job, career or calling. When people recognize work as a “calling,” they will not separate their work from their life, their purposes for work are not based on making money or seeking career promotion but rather for self-realization. Dudeck (2004) further classified spirituality into spiritual struggles and spiritual growth: the former includes “meaningful search” and the latter, “positive influence” on career development. Struggling to grow signifies one’s spiritual development or gradual stability of one individual’s value system, thus benefiting the individual when facing his/her career decision making.

In the 21st century, career choices and development are complex, ever changing, and driven by a multitude of forces, both internal and external (Bloch, 2005; Dik & Duffy, 2009; Duffy & Lent, 2008; Duffy, Allian, & Bott, 2012; Gockel, 2004). Wiersma (2002) indicated that spirituality is one of the decisive factors for career behavior; spirituality will influence the individual’s belief as its valuable goal is a developing and becoming ‘self’, unity with others, expressing self and serving others; these goals will affect one’s career behavior. Regarding spirituality and calling, Dudeck (2004) discovered that many would seek one “calling” or spiritual symbol in his/her job, and the internalized value system will always help the individual explore his/her spiritual goals. In other words, the issues concerning spirituality or calling will appear in the process of career development (Dalton, 2001; Duffy, 2010; Duffy & Sedlack, 2010). Dik and Duffy (2009) pointed out that the term *calling* used to mean a direct call by God to a religious vocation. Today, this term has grown to take on a variety of meanings and is often applied to both religious and non-religious career paths, among which calling, similar to spirituality, represents another important personal variable which impacts career decision making. In addition, Dik and Steger (2006) classified calling into the “search for calling” and “presence of calling”, as the former includes “meaningful search” and the latter is seen as a positive influence on career development (Duffy & Sedlacek, 2007; Duffy, 2010) and life/job satisfaction (Jaramillo, 2011). In order to test whether the positive relation between calling and life satisfaction mediated by people’s sacred construct (religious quest) or by a broader, secular construct, meaning in life (search for meaning in life), Steger, Pickering, Shin and Dik (2010) found that views of calling centering on people’s experience of meaning in their work rather than more constrained religious views.

Spirituality is not only related to meaning making but also related to calling and religion. Concerning the unique connection between calling and religion, Jaramillo (2011) found that the interaction between calling and intrinsic religiousness significantly predicted life satisfaction and

job satisfaction. Duffy and Sedlacek (2010) found that 44% of college students felt that they had a career calling, and 28% of college students responded that they were currently searching for a calling in the same fashion. In addition, college students seeking advanced professional degrees were more likely to feel a career calling and the presence of a calling correlated with religiousness, life satisfaction and life meaning. Opinions from many scholars indicated that religious belief is related to life meaning, as it shows significant difference in life meaning for students with different religious beliefs (Duffy, 2006; Duffy & Blustein, 2005; Steger, Pickering, Adams, Burnett, Shin, Dik, & Stauner (2010). Duffy and Blustein (2005) found that undergraduate students who are religious or spiritual tend to be more mature in their career decision making process; individuals who have a strong spiritual relationship with a higher power and are religious due to intrinsic motivation tend to be more confident in their ability to make career decisions and are open to exploring a variety of career options. In addition, intrinsic religiousness and spiritual awareness served as significant predictors of career decision making.

Regarding work value and spirituality, Dudeck (2004) found that there was a statistically significant relationship between spirituality and intrinsic work values. Lewis & Hardin (2002) found that there was some overlap between religious beliefs and work values. However, Duffy (2010) stated that spirituality and religiousness only have a minor relation to the work values. Harrington (1993) pointed out that work value includes the expression of cognition, emotion and behavior as it is one inner driving force helping one move toward attaining one's life goal; furthermore, it is a criterion for one to measure, decide and judge matters. When one entertains specific values, one's behavior will be distinguished from that of others. Work value contains many values which are arranged in different grades and sequence of importance in each individual, with its goal being satisfying or expressing the individual's needs or self-esteem. By using a nationally representative sample of U. S. in 1976, 1991, and 2006 representing Baby Boomers, Generation X, Generation Me, Twenge, Campbell, Hoffman and Lance (2010) found that leisure values and extrinsic values increased, but work centrality declined. Comparing with the two generations, GenMe and Boomers, social values (e.g., making friends) and intrinsic values (e.g., an interesting, results-oriented job) decreased. Anyway, work values have proven to be an important predictor of work centrality (Uçanok, 2011). Balsamo, Lauriola, & Saggino (2013) found that individual differences in work values are associated with choices made in college, challenges and self-orientation predict students' expressed choice of majors.

