Constructing and Determining the Reliability and Validity of a Purposive Career Behavior Scale for Master Science Students

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ABSTRACT: This study was carried out to develop and determine the validity and reliability of purposive career behavior scale for master science (M.Sc.) students of Yazd University, Iran. Thus, purposive career behavior scale including 30 items was constructed based on the 'theory of action' and then to calculate the reliability and validity of the total scale of 125 M.Sc. students of Yazd University were studied. For the reliability of the scale, Cronbach's alpha and test-retest methods in a sample of 67 were applied. The obtained alpha coefficients were 0.97 and 0.89, respectively. Also, in order to check the reliability of the scale from the viewpoint of assessors as well as the correlation with questionnaires on 'career adaptability' and 'career indecision', the scale was conducted on a sample of 58 subjects using the Spearman correlation coefficient. The results indicated that the scale had a negative significant correlation with career indecision questionnaire (-0.26) and a positive significant correlation with career adaptability questionnaire (0.48). Generally, according to the results it is suggested that the purposive career behavior scale has high reliability and suitable validity and is applicable to study in this field.

INTRODUCTION

Occupation is one of the crucial factors in one's personal life (Kaveh, 2007). It is main factor in the story of life which to a large extent determines the hope and despair of daily life (Yousefi, 2011). In post-modern era, career has become complex and career counseling not only concentrates on career in employment but also as a way to make meaning for individuals (Shafiabadi, 2003). Career counseling is a prospective process (Ghasemi *et al.,* 2011). Career is defined by Reardon, Lenz, Sampson and Peterson (2000) as: "Increasing the efficiency time of the model a purposive life through working." According to Shafiabadi (2003) career development includes a person's whole life, and is not only about working; this concept is concerned with the whole person. Career aiming puts a powerful tool in the hands of an individual, and like a compass, in a dark and endless ocean guides him/her in the right direction to the development and promotion. McMahon and Patton (2006) emphasize on individuals as active learners who should use the opportunities in their environment; they stress that today's world careers; individuals need to take responsibility for their goals and constantly make decisions (McMahon and Patton, 2006). Self-steering behavior reflects more self-awareness which reveals the right direction and the proper dynamics; such individuals enjoy having the goals and values that guide their activities (Yousefi, 2011).

In fact, individuals who have a clear understanding of the objectives and activities related to their occupation are more likely to be able to find a job or accept a career that is consistent with their characters, and insist in search of a consistent work environment. In contrast, individuals who act scatteredly are more likely to experience inconsistent career choices, frequently change jobs and have several unsuccessful careers in the future (Keshavarz, 2010). The emergence of 'constructivism' in the cognitive sciences has led to the appearance of new approaches that consider individual as an active factor in the growth of his/her career. These theories include the works of Young *et al.* (1996) notes the modification of the structure of occupation and stresses the functionality and management of individuals in their career.

Constructivists suggest that individuals actively construct their own realities and are able to actively create significant position for themselves in terms of occupational conditions. With aiming goals, individuals would be able to enjoy building coordination, direction and continuation of their behavior and as a result representation in their behavior. Constructivism basic assumption is that: individuals' activities are in a continuous developmental process which underlines purposive action; action that aims to achieve stability (McMahon and Patton, 2006). According to Bandura's cognitive-social theory, individuals are active and dynamic authorities to their own growth and may be involved in the occurrence of things through their work. In fact, how people think, believe and feel is effective on their behavior. Motivation is always an important variable and objectives are a base to understand motivational behavior (Jaafari, 2011). According to Bandura (1995), occupation selection determines that individual should take advantage of which of their capabilities and talents and which to overlook (Zunker, 2006). Purposive career behavior is a key concept in Action Theory. Action Theory is a comprehensive view of career behavior describing the connection of goals to behaviors (Spector, 2003). Action Theory is not a random attempt to connect and cope with the gap between theory and practice. Collin and Young (1986) have offered this theory for the conceptualization of a new model of career counseling and have considered career as an instrument utilized by individuals to organize their behavior over a long-term period. Action Theory is based on process, n practice and interpretation. Young *et al*., (1996) believe that any behavior on the career can be interpreted in accordance with Action Theory. Career action behavior described by Yang, *et al*. (1996 and 2002) was developed to increase our understanding of the processes of goal-oriented behavior (McMahon and Patton, 2006). This theory states the rational model of human action. This model explains the correct and successful way of human action, and began with the assumption that humans are rational thinkers that utilize language to communicate rationally. Winograd and Flores called this tradition as 'the tradition of rationality' (Zunker, 2006). Young and Valach (1996) has conceptualized 'purposive career action' as an orientation towards the individual and participation and forecasting purposes, and trying to achieve the purposes. The term 'action' is reflective of purposive behavior based on one's will, and somehow refers to the dynamic processes that occur in the selection and development of career that can be used by agented people. Setting career goal includes the adoption of a decision on what one wants to do, and the determination of an action plan to accomplish it (Perrsone *et al*., 2001). Using the 'Systems Theory' perspective, individuals are active agents in building their own career.

