DEVELOPMENT SELF-TRANSCENDENCE SCALE OF TAIWAN UNDERGRADUATE STUDENT

Wu, Ho-tang
Department of Education,
Kaohsiung Normal University
TAIWAN

Hsu, Chao-chun
Intern, Kaohsiung Municipal
Shih-Jia Junior High School
TAIWAN

Chou, Mei-ju
Department of Early Childhood
Education, National Ping-tung
University, **TAIWAN**
(Corresponding Author)

ABSTRACT

This study adopts Frankl's logotherapy to develop Self-Transcendence Scale for Taiwan Undergraduate Student. First, according to literature analysis, based on Frankl's creative, experiential, and attitudinal values, this study proposed the draft of 15 items of three factors. Second, 15 items of three factors called initial model used first-order CFA to proceed analysis (*N*=381), and the results showed that the initial model is fit, but two items' factor loading is too low, not meeting the standard, so we deleted the two items. After deleting two items, the model is called the modification model, and the Goodness-of-fit is fit. To further analyze the Preliminary fit of the modification model, it is found that there is no offending estimation. The fit of the internal structure is acceptable (including individual reliability, composite reliability, the average variation extraction, and construct discrimination). Since the model had been modified, we investigated another batch of samples (*N*＝378) to confirm the stability of the model. The overall goodness-fit is fairly appropriate. Here, the Self-Transcendence Scale is set up, and the scale classified into Creative value (4 items), Experiential values (4 items), and Attitudinal values (5 items).

Keywords: Attitudinal value, creative value, experiential value, self-transcendence.

INTRODUCTION

There are two special human phenomena where human existence is characterized. One is self-detachment, and the other is self-transcendence (Frankl, 1966a), who considered that self-transcendence and self-detachment is at the very core of the theory and practice of logotherapy. The former is one standing at a higher position to reflect himself, expanding his vision of life, enhancing his potential, converting grief to the power to achieve victory, and transform difficulty to the stair to success. Frankl (1979) delineated self-transcendence as expansion of self-boundaries, or as Reed (1989) defined it as the experience of expansion of self-boundary inwardly, outwardly, and temporally to take on broader life perspectives, activities, and purpose. If people can make self-transcendence, they will head towards a meaningful life (Frankl, 1966b; Reker & Fry, 2003), since the process of self-transcendence is both a meaning-discovering and a meaning-giving activity (Frankl, 2006).

Spirituality is often defined as finding meaning in life through self-transcendence (Burkhardt,1993), which proves self–transcendence can enhance spirituality. In addition, some scholars proposed studies related to individual's psychological development. For example, Coward (1990) viewed self-transcendence as an indicator of more-being that is a particularly salient goal of nursing care in patients with life-threatening illness, and also an indicator of overall well-being in persons at any age confronted with end-of-own-Life issues (Reed, 1991b) are positively correlated to the individual's ability to raise self-esteem and

mental health (Carpenter, Brockopp, & Andrykowski, 1999) to break through their limitation to achieve higher goal (Chen & Walsh, 2006), to decrease reliance on externals for definition of the self, to increase interiority and spirituality, to make a greater sense of connectedness with past and future generations (Levenson, Jennings, Aldwin, & Shiraishi, 2005), to enhance feelings of self-worth (Haase, Britt, Coward, Kline Leidy, & Penn, 1992), and to enhance sense of coherence with life, hope, serene and comfortable state of emotions (Coward, 1996), spiritual acceptance (measures a person's apprehension of phenomena that cannot be explained by objective demonstration (Borg, Andree, Soderstrom, & Farde, 2003), agreeable, perceptive, and considerable feelings, (Levenson et al, 2005), resilience, purpose in life (Nygren et al., 2005), well-being (Runquist & Reed, 2007). In contrary, self-transcendence is significantly negatively correlated with depression symptoms (Ellermann & Reed, 2001), and emotional exhaustion (Tomić, Evers, & Brouwers, 2004), so self-transcendence contributes to positive psychological development and can decrease negative psychological development.

From the abovementioned, we can understand the importance of self–transcendence. In western society, studies on self-transcendence have produced a variety of scales for use. For example, Self Transcendent Scale (STS) prepared by Reef in 1991 are often applied to nursery and guidance research; and Coward (1990) adopted women with advanced breast cancer as the research subject, and found that their experiences of self-transcendence are to help other female patients with the same illness, accept others' assistance, and can accept the unchangeable fact. In addition Coward and Lewis (1993) took eight gay men with AIDS as the research subject, and the results show that such patients' self-transcendence was demonstrated as helping other patients with AIDS to lessen their sense of solitary and isolation; accepting sense of urgency resulted from accepting death and further create legacy, or participating meaningful activities to reserve their hope. Other examples include that Stinson and Kirk (2006) used older women with depression as the research subject to discuss whether self-transcendence is helpful for improving their living; Thomas, Burton, Griffin and Fitzpatrick (2010) exerted 87 women with breast cancer to explore correlation of their self-transcendence, spiritual well-being, and spirituality; Farren (2010) adopted the same subject of totally 104 women with breast cancer to probe into the relationship of their self-transcendence and power, uncertainty and living quality. It can be seen that if we have a scale with validity, it will contribute to the research, since currently, no scales have been prepared for undergraduates' self-transcendence.

LITERAUTRE REVIEW
Content of Self-Transcendence

Miller (n.d.) thought that in Frankl's logotherapy, search for meaning is the third school of Viennese Psychology, while Adler's search for power is the third school of Viennese Psychology, and Freud's search for pleasure is first one, which shows Frankl's academic position. In fact, some scales relative to self-transcendence are founded on this theory, such as Reker's (1994) Sources of Meaning Profile [SOMP], Wong's (1998) Personal Meaning Profile (PMP), and Längle, Orgler, and Kundi's (2003) Existence Scale (ES). Therefore, this research prepared the scales on the basis of Frankl's logotherapy.

Miller (n.d.) considered that search for meaning in Frankl's logotherapy is composed by three assumptions, values, and dimensions. Three beliefs refer to freedom of will, will to meaning, and meaning of life; three values are creative values, experiential values, and attitudinal values; and three dimensions indicate soma or physical, psyche or psychological, and noetic

or spiritual. For Frankl, people can transcend creative, experiential, and attitudinal values to discover meaning of life (Coward, 1995). Otherwise, as Marshall (2011) claimed, if people can understand and fulfill the three types of values, they can head towards avenue of meaningful life.

