



Career and Talent Development Self-Efficacy Scale: Adaptation and Validation in the Turkish Population

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ABSTRACT

The aim of the study is to adapt and conduct reliability and validity studies of the Career and Talent Development Self-Efficacy Scale. Participants were 1047 students in İstanbul. To assess content validity, expert consultancy was utilized and to assess construct validity confirmatory factor analysis was utilized. Reliability of the scale was examined with Cronbach's Alpha, split-half reliability, test of upper and lower 27% of the groups in terms of item mean differences. Confirmatory factor analysis results showed that chi-square was significant ($\chi^2 = 719.30$, $SD = 130$, $p = .00$); and fit indices were as follows RMSEA = .066, GFI = .93, AGFI = .91, CFI = .93, IFI = .93, NFI = .91, RFI = .90, SRMR = .041. According to the model results provided a good fit to the data and factor structure in the Turkish form was parallel to the original factor structure. In terms of reliability, internal consistency reliability was .92 and split-half reliability was .86. Furthermore, corrected item total correlations were ranged between .49 and .67 and all the differences between upper and lower 27% groups were significant. The results of the analysis supported the conclusion that the Turkish form of Career and Talent Development Scale is a reliable and valid measurement tool.

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Keywords:

Career and talent development, scale adaptation, reliability, validity, factor analysis

1. Introduction

Self-efficacy is a very important concept that affects the individual's career development process. Self-efficacy concept is described by Bandura (1986) as individuals' opinion and consideration of their ability to put in order and make goals of action required to gain performances and tasks (Kennedy & Chen, 2010). To succeed the purpose of self-directed orientation in learning, all students need to have confidence in their ability to learn, to solve problems, and to make decisions. Schools have a very important role in helping students to develop these vital "life skills" and values, and in promoting students' positive beliefs in their own efficacy (Yuen et al., 2003).

Hackett and Betz (1981), who referenced Bandura's (1977) self-efficacy theory, offer the career self-efficacy term. Career self-efficacy is a pupil's level of confidence about unfasten topic linked to following career planning. Betz and Hackett (1997) arrange fifteen years of concern literature and meta-analyses and verify that career self-efficacy could be used to effectually predict the choosing of academic and following career, academic performance, and whether people attach to their chosen career field (Mao, Hsu, & Fang, 2012).

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All young people must comprehend the link between their school work and the real world and their future goals (Niles & Trusty, 2004; Schaefer, Rivera, & Ophals, 2010). The people who have positive work habits about their daily routines and works with workplace related will be more succeeding (Lapan, 2004; Yuen et al., 2010). The concept of career and talent development states a positive approachment to service young people reinforce and perform the optimum use of their abilities, with particular reference to (but not restricted to) preparation of specific expert skills (talents) necessary for working in a particular career field (Yuen et al., 2010).

1.1. Career Development

According to National Association of Career Development (2012), career development is a continuous life process through activities which individuals can explore, make decisions, and assume a variety of roles. Careers are formulated by the continuous evaluation of personal goals and the perception, assessment, and decisions regarding opportunities to achieve those goals. Career development occurs as educational and business pursuits interact with personal goals. It continues over the life span. Career development is the total integration of psychological, sociological, educational, physical, economic, and chance factors that combine to influence the nature and significance of work in the total life span of any given individual (Connell, 2011).

Career development that progresses during a person's life, starts in early childhood. (Super, Savickas, & Super, 1996). According to Super (1990) and Super et al. (1996), the early stage of an individual's life can be characterized by the growth (ages 4 to 13) and exploration (ages 14 to 24) stages of the career development process. Throughout these developmental phases, young people begin to develop their career concept that involves being more realize of their interests and abilities, and they begin to use the information they have about themselves and the world of work to make indefinite decisions about their following educational and occupational goals. In course of critical middle grades times, young people require occasion to procure more self-awareness, to have more knowledge data about their academic career process alternative, and develop the ability and talent. They will be in need of to arrives purposes about their days to come (ASCA, 2005; Campbell & Dahir, 1997; Lapan, 2004; Schaefer, Rivera, & Ophals, 2010; Solberg, Howard, Blustein, & Close, 2002; Trusty, Niles, & Carney, 2005).

The literature of career development has emphasized the significance of multicultural perspective to the career counseling process (Flores & Heppner, 2002; Leong & Brown, 1994; Marsella & Leong, 1995; Melvin, Galles, & Lenz, 2012). Therefore, the researcher tried to adapt to Turkish Culture to Career and Talent Development Self-Efficacy Scale which was developed for the Chinese students originally.