The concept of 'agent' is the core of some theories on career. According to Cochran, agent is "one who makes things happen," while patients are those who allow life to decide for them (Young *et al*., 1996). In fact, the result of purposive career behavior is the self-organization of activities, interest, values and abilities to deal with life roles. Thus, for greater character stability, the main focus should be on developing "self" (Sharf, 2006). In career counseling the details in the statements of the participants could only be best understood when their relationship be studied in a clearer framework than reference (context) (Gothard *et al*., 1999). Study of activities is the main point of contextual theory. Activities are behaviors with socio-cognitive orientation conceptualized with the reflection of daily experiences. Activities are social processes. The term 'reflective action of purposive behavior' is based on one's will. Additionally, situational or contextual factors are also of great importance and inseparable from individuals. Goal-oriented behavior can only be interpreted or understood in its context. In contrast, environmental or contextual issues must also be considered in the context of the intention and will of the individual (McMahon and Patton, 2006). According to Valach and Collin (1996) one method to understand the contextual description of career counseling is Action Theory. Accordingly, action is focused on the whole context in which the behavior occurred. Contextual model of human development refers to the interaction of changeable and continuous forces the core of which is the connection between the individual and the environment. Because, according to this view, these two are inseparable and are considered a unit. The active character of individuals is one of the elements of contextual views. In this view, an individual is considered as a self-organizing system constantly constructing and renewing itself. Contextual view of career insists on the interaction of the individual with social and environmental contexts. Action Theory is a means of integrating different aspects of Contextualism. Action Theory utilizes career as an integrated approach in theories of career, the not only integrates the psychological and socio-contextual perspectives, but also describes the impact that social perspectives beyond traditional approaches to career that connects them directly to constructivism (McMahon and Patton, 2006). Action features can be summarized in three areas: the prospect of action (obvious behavior, conscious understanding, and social meaning) systems of action (individual's action, act of joining, projects and career), and levels of action organization (elements, practical steps and goals). Each action unit can then be explained in the interpretation process. These elements cannot be separated from the context and interpret the meaning of needs. Finally, these elements and steps are integrated in the individual's plan and goals.

Goal-oriented action can be interpreted regarding three perspectives: Obvious behavior, conscious understandings, or internal processes and social meaning. Obvious behavior includes clearly visible behavior, such as tasks related to organizational posts. Internal processes refer to the identification of interpersonal cognition and the emotional processes occurring throughout obvious behavior, such as purposive thinking about the future and feeling anxious for it. Social meaning (the third perspective) represents the base of action for oneself and others. For instance, a successful accomplishment of job tasks can result in positive vocational outcomes such as social rewards. Each of these perspectives is equally connected with goal-oriented behavior and career. Young and Valach (1996) emphasize that the uniqueness of the theoretical approach of action is the effort to establish a relationship between these three 'perspectives of action'. There are some findings about the impact of goals on the early stages of individual career choice (Abele and Spurk, 2006). Jaafari (2011) studied the relationship between the structures of career exploration, job search intensity and effective job search. Its results confirmed the concept of preparation and the basic stages of job choice. Action Theory describes the connection levels to the cognitive hierarchy of practice and feedbacks from the environment. In the first stage, action begins with the desire to do or have certain things, and then the desire leads to specific goals and objectives to be achieved. These goals in the workplace are often tied to a job or a task. The next step is to put the goals in designed projects. Projects include selecting specific steps and actions to achieve the objectives and to determine their sequence. Next, the project is implemented and the implementation itself includes actions to be enforced and in the end the people receive feedbacks from the environment or other people. Through feedbacks, individuals will realize whether or not there has been any progress to achieve the goals. Positive feedbacks help the continuation of the projects, while negative feedbacks lead to the refining of goals, projects or actions (Zunker, 2006).