Owing that self-transcendence is to transcend among creative, experiential, and attitudinal values, we further analyze the three types of values:

Creative values

By means of doing or creating something (Frankl, 1959) or through tasks, the individual exerts creative values to endow life with unique values. Or, by means of constructive methods, the individual uses creative values to contributes personal potential to family, society, and mankind (Frankl, 1986). For Breitbart (2001), performance of creative values is presented in respect with work, deeds, dedication to causes, and the like. Meanwhile, Spillers (2007) held that such type of values is man's calling in life as endeavoring to help others, as Lewis (2011) identified that people can implement it by doing good deeds. As for Pattakos (2004), he asserted that in regard of work, creative values involve "making progress". As the civil servants adopted as the subject, this research mentioned, "I enjoy a feeling that I am making a difference, slowly or sometimes in occasional leaps and bounds when there's a breakthrough toward a goal we've been working toward" (p. 108).

In addition, Esping (2010) thought that creative values discover meaning of life by the individual's contribution to humans, such as writing a book, teaching, becoming an activist and loving parents. Miller (n.d.) asserted that by means of the individual's artistic talents, creative values are shown in creative behaviors.

In short, creative values refer to the individual's potential to create unprecedented things or contributions though creative activities, and further find meaning of life (Marshall, 2011). Therefore, as long as the individual regards it is worthwhile to make efforts to carry out activities or works, all can be classified as creative activities, including work performance, helping others, artistic creation, writing a book, participating in social activities, and love for family.

Experiential values

Experiential values are evidenced by contemplating or enjoying the beauties of creation, or experience a loving bond with another person (Frankl, 1986)。 Frankl (1965) considered that our life is sometimes up and sometimes down, the meaning of life does not lie in how many mountains one has conquered; rather, it lies in which mountain one is the highest, the most difficult, and the most impressive one has climbed. Even if we are not rich, beautiful memories we possess are unique experiences. In this respect, Frankl (1984, 1986) considered the values are to feel love, self-understanding, amazement at natural scenery, appreciation of touching hymns, and gratitude for man, things, and objects (Coetzer, 1992), or experience truth and beauty through relationships of nature, art, dance, music, literature, and love and acceptance (Lewis, 2011).

From the abovementioned, we can understand that experiential values are contemplating or enjoying the beauties of creation, or experience a loving bond with another person.

Attitudinal values

Attitudinal values are choosing one's attitude toward suffering) (Frankl, 1959). They involve people's abilities to face their suffering with courage and dignity when they encounter uncontrollable fate and environment (Marshall, 2011). In depth of spirituality, people can choose their attitudes to face suffering freely. That is to say, such type of values can help people grow, and make the meaning of life achieve the summit (Frankl, 2006). On the other hand, even when creative and experiential values are deprived due to the environmental factors (Esping, 2010), attitudinal values are those that can be fulfilled with the highest possibility (Frankl, 1967).

Attitudinal values mean to face the negative situations in an uncontrollable range with the positive attitudes (Frankl, 1986), and Marshall (2011) regarded that such type of values can be applied to all situations. For those situations, they are like the unavoidable sufferings like chronic illness, irretrievable loss like death of our beloved, sense of guild caused by the wrong determinations in the past, courage to overcome cowardice, benevolence to replace revenge, or justice over appeasement (Lewis, 2011).

In facing sufferings, it can be found the even higher level of illumination and responsibility (Blair, 2004; Young-Eisendrath & Miller, 2000), since in front of unchangeable situations, life will demand the sufferers to select the attitudes towards that situation to find the meaning of the situation (Blair, 2004; Breitbart, Gibson, Poppito, & Berg, 2004; Chodron, 2005).

For Crowe (1997), one of the ways to transcend sufferings is acceptance. He thought that acceptance will terminate grief, and represent that the individual has been aware of his situation without escaping from the reality, but accept the current situation with positive acquiescence, or even positively acceptance. This is exactly so-called spiritual freedom, and people can transcend through acceptance. Finally, Farmer et al (2003) considered that self-transcendence can be measured by "accepting the self" and "accepting others".

From what mentioned above, we know that with positive attitudes, people exert attitudinal values to accept various kinds of situations.

Self-Transcendence Related Scales

To make evaluative criticism on self-transcendence that has been published in the past:

Reef's STS

Reed's STS is extensively used in different samples (Coward & Reed, 2006). Reed (2003) thought that his theory is mainly affected by three issues The first issue is the life span movement in 1970s, which provides the evidences for his philosophy and experiences. Next, it relates to Martha Rogers' assumption related to change of nature in human beings in 1970s. The third issue involves the movement's influence on the children's and adults' clinical experiences of psychotherapy. As for Lundman et al (2011), they considered STS belongs to nursing theory of self-transcendence. This scale has totally 15 items applied to measure the experiences of self-transcendence. It adopts Likert's four-point scale to measure three dimensions of self-transcendence's standard, including (1) Introjectivity: the inner retrospective activities; (2) Generativity: interpersonal transcendence of interaction with

others: caring for others' welfare; and (3) Temporal Integration: enhancing the current perception based on personal perception in the past and future.

Reker's Sources of Meaning Profile

According to Frankl's theory, Reker (1994) prepared for Sources of Meaning Profile [SOMP]. This scale has a total of 16 items, and, after factor analysis, it was classified into 1. Self-transcendence: superseding source of self like altruism 2. Collectivism: focusing on source of social interest like cultural ties; 3. Individualism: emphasizing on enhancing source of individual like personal growth; 4. Self-preoccupation: focusing on source of self-interest like possession of material. Sources of Meaning Profile was modified in 1996 and became Sources of Meaning Profile Revised [SOMP-R] with 17 items totally that can be divided into four dimensions (quoted from White, 2004). The first part is to discuss self-transcendence with four items: "Participation in leisure activities", "Meeting basic, everyday needs," "Taking part in creative activities," "Engaging in personal relationships with family and/or friends".