1.2. Talent Development

Talent and talent development have been investigated by a lot of researchers. There are several theories about talent and talent development (e.g. Bloom, 1985; Gagne. 2003). In Bloom's (1985) model of talent development, immensely talented people in six fields are examined. These fields are two in the arts (sculptors and concert pianist), two in sports (world-class tennis players and Olympic swimmers), and two in the academic field (mathematicians and neurologists). According to Bloom and his associates, best education for talent development consist of three phases. In the course of the first phase, young people are guided to get stuck on with a subject, idea or discipline. The second phase contains education in the skills, knowledge, and values of the domain. In the final phase, the talented young person find out to perform his or her ambition, and deep knowledge to create an unexampled manner, and message, and to explore authentic problems (Subotnik, Edmiston, Cook, & Ross, 2010). Gagne (2003) defined talent development as a dynamic continuum which inherent skills are transformed into aptitudes that are proper and required for occupations. According to Gagne, transformation emerges result of both training and self-learning (Yuen, Gysberg, Chan, Lau, & Shea, 2010).

Examining the literature about career and talent development, it is lacking on the availability of both a sound theoretical basis and scale for evaluation of applications for developing interventions aimed at adolescent career development. Thus, hoped that this study would provide a foundation for the derivation of a theory-based approach to researching and understanding adolescent career and talent development and

helping to enhance motivate for their career and talent development self-efficacy. So the aim of this present study is examining the psychometric properties of the Turkish version of the Career and Talent Development Self-efficacy Scale for adolescents.

2.Method

2.1. Participants

Participants of the study consisted of 1047 adolescent in Istanbul. Among the participants, 46% ($N = 477$) of them were female and 54% ($N = 570$) of them were male. All the participants, participated voluntarily in the study. Their ages were between 13-18. The perceived socio-economic status was 2,5% very high-level income, 31% high level income, 57% mid-level income, 7% lower-level income, and 2,5% very lower-level income.