MATERIALS AND METHODS

This study aimed to construct and determine the validity and reliability of Purposive Career Behavior Scale.

Population. Study population consisted of all male and female M.Sc. students studying in the academic year of (2012 and 2013) in Islamic Azad University of Yazd.

Sample. In this study, a total of 125 subjects were selected with cluster sampling method among M.Sc. students of all disciplines except medicine in Islamic Azad University of Yazd.

Sampling method. In the first step, for the purpose of sampling different M.Sc. disciplines and classroom timetables of Islamic Azad University of Yazd were

determined. Then, two classes were randomly selected from each discipline. Eventually, a number of students from each class were randomly selected to answer the questionnaires.

Implementation method. This is a researcher-made questionnaire which initially through collaboration with supervisors to develop a Purposive Career Behavior Scale based on 'Theory of Action' in three areas of 'behavioral manifestations', 'internal processes' and 'social meanings' some questions were designed. After a careful review, they were approved by evaluators who were specialized in the field of career counseling. In order to evaluate the content and face validity of the Scale, four experts studied Scale items - whose statements and comments were applied. After preparing a pilot questionnaire, to assess its reliability it was first implemented on a sample of 67 subjects and two weeks later a re-test was conducted. The results were analyzed and Cronbach's alpha was applied to assess the reliability of the questionnaire. Alpha coefficient obtained was 0.93. And in the retest which was also conducted on a sample of 67 subjects from the same population Cronbach's alpha was obtained 0.89. Furthermore, to assess the reliability from the viewpoint of the evaluators as well as correlation with different purposive career behavior and career indecision, the Scale was conducted among a sample of 58 subjects. The results showed that the Scale enjoyed a good reliability and its correlation with Career Indecision Inventory was negatively significant, and positively significant with Career Adaptability Inventory. Its correlation with career indecision questionnaire was $r = -0.261$ ($P < 0/05$) and with purposive career behavior questionnaire was $r = -0.261$ ($P < 0/01$).

Measuring instruments

Purposive career behavior scale. The Scale has been designed by the researcher to evaluate students' purposive career behavior. It consisted of 30 items containing three sub-scales of 'behavioral manifestations, 'internal processes' and 'social meanings'. The sub-scales measure subjects' abilities in three dimensions including 'manifested purposive career behaviors', 'affective and internal processes of purposive career behavior', and 'social meanings' that reflects individual's social behavior and its social feedback and impact on purposive career behavior (McMahon and Patton, 2006).

'Manifested purposive career behaviors' sub-scale consists of 9 items (3, 8, 12, 13, 21, 24, 27, 29, and 30). A sample item of this sub-scale is "I am actively looking for skills that suit the occupation that best suits me." 'Affective and internal processes of purposive career behavior' is the second sub-scale including 18 items (1, 2, 4, 5, 6, 10, 11, 14, 15, 16, 17, 18, 19, 20, 22, 23, 26 and 28).

A sample item of this sub-scale is: "I am decisive about my career future; I have decided to get the job I have on my mind." 'Social meanings' sub-scale includes 3 items (7, 9 and 25). It should be noted that due to the maintenance of the general factor of purposive career behavior, the number of subscales items are different. Moreover, motivation is always an important variable and goals are central to the understanding of motivational behavior. Therefore, most items of the Scale measure emotional and internal processes.

The implementation and scoring methods are as follows: Respondents are asked to rate each item on a five-point Likert-type rating scale ranging from (5) "Strongly agree" to (1) "Strongly disagree." Items 12, 13 and 28 are in reverse-scored. In its implementation, the subjects were asked to read each of the items about their ability to perform an activity carefully, and according to their ability select one of the options ranging from strongly agree to strongly disagree. Total score can range from 30 to 150. Scale reliability and validity are suitable and its alpha coefficient obtained is 0.93.