Even though findings from studies indicated that spirituality, calling and religious beliefs are all related to meaning making and all impact career decision making, the literature on career development is sparse on relationships between college students' spirituality or religious belief and work values, with their career decision making. Peng (2002) pointed out that "multiple cultures" in a narrow sense signifies cultures of different ethnic groups, and refers to special population group cultures which include factors such as different genders, ages, backgrounds of growth and spirituality, etc. More research is needed to explore the mechanisms by which students' spirituality or work values relate to their career decision making. Therefore, this research has two purposes: First, to explore the relationships among spirituality and work value of college students (Christian and non-Christian) with their career decision making; to delve into the hypothesis of whether spiritual health and work value of college students (Christian and non-Christian college students) can accurately predict their career indecision making.

Method

Participants

In this study, 248 college students identified themselves as Christian by answering such demographic questions as "Are you atheist? Or theist?" "To which religion do you belong?" The

Christian participants are students from the Christian Bible study groups of 12 colleges in northern, central and southern Taiwan. There are two methods of survey distribution. First, the surveys were handed out, based on the number of people in the Bible study group, by acquaintances in the college Bible study group where they study. Secondly, the surveys were distributed at retreats. Convenience sampling is adopted in the research and the surveys were distributed based on the number of members in the Bible study group. To achieve the objectives of this study, a sample extraction of 356 non-Christian college students who were identified as not belonging to any specific religious belief (i.e. not Buddhism, Taoism, or others), was selected as be the comparison sample.

Instruments

Spirituality Assessment Scale (SAS): Howden (1992) developed the Spirituality Assessment Scale (SAS) which is used to evaluate the level of personal spirituality and/or spiritual health; including four scales: the purpose and meaning in life, inner resources, unifying interconnectedness, and transcendence. The Likert six point scale was adopted and the scope ranges from strongly disagree (1) to strongly agree (6) with total scores between 28 and 168.

The SAS scale includes four critical attributes as follows: (1) Purpose and Meaning in Life: the process of searching for or discovering events or relationships that provide worth, hope and/or a reason for existence; the related questions are 18, 20, 22, and 28. (2) Innerness or Inner Resources: the process of working or discovering striving for or discovering wholeness, identity and a sense of empowerment which manifested in feelings of strength in times of crisis, or serenity in dealing with uncertainty in life; the related questions are 8, 10, 12, 14, 16, 17, 23, 24 and 27. (3) Unifying Interconnectedness: the feeling of relatedness or attachment to others, a sense of relationship to all of life, a feeling of harmony with self and others, and a feeling of oneness with the universe or Universal Being; the related questions are 1, 2, 4, 6, 7, 9, 19, 25 and 26. (4) Transcendence: the ability to reach or go beyond the limits of usual experience; the capacity, willingness, or experience of rising above or overcoming bodily or psychic limitations; or the capacity for achieving wellness or self-healing; the related questions are 3, 5, 11, 13, 15 and 21.

According to Howden's (1992) classification of spiritual health, a person tend to have a passive and negative spirituality when the score falls between 28 and 74; average spirituality for scores between 75 and 121; and proactive and positive spirituality for scores between 122 and 168. A higher score indicates better spiritual health. The content validity of SAS was submitted for review to six spirituality-related professionals in the United States in various sectors and the Content Validity Index (CVI) is a high 0.88. The result of the formal survey shows that there is a certain high level of consistency among the four scales (Cronbach's $\alpha = 0.94$) and each scale demonstrates a fairly high level of inner consistency: (1) the purpose and meaning in life (4 questions) : Cronbach's $\alpha = 0.84$; (2) inner resources (9 questions) : Cronbach's $\alpha = 0.85$; (3) unifying interconnectedness (9 questions) : Cronbach's $\alpha = 0.82$; (4) transcendence (6 questions) : and Cronbach's $\alpha = 0.77$. Therefore, SAS is a scale with reliability and validity.