Wong's PMP

Wong's (1998) PMP is founded on Frankl' logotheraphy theory by adopting Likert 7 point scale with 7 dimensions: Achievement, Relationship, Religion, Self-transcendence, Self-acceptance, Intimacy, and Fair treatment. There are 8 items in self-transcendence: "I believe I can make a difference in the world", "I strive to make this world a better place", "It is important to dedicate my life to a cause", "I have a purpose and direction in life", "I seek higher values-values that transcend self-interest", "I have a sense of coherence and continuity in my life", "I make a significant contribution to society", and "I attempt to leave behind a good and lasting legacy". This sub-scale is consistent with Frankl's theory that consists of the substantial content of transcendence, but it is only applied to the general adults rather than targeting at the university students as the subject.

Längle et al's ES

Existence Scale complied by Längle et al (2003) is a self-rating test to assess the degree of personal fulfillment in one's existence. The test is based on Frankl's anthropological theory, and this scale uses Likert 6-point scale, has totally 46 items divided into four dimensions: self-distance (8 items), Self-transcendence (14 items), Freedom (11 items), and Responsibility (13 items).

Among self-transcendence, the 14 items can be consulted. The content is as follows: 1) I try to put off unpleasant decisions without thinking too much about them. 2) I am easily distracted, even when I do things I enjoy. 3) There is nothing in my life I am really committed to. 4) I often do not understand why it is me who has to do something. 5) The way I live now is good for nothing. 6) I have a hard time realizing what relevance things have for my life. 7) I have good ways of dealing with myself. 8) I don't take enough time for the things which are important. 9) I never know right away what to do in a situation. 10) I do a lot because I have to, not because I want to. 11) I am easily confused when problems arise. 12) I rarely prioritize what I have to do. 13) I am always eager to see what the day will bring. 14) I rarely think about consequences before I act.

Regarding the four scales above, except that Reef's STS, Reker's (1994) SOMP, Wong's (1998) PMP, Längle et al's (2003) ES are all based on Frankl's logotherapy. However, those scales' subject are general adults rather than university students. As for self-transcendence scale in this research is prepared with the university students as the subject, focusing on exploring the conditions of transcendence in the three dimensions. Also design of the items concentrates on the transcendence conditions in physical, psychological, and spiritual dimensions.

METHODOLOGY
Pretest Questionnaire

With the development of Self-Transcendence scale, the research plans the first draft from the interview with two college students. From their respective, each item was discussed and revised for the design of pre-test questionnaire. The items and code are shown as table 1.

Table 1 Pre-test Questionnaire

Dimension	Code	Item
Creative value	CV1	I am willing to help others through some ways.
	CV 2	I believe I can make the world a little different.
	CV 3	I care for the inferiority groups very much.
	CV 4	I am willing to succeed good and long-lasting traditions.
	CV 5	I am willing to make vital contributions to the society.
Experiential values	EV1	I feel I can handle my own work, and have confidence that I can do it very well.
	EV 2	I am willing to share with others my wisdom and experiences.
	EV 3	I am willing to search for the meaning of my past experiences.
	EV 4	I can experience a rich experience of life from loss.
	EV 5	I am always treating events in living from the angle of everything in Nature.
Attitudinal value	AV1	I can accept the fact of my getting old.
	AV 2	I feel losing is more meaningful than obtaining in my life.
	AV 3	I feel with one more success/failure allows me to experience a layer deeper of the meaning of life
	AV 4	I feel both success and failure has positive meaning for people.
	AV 5	I feel that life does not rely on gain or loss but on its abundance.

Research Sampling

As to the sampling of survey group on Self-Transcendence Scale, there have been two surveys:

The first CFA: the first CFA sample is called as calibration sample(*N*=381). We adopt samplings from Taiwan universities.

The second CFA: we deleted two items while the first CFA of the initial model has to be amended, and after amending, there can be another batch of samples. This time will be called

as validation sample($N=378$). Hereby the backgrounds of two kinds of sample are shown in Table 2 .

Table 2 Pretest Sampling Background Arrangement of Self-Transcendence

		Calibration Samples Calibration Samples (N=381)		Validation Samples (N=378)	
		Numbers	Percentage	Numbers	Percentage
Gender	Male	112	29.4	119	31.5
	Female	269	70.6	259	68.5
Grade	Freshmen	83	21.8	67	17.7
	Sophomore	91	23.9	84	22.2
	Junior	70	18.4	89	23.5
	Senior	137	36.0	138	36.5
Age		M=20.12	SD=1.47	M=20.28	SD=1.51

3.3 Data Analysis

This study focuses on the development of Self-Transcendence Scale for university student. We processed analysis with Amos 16.0 in order to do CFA, and the test indexes are:
1. Model fit indices: we take χ^2, RMSEA, GFI, AGFI, IFI, TLI, and CFI as our indexes to analyze if the model is appropriate.
2. Test on fitness of internal structure of model: on the test of model internal fit, we adopted four objects such as basic fit, composite reliability(ρc), average variance extracted(ρv), and construct discrimination to test.

RESULTS
Latent Variables' Correlation

We added up score of each dimension of self-transcendence and employed correlation coefficient; the results show that correlation of the three latent variables ranges between .51-.68, all achieving significantly positive correlation($p<.001$)(see Table 3).

Table 3 Latent variables' correlation coefficient and descriptive data

dimension	1	2	3	M	SD
1. Creative value	1			18.101	3.66
2. Experiential value	.68***	1		18.57	3.34
3. Attitudinal value	.51***	.62***	1	18.52	3.29

$N=378$.
*** $p<.001$.