Career adaptability inventory. This inventory was developed by Yousefi (2011) to assess career adaptability based on Savakis 'constructionist career theory'. The inventory contains 40 items. Based on the definition of Savakis (2004), four general scales are designed for it. Adaptability is a psycho-mental and social structure that reflects a person's willingness and resources to deal with the current and impending career development tasks. Career adaptability subscales include career concerns, decision-making, control, curiosity and self-confidence. There are 10 items for each subscale. Career adaptability enables individuals in responding to new environmental demands without passively waiting for organizational inputs respond in self-correcting and active ways. Savakis (2005) defines career adaptability as the enjoyment of attitudes, competencies and behaviors that make individuals best co-ordinate with their occupational environment.

Career indecision inventory. Career Indecision Inventory developed by Osipow, *et al*. (1976) is preferable in most of the studies on career indecision. It is composed of 18 items. The first two items measure decision-making and items 3-18 measure indecision (Karimi, 2008). Various studies have defended the reliability and validity and efficiency of this inventory (Osipow, *et al*., 1976). Karimi (2008) has translated the inventory and reported its reliability by alpha coefficient 0.83 (Zamani, 2006).

RESULTS AND DISCUSSION

As mentioned earlier, for the purpose of evaluating the reliability of Purposive Career Behavior Scale Cronbach's alpha was applied. The Scale consisted of 30 items which were answered by 67 subjects. According to Table 1 its total amount of Cronbach's alpha is 0.93 showing a very high and suitable amount. Since the removal of any of the items did not cause a significant increase in the level of reliability, all the items were considered valid and reliable.

Table 1: Reliability of Purposive Career Behavior Scale by test-retest.

alpha	SD	Mean	Sub. No.	Test
0.93	16.67	112.55	67	test
0.89	15.18	110.75	67	retest

Table 2 shows the reliability amounts of the Scale with regard to the removal and maintenance of any of the items.

According to Table 2, only with elimination of items 12 and 13 will result in an increase in Cronbach's alpha which is representative of the scale's reliability. Given that this increase does not cause a significant impact on the total amount of alpha (0.003 increased in reliability in case of item (Yousefi, 2011) is removed, and 0.005 increase in reliability in case item (13) is removed), the elimination of any of the two items is not recommended. Finally, analysis of the reliability reveals that Purposive Career Behavior Scale enjoys suitable reliability.

To determine the correlation between 'Career Adaptability Inventory' and 'Career Indecision Inventory' subjects' total ranking was considered and Spearman correlation coefficient was recruited. According to Table 3, there is a significant negative correlation between Purposive Career Behavior Scale and Career Indecision Inventory (-0.261) indicating the divergence of these two questionnaires.

The correlation between the two questionnaires was calculated through Spearman correlation coefficient. According to the results of Table 4, there is a significant positive correlation between Purposive Career Behavior Scale and Career Indecision Inventory and thus are convergent. The correlation between the two questionnaires is 0.482.

Table 2: Scale reliability for each studied item.

Item	Mean by the elimination of the item	Variance by the elimination of the item	Corrected items – Total correlation	Squared multiple correlation	Cronbach's alpha by the elimination of the item
1	108.53	262.11	0.467	0.668	0.930
2	108.65	262.47	0.526	0.690	0.929
3	108.71	251.73	0.728	0.854	0.926
4	108.98	256.29	0.627	0.831	0.928
5	108.31	260.64	0.620	0.705	0.928
6	108.56	260.73	0.611	0.744	0.928
7	108.68	260.91	0.501	0.746	0.929
8	108.92	260.46	0.416	0.706	0.931
9	108.44	266.49	0.420	0.704	0.930
10	108.65	260.81	0.574	0.697	0.929
11	108.82	268.72	0.329	0.490	0.931
12	108.28	272.75	0.130	0.539	0.934
13	108.43	275.97	0.024	0.580	0.936
14	108.91	259.63	0.609	0.836	0.928
15	108.88	262.08	0.515	0.795	0.929
16	108.46	261.98	0.561	0.703	0.929
17	108.92	260.16	0.453	0.561	0.930
18	108.01	254.46	0.603	0.704	0.928
19	108.91	261.08	0.582	0.709	0.929
20	108.01	258.13	0.654	0.762	0.928
21	108.89	259.48	0.581	0.754	0.928
22	108.25	262.67	0.557	0.826	0.929
23	108.76	257.48	0.649	0.770	0.928
24	108.62	258.48	0.642	0.754	0.928
25	108.92	250.16	0.827	0.886	0.925
26	108.67	253.43	0.737	0.821	0.926
27	108.74	256.46	0.676	0.758	0.927
28	108.22	254.39	0.605	0.625	0.928
29	108.44	263.01	0.557	0.690	0.929
30	108.34	259.32	0.566	0.767	0.929