Work Value Scale: This scale is in Chinese and was developed by Wu, Lee, Liu and Ou (1996) is used to help students develop their understanding of the values, criteria of assessment and conflict of value they hold when facing their work selection. The Likert six point scale is adopted and the scope ranges from strongly disagree (1) to strongly agree (6) with total scores between 49 and 294. A higher score indicates a greater emphasis on the work value element. As a result, the questions in the survey tend to have a high level of agreeability. Therefore, most of the subjects demonstrate high scores in this scale.

The scale includes seven elements: (1) Personal growth: constant achievement in new knowledge and personal growth in work; exercising creativity and promoting personal growth. (2)

Self-realization: realizing the goals in life through work, demonstrating personal talent, enhancing the quality of life and improving social welfare. (3) Dignity: fulfilling a sense of personal satisfaction through work; achieving self-affirmation and autonomy; winning other people's respect and having management authority and dominance. (4) Social interaction: creating excellent social interaction through work; sharing emotions with supervisors and coworkers as well as establishing good interpersonal relationships with others. (5) Organization security and finance: obtaining reasonable financial compensation at work and enjoy a sense of security created by the organization's sound systems. (6) Stability and being free from anxiety: stable and regular work; freedom from being nervous, chaotic, anxious, and fearful. (7) Leisure activities and transportation: having sufficient physical activities and leisure activities.

The scale was tested on different groups (people who have a college degree and who are currently working, graduates from colleges and vocational colleges) and all demonstrate a fairly high level of credibility and validity (Wu, Lee, Liu & Ou, 1996). In the norm established, Cronbach's α coefficient for the 2,426 "people who have a college degree and who are currently working" is between .8245 and .9119 while the average is .8836 and the Cronbach's α coefficient for the entire scale is .9623. The Cronbach's α coefficient for "college graduates" in the seven scales is between .8058 and .9288 while the average is .8663 and Cronbach's α coefficient for the entire scale is .9581. Cronbach's α coefficient for "vocational college graduates" in the seven scales is between .8110 and .9036, while the average is .8723 and the Cronbach's α coefficient for the entire scale is .9614. The above figures indicate a great inner consistency of the work value scale among the three groups of people.

In terms of reliability, the re-testing reliability coefficient, after a three-week period, for those who have a college degree and who are currently working is between .7335 and .9356 in the seven scales, with an average of .8104. The re-testing reliability coefficient after six weeks is between .7011 and .8769, with an average of .7610. For college graduates, the re-testing reliability coefficient after three weeks is between .7028 and .9138 in the seven scales, with an average of .7904. The re-testing reliability coefficient after six weeks is between .6893 and .8542, with an average of .7427. Finally, for vocational college graduates, the re-testing reliability coefficient after three weeks is between .7156 and .9354 in the seven scales, with an average of .8030. The re-testing reliability coefficient after six weeks is between .7021 and .8847, with an average of .7620. The above data indicate a fairly good stability for the scale of work value among the three groups of people.

Career Decision Scale (CDS): (Osipow, 1987) is the most widely used and studied scale for career indecision, evaluating the level of intensity and content for school work and career indecision.

Throughout the years, the reliability and validity of Career Decision Scale have been supported by many empirical studies around the world. Generally speaking, the re-testing reliability falls between .70 and .90 and the correlation between the questions falls mostly between .60 and .70. Peng and Herr (1999) discovered that, comparing to the control group, the experimental group demonstrates a lower re-test score in the indecision scale after the interference of career counseling. When the Career Decision Scale was translated from English to Chinese, the overall Cronbach α is .87 and the re-testing coefficient within a month is .84. Exploring the relationship between career belief and career indecision, the research subject for Peng and Herr (2002) includes 178 college students; Cronbach α for CDS is .80. For the current study, for items 1-2 and items 3-18 of the CDS, Cronbach α 's are 0.73 and .81, respectively.

Data Analysis

Descriptive statistics were used to describe the characteristics of the two groups of participants comprising the sample. Quantitative analyses used in this study included a Person product-moment

correlation matrix to determine the relationships of spirituality, work value and career decision making (career certainty and career indecision). In addition, the stepwise regression analysis was employed to identify significant predictors, based on hypothesized relationships with career indecision. The following variables were used in this investigation: spirituality, work value, academic year of college and gender.