*Goodness-of-Fit of M*odel

We processed analysis with Amos 16.0 in order to do CFA, the results are as following:

Goodness-of-fit of initial model
After investigating 381 samples, CFA was used for verifying the 15 items of the three factors. With correlation coefficient analysis, it is confirmed that there is significantly positive

correlation between three latent variables and the total score. Then, CFA was conducted, and the results are as shown in Fig. 1: In the initial model, regarding the overall fit, $\chi^2=203.46$, $df=87$, $p=.00$, RMSEA$=.06$, GFI$=.93$, and AGFI$=.91$. Among them, χ^2 reaches the significant standard, but does not meet the standard ($p>.05$). RMSEA meets the standard of less than .10, and GFI and AGFI all meet the standard of more than .90. Overall, the results show that the initial model is fit. From the 15 indicators' factor loading, EV5's factor loading is .47, and AV1's is .33. As Bogozzi and Yi(1988) proposed that the factor loading between the indicators should fall between .50-.95, Tabachnica and Fidell(2001) considered that $\lambda \geqq 55$ can be regarded as good. so we deleted EV5 and AV1.
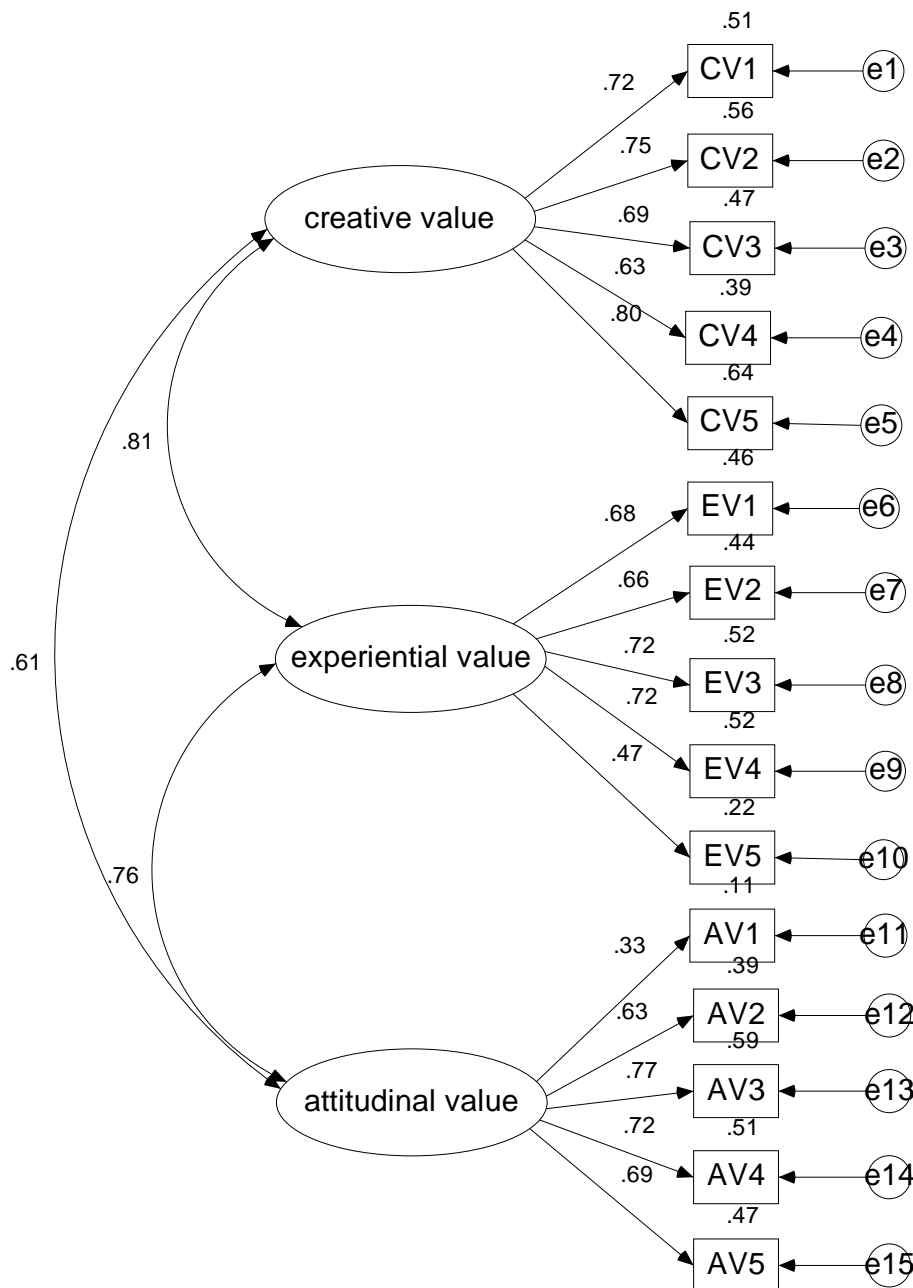

Chi squre=203.46 df=87 p=.00
RMSEA=.06 GFI=.93 AGFI=.91

Fig. 1 Fit evaluation of the initial model

Note: Data on the indicator is individual reliability.

Goodness-of-fit of modified model

Goodness-of-fit of modified model conducted analysis from preliminary fit, overall model fit, and fit of internal structure of model, respectively (Bagozzi & Yi, 1988):

Preliminary fit of modified model

In respect with the modified model's preliminary fit, the results show that: 1. In Θ_ε matrix entries, error variance of ε_1 to ε_{15} are between .31-.61, and all are positive. 2. The *t* value of all error variances falls between 9.15-12.32, and all reaches the significant standard of .001. 3. The standard error of the parameters is between .03-.11, not very big standard error. 4. The factor loading of the latent variable and its indicator ranges between .62-.80, meeting the standard of >.50 and <.95. Based on the above, all results meet the standard, showing good item quality and no offending estimates (the output data do not exceed the acceptable range)(Hair, Anderson, Tatham, & Black, 1998).