Table 3: Relationship between purposive career behavior and career indecision.

Career Indecision	Purposive Career Behavior			
-0.261*	1	correlation coefficient	Purposive Career Behavior	Spearman correlation coefficient
0.048	-	Sig. level		
58	58	Number		
1	-0.261*	correlation coefficient	Career Indecision	
-	0.048	Sig. level		
58	58	Number		

* Significant correlation with a less than 5% probability of error.

Table 4: Relationship between purposive career behavior and career adaptability.

Purposive Career Behavior	Career Adaptability			
0.482**	1	correlation coefficient	Career Adaptability	Spearman correlation coefficient
0.000	-	Sig. level		
58	58	Number		
1	0.482**	correlation coefficient	Purposive Career Behavior	
-	0.000	Sig. level		
58	58	Number		

** Significant correlation with a less than 1% probability of error.

Finally, the correlation between Purposive Career Behavior and Career Adaptability was calculated. According to the results of Table 5, there is a significant positive correlation between Purposive Career Behavior Scale and Career Adaptability Inventory and thus are divergent.

Table 5: Relationship between adaptability and indecision.

Indecision	Adaptability			
-0.578***	1	correlation coefficient		Spearman correlation coefficient
0.000	-	Sig. level	Adaptability	
58	58	Number		
1	-0.578***	correlation coefficient		
-	0.000	Sig. level	Indecision	
58	58	Number		

*** Significant correlation with a less than 1% probability of error.

Purposive career behavior is a key concept in Theory of Action. Theory of Action is a comprehensive view of 'career behavior' describing a stage of goals' connection to behaviors (Spector, 2003). Valach *et al.* (2004) has defined 'purposive career action' as an orientation towards the individual and participation and forecasting purposes, and trying to achieve the purposes. The term 'action' is reflective of purposive behavior based on one's will, and somehow refers to the dynamic processes that occur in the selection and development of career that can be used by agentic people (McMahon and Patton, 2006). In fact, the result of purposive career activities character is self-organizing activities, interests, values and ability to deal with life roles for more stability and strength of character main focus would be on development (Sharf, 2006). Goal-oriented action can be interpreted regarding three perspectives: Obvious behavior, conscious understandings, or internal processes and social meaning.

This study aimed to develop and determine the validity and reliability of Purposive Career Behavior Scale in M.Sc.? students of University of Yazd, Iran. The Scale was designed based on 'Theory of Action' in three areas of 'behavioral manifestations', 'internal processes' and 'social meanings'. The Scale consisted of 30 items. To assess its reliability it was first implemented on a sample of 67 subjects and two weeks later a re-test was conducted. The results were analyzed and Cronbach's alpha was applied to assess the reliability of the questionnaire. Alpha coefficient was 0.93. To assess the reliability from the viewpoint of the evaluators as well as correlation with different purposive career behavior and career indecision, the Scale was conducted among a sample of 58 subjects. The results showed that the Scale enjoyed a good reliability and its correlation with Career Indecision Inventory was negatively significant (-0.26), and positively significant with Career Adaptability Inventory (-0.48). Generally, according to the obtained results it is suggested that Purposive Career Behavior Scale enjoys high reliability and suitable validity; moreover, applicable to studies in the field (Young *et al.*, 1996; Valach *et al.*, 2004). It should be noted that the Scale was only conducted Yazd in the range of 24-32 years on students.

It is necessary for future studies to apply the Scale in wider populations and different ranges of occupations.

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