Results

Participants included 248 Christian college students (124 male; 124 female); 58 (23.38%) freshmen, 64 (25.8%) sophomores, 69 (27.8%) juniors and 57 (23.0%) seniors. Non-Christian college students included 356 (178 Male; 178female); 84 (23%) freshmen, 91 (25.6%) sophomores, 99 (27.8%) juniors, 82 (23%) seniors. The results of this study were analyzed in two parts: (1) analysis of Christian college students; and (2) analysis of non-Christian college students.

Analysis of Christian College Students

T-test analyses conducted to examine the career indecision of Christian college students of different genders showed no difference for males and females ($t = .07, p > .05$; male $M = 32.30, SD = .53$, female $M = 32.39, SD = .50$). Significant difference occurred on career indecision for Christian college students with different academic year of college ($t = 2.97, p < .05$), while the career indecision of freshmen ($M = 32.40, SD = .50$), sophomores ($M = 32.25, SD = .53$) and juniors ($M = 32.38, SD = .52$) was larger than that of seniors ($M = 32.16, SD = .52$). A very small mean difference of .1 or .2 was significant because the N was large.

Table 1 indicates that the correlation coefficient r between career certainty and college Christian fellowship is .34 ($p < .001$); moreover, a significant negative correlation occurred between career indecision and spirituality $-.27(p < .001)$, i.e. students with a higher score in spirituality will tend to develop more certainty for their career; on the contrary, students with a lower score in spirituality will tend to develop more uncertainty for their career. A correlation coefficient r between career certainty and work value was significant for Christian college students, .19 ($p < .01$); however, a non-significant correlation was found between career indecision and work value ($r = -.06, p > .001$). There is a significant relationship between the total score of spirituality and the total score of work value. Correlation coefficient r between spirituality and work value for Christian college students is .47 ($p < .001$), i.e. a middle correlation that shows students with a high score in spirituality will value “work value” more; on the contrary, students with a low score in spirituality will not value “work value” lower.

Table 1. *The correlation coefficient of spirituality, work value and career decision making of Christian college students*

	Career Certainty	Career indecision	Spirituality	Work Value
Career Decision Making				
Career Certainty	1.00			
Career indecision	-0.46***	1.00		
Spirituality	0.34***	-0.27***	1.00	
Work Value	0.19**	-0.06	0.47***	1.00

* $p < .05$, ** $p < .01$, *** $p < .001$, (N = 248)

Table 2 shows that using predictor variables including “Spirituality” and “Work Value” to predict “Career indecision” yields two significant variables “Purpose and Meaning in life” (X_2) and “Innerness or Inner Resources” (X_3). The multiple correlation coefficient is 0.407 and the explained variance is 0.166. This means that the two variables in Table 2 will jointly predict 16.6 % variance of “Career indecision of Whole Subjects.” “Purpose and Meaning in Life” is the most explained variance, 14.4 %, followed by “Unifying Interconnectedness”, 2.2 %. The following is the simple regression formula of “Career indecision of Subjects:”

$$Y_1 = 0.174 X_3 - 0.347 X_2 + 3.126$$

Table 2. The stepwise analysis of career indecision based on spirituality and work value of Christian college subjects

	Multiple Correlation Coefficient (R)	Decisive Coefficient (R^2)	Increase of Explanatory Power (ΔR^2)	F Value	Net F Value	Primitive Regression Coefficient	Standardized Regression Coefficients (β coefficients)
Purpose and Meaning in Life (X_2)	0.380	0.144	0.144	41.464** *	41.464** *	-0.347	-0.571
Innerness or Inner Resources (X_3)	0.407	0.166	0.022	24.341** *	6.322*	0.174	-0.241
Constant						3.126	

* $p < .05$, ** $p < .01$, *** $p < .001$, (N = 248)

Standardized regression coefficients show that β coefficient of “Purpose and Meaning in Life” is -.571, thus revealing that students with lower perception of “Purpose and Meaning in Life” tend to develop more conditions related to “Career indecision;” β coefficient of “Innerness or Inner Resources” is -.241, thus revealing that students with higher perception of “Innerness or Inner Resources” will develop fewer conditions related to “Career indecision”.