Overall model fit

After deleting EV5 and AV1, the initial model called modified model, and its goodness-of-fitness are(see Fig. 2): $\chi^2 = 149.16$, *df*=62, *p*=.00, RMSEA=.06, GFI=.94, and AGFI=.91. Among the fit indicators, χ^2 does not meet the standard(p>.05), and the others like RMSEA, GFI, and AGFI all meet the standard(>.90). So the overall modified model is acceptable.
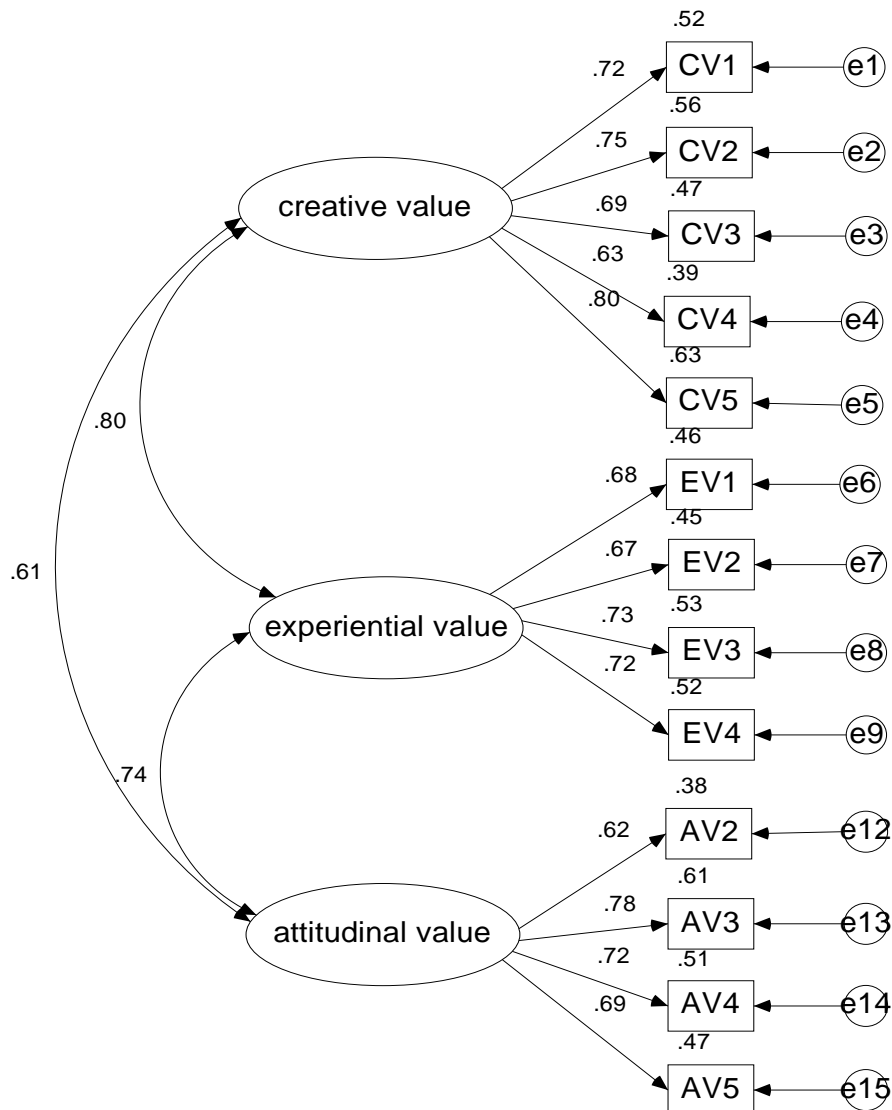
Chi squre=149.16 df=62 p=.00
RMSEA=.06 GFI=.94 AGFI=.91

Fig. 2 Fit evaluation of the modified model
Note: Data on the indicator is individual reliability.

Fit of internal structure of model

According to the analytical of fit of internal structure of model, the strategies used commonly are individual item reliability, composite reliability of the latent variables, average variance extraction of latent variables, and construct discrimination (Chiu, 2010).

On individual item reliability, the individual reliability refers to indicator's (item) square of factor loading. The indicator has 13items, and the individual reliability ranges between .38-.63. Bogozzi and Yi (1988) considered the individual reliability must reach more than .50, or the indicator's factor loading must exceed .71. For social science, such high factor loading cannot be obtained easily (Chiu, 2010), so Bentler and Wu (1983) suggested it is acceptable for individual item's reliability to be larger than.20. According to this standard, the 13 individual item's reliability in this scale is acceptable.

For composite reliability of the latent variables: the composite reliability of the three latent variables are *Creative Value* .84, *Experiential Value* .80, and *Attitudinal Value* .80, which all meet the standard of >.60, meaning that the indicator of the three latent variable can predict 80% or above. Namely, the three latent variables have basic stability in respect with reflecting the real scores.

Third, as for the average variance extracted, the average variance extraction of the three latent variables are *Creative Value* .52, *Experiential Value* .50, and *Attitudinal Value* .50, all close to the standard of >.50, and meaning the indicators can reflect the constructed latent variables.

In regard of construct discrimination, this research adopted the competing models(Anderson & Gerbing, 1988) to inspect the construct discrimination of the latent variables: the chi square of between the three restrictive models and nonrestrictive models are 113.32, 143.62, and 103.32, all larger than the threshold standard 3.84($p < .05$)(see Table 4), which means that the chi square difference($\Delta\chi^2$) between the three restrictive models and the nonrestrictive model reach the significant standard($p<.05$). Meanwhile, the hypothesis that correlation between any two paired latent variable is complete correlation($\rho=1$) fails, because the latent traits signified by the three latent variables are significant different.

Table 4 Self Transcendence Scale's Construct Discrimination Analysis Summary

Paired latent variable	Restrictive model (B)			Nonrestrictive model (A)			χ^2 difference (B-A)
	$\rho1$	*df*	χ^2	ρ	*df*	χ^2	$\Delta\chi^2$
Creative Value- Experiential Value	1	27	187.68	.80	26	74.36	113.32*
Creative Value- Attitudinal Value	1	27	228.65	.61	26	85.03	143.62*
Experiential Value -Attitudinal Value	1	20	139.59	.74	19	36.27	103.32*

Note: *$p<.05$.

Based on above, the fit of internal of model is acceptable, that is, internal quality of the modified model with 11 items of the three factors is acceptable.

Cross- validity of the model

Since the model was modified, so we investigated another batch of samples($N=378$) to confirm whether the model with 13 items of the three factors are stable or not. The results(See Fig. 2) are: $\chi^2=183.19$, *df*$=62$, $p=.00$, RMSEA$=.07$, GFI$=.93$, AGFI$=.90$. Among the fit indicators, χ^2 does not meet the standard, but the RMSEA, GFI, and AGFI all meet the standard. As a whole, the modified model is overall fit, and the *Self Transcendence Scale* with 13 items of the three factors model is acceptable.

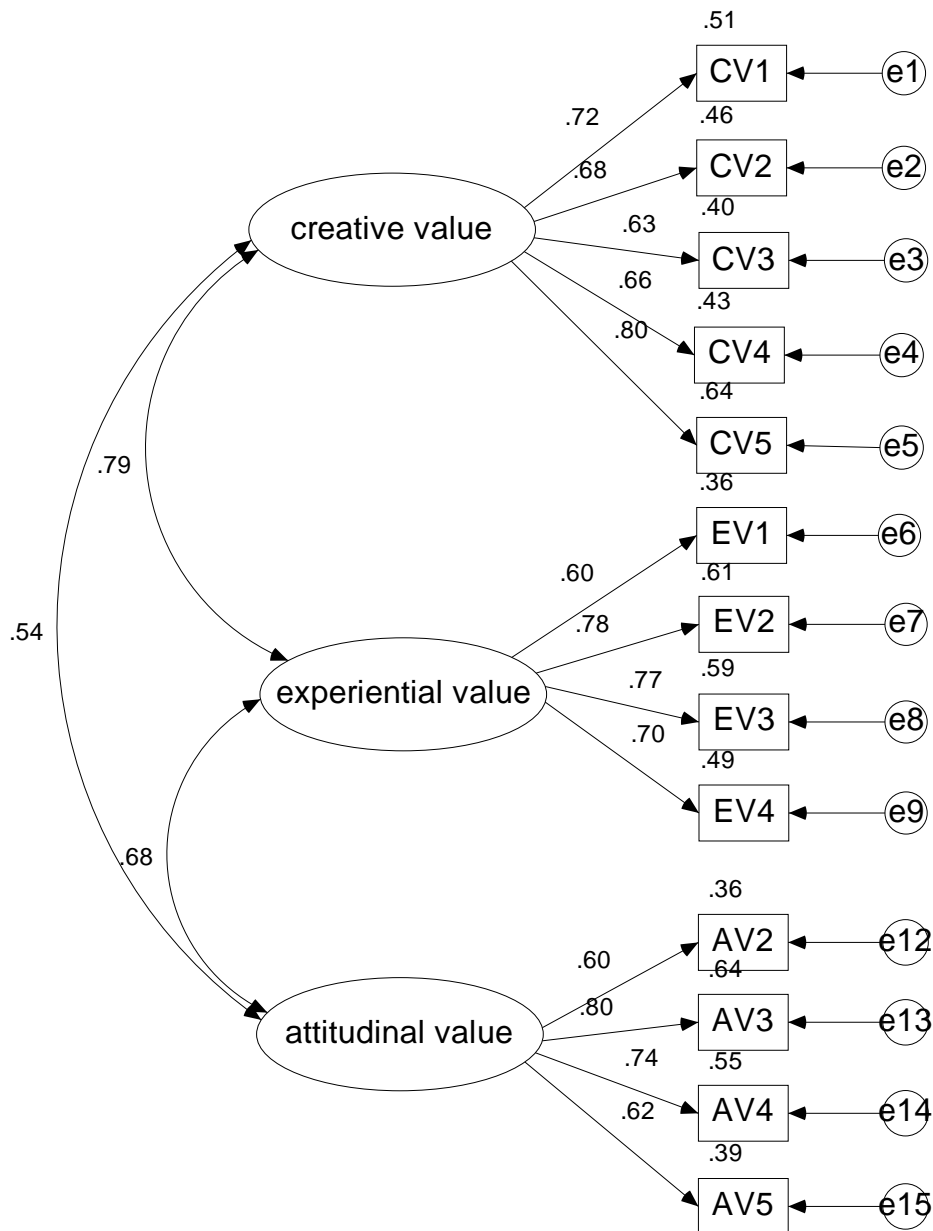Chi squre=183.19 df=62 p=.00
RMSEA=.07 GFI=.93 AGFI=.90

Fig. 2 Cross-validity model's fit evaluation(the standard solution)

DISCUSSION

The purpose of this research is to develop Taiwan Undergraduate's Self Transcendence Scale. In the process of developing the scale, it involves what lists below:

To start with, according to literature review, we found Frankl's logotherapy is the theoretical foundation for some self-transcendence scales. Since Frankl (1966b) believed that if people can achieve self-transcendence, they will head towards a meaningful life. At this point, self-transcendence refers to transcendence in three respects— creative, experiential, and attitudinal values. Therefore, our scale is based on the three types of values, drew up the initial draft about events often encountered by the university students, and invited two

university students to propose opinions on modification in accordance to their viewpoints. At last, the initial draft of three factor's 15 items was verified.

The initial draft of three factors' 15 items is drawn according to Frankl's logotherapy, and verified directly by CFA. After surveying 381 undergraduates, we conducted first-order CFA analysis, and found from the results that the initial model is fit. However, EV5's and AV1's factor loadings are too low, so the two items do not meet what was proposed by Bogozzi and Yi's (1988) .50-.95 nor the standard of $\lambda \geqq 55$ set up by Tabachnica and Fidell(2001). As a result, we deleted the two items, "I am willing to make vital contributions to the society" and "I feel I can handle my own work, and have confidence that I can do it very well".

After deleting the two items, the remaining are three factor's 13 items, and we call the new assumption model as the modified model. With the original samples, SEM analysis was re-conducted, and the results show that the preliminary model, the overall model, and the internal structure are fit.

Since the model had been modified, we had to proceed cross- validity of the model with another batch of samples ($N=378$) to confirm the model's fitness. The results of the modified model show the overall fit, and the *Self Transcendence Scale* with 13 items of three factors is acceptable, which also shows the model fits different samples.

With cross- validity of the model, it means *Self Transcendence Scale* with 13 items of three factors is stable. On the other hand, it means that according to Frankl's logotherapy as the theoretical foundation, the prepared scale of the creative value (4 items) , experiential value(4 items) , and attitudinal value (5 items) is stable. That is to say, in this research, we have three factors, and each with 4-5 items, so it meet the standard set up by Bollen (1989) that each factor must have at least three items.

CONCLUSION

On the basis of Frankl's logotherapy, Self-Transcendence Scale has been prepared in this research. The scale consists of three factors with 13 items—the first factor is Creative values, which focusing on making contributions to family, society, and humans with constructive methods through work, or on endeavoring to help others, or make a difference in work. Over this factor, we have obtained "I am willing to help others through some ways", "I believe I can make the world a little different", "I care for the inferiority groups very much.", "I am willing to succeed good and long-lasting traditions". As for experiential values, the implication lies in feeling love among people, self-understanding, and appreciation and gratitude for everything. This factor obtains "I am willing to share with others my wisdom and experiences", "I am willing to search for the meaning of my past experiences", "I can experience a rich experience of life from loss", and "I am always treating events in living from the angle of everything in Nature". As far as attitudinal value is concerned, it implies that people should accept various kinds of situations with a positive attitude, or find the higher level of illumination and responsibility. This factor has totally 5 items, including "I can accept the fact of my getting old", "I feel losing is more meaningful than obtaining in my life", "I feel with one more success/failure allows me to experience a layer deeper of the meaning of life", and "I feel that life does not rely on gain or loss but on its abundance". In general, the items above were all verified by CFA, and have acceptable validity and reliability, so can be adopted by relative studies.