Analysis of Non-Christian College Students

The t-test analyses of the career indecision of non-Christian college students of different genders showed no difference for males and females ($t = .07, p > .05$; male $M = 32.39, SD = .51$; female $M = 32.52, SD = .53$). There are differences on career indecision of non-Christian college students of different academic year of college ($t = 2.97, p < .05$); the career indecision of

sophomores ($M = 32.68, SD = .49$) and seniors ($M = 32.66, SD = .47$) is larger than that of freshmen ($M = 32.43, SD = .38$) and juniors ($M = 32.39, SD = .56$).

Table 3 indicates that the correlation coefficient r between career certainty and spirituality for non-Christian college students is $.28 (p < .01)$. Moreover, there is a significant negative correlation between career indecision and spirituality of career decision making, as the correlation coefficient r is $-.17 (p < .01)$, i.e. students with higher scores in spirituality will tend to develop certainty in regard to their career; on the contrary, students with lower scores in spirituality will tend to develop uncertainty concerning their career. Correlation coefficient r between career certainty and work value for non-Christian college students is $.10 (p > .01)$. While this does not reach the significant positive correlation; it shows a non-significant correlation between career indecision and work value ($r = .02, p > .01$). The correlation coefficient r between spirituality and work value for non-Christian college students is $.47 (p < .01)$, i.e. a mild correlation that shows that students with a higher score in spirituality value work value more; on the contrary, students with a lower score in spirituality will not value work value.

Table 3. *The correlation coefficient of spirituality, work value and career decision making of non-Christian college students*

	Career Certainty	Career indecision	Spirituality	Work Value
Career Decision Making				
Career Certainty	1.00			
Career indecision	-.42**	1.00		
Spirituality	.28**	-.17**	1.00	
Work Value	.10	.02	.47**	1.00

* $p < .05$, ** $p < .01$, *** $p < .001$, (N = 356)

Table 4 shows that using predictor variables, including “Spirituality” and “Work Value” to predict the criterion variables “Career indecision of Non-Christian college students as Subjects” (Y_1) yield two significant variables “Purpose and Meaning in life” (X_2) and “Spirituality” (X_1). The multiple correlation coefficient is $-.191$ and the explained variance is 0.150 . This means that two variables will jointly predict 15.0% variance of “Career indecision of Non-Christian college students as Subjects.” “Purpose and Meaning in Life” shows the best prediction as the explained variance is 12.5% , followed by “Spirituality” as the explanation power is 2.5% . The following is the simple regression formula of “Career indecision of non-Christian college students.”

$$Y_1 = 0.149 X_1 - 1.516 X_2 + 48.453$$

Table 4. *The stepwise analysis of career indecision based on spirituality and work value of non-Christian college subjects*

Multiple Correlation Coefficient (R)	Decisive Coefficients (R^2)	Increase of Explanatory Power (ΔR^2)	F Value	Net F Value	Primitive Regression Coefficient	Standardized Regression Coefficient (β)

)							
Purpose and Meaning in Life (X ₂)	-.353	.125	.125	39.823 ^{**}	39.823 ^{**}	-1.516	-.571
Spirituality (X ₁)	-.191	.150	.025	24.589 ^{**}	8.31 ^{**}	.149	-.270
Constant						48.453	

p* < .05, *p* < .01, ****p* < .001, (N = 356)

Standardized regression coefficients show that the β coefficient of “Purpose and Meaning in Life” is -.571, thus revealing that students with lower perception of “Purpose and Meaning in Life” tend to develop the condition of “Career indecision;” the β coefficient of “Spirituality” is -.270, thus revealing that students with lower perception of “Spirituality” will develop the conditions related to “Career indecision.”

In short, this research found that “Purpose and Meaning in Life” is the major predictor variable of “Career indecision” for college students’ (Christian students or general students). “Purpose and Meaning in Life” negatively predicted one’s “Career Indecision.” For Christian college students, “Purpose and Meaning in Life” and “Innerness or Inner Resources” jointly predicted their “Career Indecision”, with the explained variance to be 16.6 %. For non-Christian college students, “Purpose and Meaning in Life” and “Spirituality” jointly predicted “Career indecision”, with the explained variance of 15.0 %.