REFERENCES

Anderson, J. C., & Gerbing, D. W. (1984). The effect of sampling error on convergence, improper solutions and goodness-of-fit indices for maximum likelihood confirmatory factor analysis. *Psychometrika, 49*, 155–173.

Bagozzi, R. P, & Yi, Y. (1988). On the evaluation of structural equation models. *Academic of Marketing Science, 16*, 76-94.

Bentler, P. M., & Wu, E. J. C. (1983). *EQS/Windows user's guide*. Los Angeles, CA: BMDP Statistical Software.

Blair, R. G. (2004). Helping older adolescents search for meaning in depression. *Journal of Mental Health Counseling, 26*, 333–347.

Bollen, K. A. (1989). Structural equations with latent variables. New York, NY: Wiley & Sons

Borg, J., Andrée, B., Soderstrom, H., Farde, L. (2003). The serotonin system and spiritual experiences. *The American Journal of Psychiatry, 160*(11), 1965-1969.

Breitbart, W. (2001). *Spirituality and meaning in supportive care: Spirituality- and meaning-centered group psychotherapy interventions in advanced cancer. Supportive Care in Cancer*. New York, NY: Sprirner-Verlag.

Breitbart, W., Gibson, C., Poppito, S. R., & Berg, A.(2004). Psychotherapeutic interventions at the end of life: A focus on meaning and spirituality. *Canadian Journal of Psychiatry, 49*, 366–372

Burkhardt, M.A. (1993). Characteristics of spirituality in the lives of women in a rural Appalachian community. *Journal of Transcultural Nursing, 4*(2), 12–18.

Carpenter, J. S., Brockopp, D. Y., & Andrykowski, M. A. (1999). Self-transcendence as a factor in the self-esteem and well-being of breast cancer survivors. *Journal of Advanced Nursing, 29*(6), 1402-1411.

Chen, S., & Walsh, S. M.(2006, March). *The comparison of two interventions to promote nursing students' self-transcendence and attitudes toward the elderly: A pilot study*. Poster session paper presented at the 2006 Research Conference of the Lambda Chi Chapter of Sigma Theta Tau International Honor Society of Nursing, Miami.

Chiu, H. C. (2010). Quantitative and statistical analysis (5 th ed.).Taipei, Taiwan: Wunan.

Chodron, P. (2005). *The places that scare you: A guide to fearlessness in difficult times*. Boston, MA: Shambhala.

Coetzer, P. H. (1992). Gratefulness: A highway to meaning? *The International Forum For Logotherapy, 15*, 104-107.

Coward, D. D. (1990). The lived experience of self-transcendence in women with advanced breast cancer. *Nursing Science Quarterly, 3*(4), 162-169.

Coward, D. D. (1995). The lived experience of self-transcendence in women with AIDS[Abstract]. *Journal of Obstetric, Gynecological Neonatal Nursing, 24*(4), 314-318.

Coward, D. D. (1996). Self-Transcendence and Correlates in a Healthy Population. *Nursing Research, 45*(2), 116-121.

Coward, D. D., & Lewis, F. M. (1993). The lived experience of self-transcendence in gay men with AIDS. *Oncology Nursing Forum, 20*(9), 1363-1368.

Coward, D., & Reed, P. (2006). Self-transcendence theory. In A. Tomey & M. Alligood(Eds.), *Nursing theorists and their work*(pp.). St. Louis, NI: Moshy.

Crowe, T. (Ed.). (1997). *Applications of counseling in speech-language pathology and audiology*. Baltimore, MD: Williams & Wilkins.

Ellermann, C., & Reed, P. (2001). Self-transcendence and depression in middle-age adults. *Western Journal of Nursing Research, 23*, 698-713.

Esping, A. (2010). A longitudinal case study of graduate school as logotherapy for an international Ph.D. student studying in the United States. *International Journal of Existential Psychology and Psychotherapy,* 3(2). Retrieved from http://journal.existentialpsychology.org/index.php?journal=ExPsy&page=article&op=viewArticle&path%5B%5D=157&path%5B%5D=esping-html

Farmer, A., Mahmood, A., Redman, K., Harris, T., Sadler, S., & McGuffin, P. (2003). A Sib-Pair study of the Temperament and Character Inventory Scales in major depression. *Archives General Psychiatry, 60*(5), 490-496.

Farren, A. T. (2010). Power, uncertainty, self-transcendence, and quality of life in breast cancer survivors. *Nursing Science Quarterly, 23*(1), 63-71 .

Frankl, V. E. (1965). The Philosophical Foundations of Logotherapie. Universitas, 8(1), 171.

Frankl, V. E. (1979). *The unheard cry for meaning: Psychotherapy and humanism.* New York, NY: Simon and Schuster.

Frankl, V. E. (1959). *Man's search for meaning*. New York: Pocket Books.

Frankl, V. E. (1966a). Self-transcendence as a human phenomenon. *Journal of Humanistic Psychology, 6*(2), 97-106. doi:10.1177/002216786600600201

Frankl, V. E. (1966b). What is meant by meaning? *Journal of Existentialism, 6*(25), 21–28.

Frankl, V. E. (1967). *Psychotherapy and existentialism: Selected papers on logotherapy*. New York, NY: Washington Square Press.

Frankl, V. E.(1984). *Man's search for meaning: An introduction to logotherapy*. New York: Simon & Schuster.

Frankl, V. E. (1986). *The doctor and the soul: From psychotherapy to logotherapy*. New York: Vintage Books.

Frankl, V. E. (2006). *Man's search for meaning*. Boston: Beacon Press.

Haase, J., Britt, T., Coward, D., Kline Leidy, N., & Penn, P. (1992).Simultaneous concept analysis of spiritual perspective, hope, acceptance and self-transcendence. *Image, 24*(2), 141-147.

Hair, J. F., & Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis* (5th ed.). Englewood Cliffs, NJ: Prentice-Hall.