Discussion

It has been a trend in the development of counseling in recent years to revalue the importance of man’s spirituality. In this study, spirituality has a broad sense, no absolute relationship with religion. In Taiwan, Buddhism and Taoism are the two major religions. However, based on the study by Hsu, Chao and Chang (2004), two-thirds of college students in higher education institutes believe in God but do not belong to any specific religious faith. Specifically, for the believer population of college students, there are more Christians than Buddhists or Taoists. Therefore, the background of college students’ religion should be of concern. In this study, the Christian college students are from the Bible study groups of the twelve colleges; the sample extraction of the non-Christian college students are theist but they do not identified themselves belonging to any specific religious belief (i.e. not Buddhism, Taoism, or others).

The mutual relationship of college students’ (Christians and non-Christians) spirituality and work values with their career decision making is comprised of three aspects: (1) For the Christian and non-Christian college students, the study shows significant positive correlation between spirituality and “Career Certainty” of career decision making (*r* = .34 & *r* = .28), which means that students with a higher level of spirituality will develop more certain career decision making. It also reaches significant low negative-correlation between spirituality and “Career indecision” of career decision making (*r* = -.27 & *r* = -.17), which means that students with a lower level of spirituality will develop more uncertain career decision making; (2) For Christian college students, it shows significant low positive-correlations (*r* = .19) between work value and “Career Certainty” of career decision making, which means that Christian college students valuing work values (self-growth, self-realization, dignity, etc.) higher will have more certain career decision making. It shows no

significant correlations between non-Christian college students' work value and career certainty. For Christian and non-Christian college students, it shows no correlation between work value and career indecision; (3) It shows significant positive correlation between the college students' spirituality and work value, as the subjects of Christian and non-Christian college students present the same outcome ($r = .47$), thus meaning that the higher score for spirituality will lead to higher overall score for work value.

This study indicated that for 248 Christian college students and 356 non-Christian college students in Taiwan, there are significant relationships between the total score of spirituality and the scores of career decision making (career certainty/career indecision), which confirms that spirituality is important for career decision making (Dalton, 2001; Dik & Steger, 2007; Duffy & Sedlacek, 2010; Duffy, 2010). In addition, for both Christian and non-Christian college students, there is a significant relationship between the total score of spirituality and the total score of work value, which supported the study of Dudeck (2004) that the significant relationship exists between spirituality and intrinsic work value. Moreover, this study found that not only for Christian college students but also for non-Christian college students, "Purpose and meaning in life" in spirituality is one important predictor variable related to career indecision. For Christian college students, "Purpose and Meaning in life" and "Innerness or Inner resources" are significant predictor variables, with explained variance of 16.6%. For non-Christian college students, the explained variance reveals that "Purpose and Meaning in life" and "spirituality" also jointly predict career indecision, with the explanation variance being 15.0%. The above finding is strikingly consistent with Blustein's (2005): spiritual awareness and intrinsic religiousness (spirituality) serve as significant predictors of career decision making. Based on the findings of this study, three suggestions are given for career counseling: (1) Career guidance and counseling should value the influence of spiritual factors on career decision making; (2) In order to strengthen the innerness or inner resources of college students, the concepts of spirituality related to life education and positive psychology should be incorporated into career education and career counseling to guide college students in gaining insights into finding the purpose of life and searching for meaning in life.

Because this survey sampled only 604 college students from 12 colleges in Taiwan, geographic and cultural restrictions result in a limited generalizability of the findings to other colleges in Taiwan or in the world. Future studies not only could replicate this study's findings with a larger random sample but also could expand this realm of research by conducting comparisons and analyses on subjects with different religious beliefs or devoutness. Moreover, the multicultural issues involving adults and trans-cultures can be taken into account to conduct comparisons between different ethnic groups. With regard to the findings of this quantitative study, spirituality variables having effects upon career decision making, career issues concerning career belief, religious beliefs and career thoughts can be incorporated into future qualitative research, thus helping career counselors and counseling practitioners gain more insights into developing spiritual counseling techniques to support college students' career decision making.

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