Längle, A, Orgler, C. H., & Kundi, M. (2003). The Existence Scale: A new approach to assess the ability to find personal meaning in life and to reach existential fulfillment. *European Psychotherapy, 4*(1), 135-151. Retrieved from http://cip-medien.com/media/download_gallery/EP/2003/13_EP_Vol4_2003Laengle4.pdf

Levenson, M. R., Jennings, P. A., Aldwin, C. M., & Shiraishi, R. W. (2005). Self-transcendence: Conceptualization and measurement. *The International Journal of Aging and Human Development, 60*(2),127 – 143.

Lewis, M. H.(2011). *Frontier logotherapy: A logotherapy practicum in a medically underserved rural and frontier area*. Retrieved from http://homepage.mac.com/mhlewis/papers/DiplomateMHL.pdf

Lundman, B., Viglund, K., Aléx, L., Jonsén, E., Norberg, A., Fischer, R. S., Strandberg, G., & Nygren, B.(2011). Development and psychometric properties of the Inner Strength Scale. *International Journal of Nursing Studies, 48*(10), 1266-1274. Retrieved from http://www.sciencedirect.com/science/article/pii/S0020748911000964

Marshall, M. (2011). *Prism of meaning: Guide to the fundamental principles of Viktor E. Frankl's Logotherapy*. The Canadian Institute of Logotherapy, Canada: Author.

Miller, C. (n.d.). *For what are we born to become? The logotherapy of Dr. Victor Frankl*. Retrieved from http://americanspcp.com/docs/ijpp/Carol_MillerLogotherapy.pdf

Nygren, B., Aléx, L., Jonsén, E., Gustafson, Y., Norberg, A., & Lundman, B. (2005). Resilience, sense of coherence, purpose in life and self-transcendence in relation to perceived physical and mental health among the oldest old[Abstract]. Aging & Mental

Health, 9(4), 354-362. Retrieved from
http://www.tandfonline.com/doi/abs/10.1080/1360500114415

Pattakos, A. N. (2004). The search for meaning in government service. *Public Administration Review, 64*(1), 106–112. Retrieved from
http://onlinelibrary.wiley.com/doi/10.1111/j.1540-6210.2004.00350.x/pdf

Reed, P. G. (1991a). Self-transcendence and mental health in oldest-old adults. *Nursing Research, 40*(1), 5-11.

Reed, P. G. (1991b). Toward a nursing theory of self-transcendence: Deductive reformation using developmental theories. *Advances in Nursing Science, 13*(4), 64-77.

Reed, P. G. (2003).The theory of self-transcendence. In M. J. Smith & P. R. Liehr(Eds), *Middle range theory for nursing*(pp. 145-165). New York, NY: Springer.

Reker, G. T. (1994). Logotheory and logotherapy: Challenges, opportunities, and some empirical findings. *The International Forum for Logotherapy, 17*, 47-55. Retrieved from http://garyreker.ca/1994%20Reker%20Logotheory%20and%20logotherapy.pdf

Reker, G. T., & Fry, P. S. (2003). Factor structure and invariance of personal meaning measures in cohorts of younger and older adults. *Personality and Individual Differences, 35*(5), 977–993. Retrieved from
http://www.sciencedirect.com/science?_ob=MiamiImageURL&_cid=271782&_user=1605972&_pii=S0191886902003124&_check=y&_origin=&_coverDate=31-Oct-2003&view=c&wchp=dGLzVBA-zSkzS&md5=f05d4ef23ee8711961190c416a3c7bdc/1-s2.0-S0191886902003124-main.pdf

Runquist, J. J., & Reed, P. G. (2007). Self-transcendence and well-being in homeless adults[Abstract]. *Journal of Holistic Nursing, 25*(1), 5-13. Retrieved from http://jhn.sagepub.com/content/25/1/5.short

Spillers, C. S. (2007). An existential framework for understanding the counseling needs of clients. *American Journal of Speech-Language Pathology, 16*, 191-197. Retrieved from http://ajslp.asha.org/cgi/content/full/16/3/191

Stinson, C. K., & Kirk, E. (2006). Structured reminiscence: An intervention to decrease depression and increase self-transcendence in older women. *Journal of Clinical Nursing, 15*(2), 208–218. Retrieved from http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2702.2006.01292.x/pdf

Tabachnica, B. G., & Fidell, L. S. (2001). Using multivariate statistics(4 ed.). Needham Heights, MA: Allyn and Bacon.

Thomas, J. C., & Burton, M., Griffin, M. T. Q., Fitzpatrick, J. J. (2010). Self-transcendence, spiritual well-being, and spiritual practices of women with breast cancer[Abstract]. *Journal of Holistic Nursing, 28*(2), 115-122.

Tomić, W., Evers, W. J. G., & Brouwers, A. (2004). Existential fulfillment and teacher burnout. *European Psychotherapy, 5*(1), 65-73. Retrieved from http://dspace.ou.nl/bitstream/1820/1226/1/EXISTENTIAL%20FULFILLMENT%20AND%20TEACHER%20BURNOUT.pdf

White, C. A. (2004). Meaning and its measurement in psychosocial oncology. *Psycho-Oncology, 13*(7), 468–481. Retrieved from http://onlinelibrary.wiley.com/doi/10.1002/pon.815/pdf

Wong, P. T. P. (1998).. Implicit theories of meaningful life and the development of the Personal Meaning Profile. In P. T. P. Wong & P. S. Fry(Eds.),*The human quest for meaning: a handbook of psychological research and clinical applications(pp.111-134).* Mahwah, NJ: Lawrence Erlbaum Associates. Retrieved from http://www.google.com/books?hl=zh-TW&lr=&id=RELiuuxghaQC&oi=fnd&pg=PA111&dq=%22Implicit+theories+of+mea

ningful+life+and+the+development+of+the+Personal+Meaning+Profile%22&ots=h-eI3LXynP&sig=E1H_JQHoQkfeLJHvrvA3umCIWNo#v=onepage&q=%22Implicit%20theories%20of%20meaningful%20life%20and%20the%20development%20of%20the%20Personal%20Meaning%20Profile%22&f=false

Young-Eisendrath, P., & Miller, M. E. (Eds.) (2000). *The psychology of mature spirituality.* London, England: Routledge.