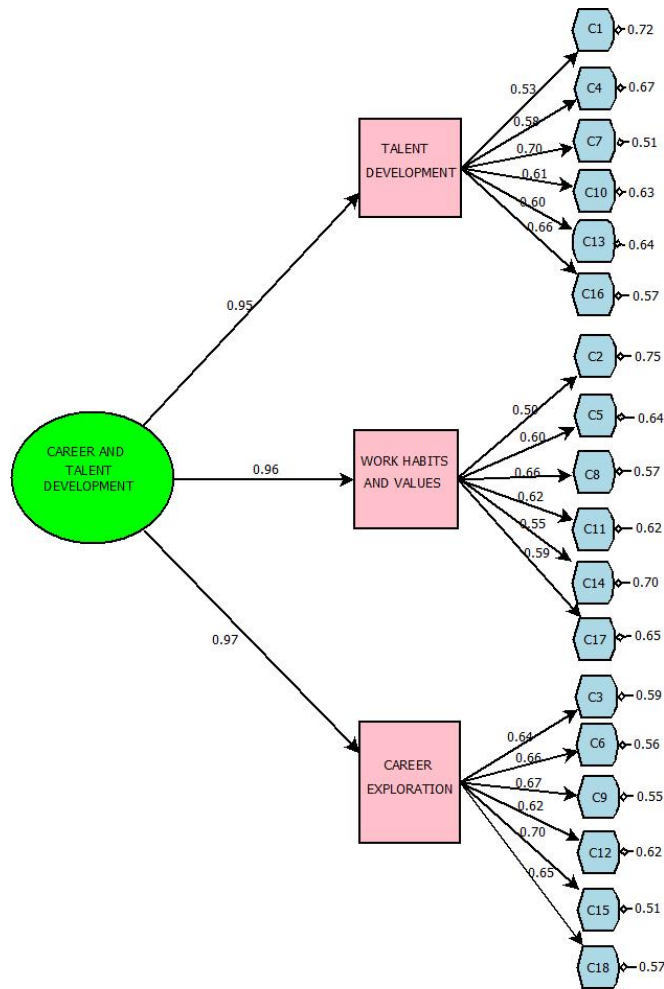
2.2. Procedure

At first, the researcher kept in touch with the researcher who developed the scale, Mantak Yuen, via e-mail to gain necessary permission. A scale adaptation study contains several steps that should be carefully performed because of the contextual differences between cultures. The precision is especially important in the translation phase. If the adapted form of a scale lacks clarity or it is not realistic within a given social context, reliability and validity will be affected and using these types of measurement tools will be problematic. For the scale development studies, it is suggested that construct validity and content validity should be assessed to show scale validity. Content validity was assessed thorough expert opinions and construct validity was assessed through CFA. In addition, reliability was assessed with Cronbach's alpha, split half reliability, corrected item total correlations, and comparing 27% upper and lower groups with t-test methods were employed (Büyüköztürk, 2010; Çokluk, Şekercioğlu, & Büyüköztürk, 2010; Spahi, Yurtkoru, & Çinko, 2008). In addition, Şimşek (2007) asserts that factor structure that is identified through exploratory factor analysis can be analyzed with confirmatory factor analysis to understand the point where theory and "reality" diverge. Within the construct validity assessment, confirmatory factor analyses conducted to test the original factor structure. Reliability of the scale assessed through Cronbach's Alpha, split half reliability, corrected item total correlations and t-test. Reliability and validity analyses conducted via SPSS 15 and LISREL 8.51 (Jöreskog & Sörbom, 2001).

3.Results

3.1. Construct Validity

3.1.1. Confirmatory factor analysis. Within the construct validity studies, confirmatory factor analysis was used to investigate three factor structure of Career and Talent Development Self-Efficacy Scale. The results showed that χ^2 was significant ($X^2 = 719.30, DF = 130, p = 0.00$) and the fit indices were as follows $RMSEA = .066, GFI = .93, AGFI = .91, CFI = .93, IFI = .93, NFI = .91, RFI = .90$ and $SRMR = .041$. According to the generally accepted criteria model provided a good fit. Factor loadings are presented in Figure 1.



Chi-Square=719.30, df=130, P-value=0.00000, RMSEA=0.066

Figure 1. Path Diagram and Factor Loadings Related to the Turkish Form of Career and Talent Development Self-efficacy Scale.

3.2. Reliability

Reliability of the scale was assessed through several estimates; namely, Cronbach's alpha, split-half reliability, corrected item total correlation, and t-test analysis to test upper and lower 27% groups in terms of mean differences. Internal consistency reliability of the scale was found as .92. Considering that the threshold suggested for a measurement tool to be used in scientific studies is .60 (Büyüköztürk, 2010), present scale has satisfactory reliability level. Split-half reliability was .86, and corrected item total correlations were ranged between .49 and .67. Finally, there was a significant difference in the scores of upper and lower 27% groups which were formed according to total score. T scores ($DF = 564$) ranged between 19.18 ($p < .001$) and 25.53 ($p < .001$). Hence, different estimates, internal consistency reliability, split-half reliability, corrected item total correlation, and t-test, support the satisfactory reliability level of the present scale. Findings are reported in Table 1.

Table 1.Items, Corrected Item Total Correlations, Cronbach's Alpha, T-test Results for Turkish Form of Career and Talent Development Self-Efficacy Scale

Number of Item	Corrected Item-Total Correlation				T test
	All of the Scale	TD	WHV	E	
1	.50	.51			21.30* **
4	.55	.52			20.04* **
7	.67	.60			25.53* **
10	.58	.48			19.51* **
13	.58	.54			23.79* **
16	.62	.54			25.02* **
2	.49		.40		19.18* **
5	.58		.52		19.19* **
8	.63		.59		20.95* **
11	.59		.55		20.26* **
14	.52		.46		21.11* **
17	.55		.50		20.30* **
3	.63			.59	24.09* **
6	.64			.61	21.96* **
9	.64			.56	22.63* **
12	.59			.55	21.84* **
15	.67			.64	24.22* **
18	.62			.59	20.55* **
Cronbach's Alpha	.92	.78	.76	.82	
Split-Half	.86	.76	.74	.79	

¹n=1047 ²n1 = n2 =283 ***p<.001

Note: TD: Talent Development, WHV: Work Habits and Values, CE: Career Exploration

4. Discussion

The aim of the present study was to adapt Career and Talent Development Self-Efficacy Scale into Turkish and to conduct reliability and validity studies. According to confirmatory factor analysis results model provided a good fit to the data and the original factor structure was similar to adapted version. Internal

consistency, split-half reliability, item total correlation and t-test methods were employed to assess scale reliability. These analyses yielded high and significant results, which lead to the conclusion that the scale is a reliable one. Considering the suggestion that minimum reliability level for a measurement tool used in scientific studies is .70 (Tezbaşaran, 1996), it can be suggested that the present scale has enough reliability level. Items with .30 and higher loadings are suggested to have ability to differentiate individuals on the variable assessed (Büyüköztürk, 2004). Thus, it can be concluded that the present scale has satisfactory item total correlations. T-test analysis showed that upper and lower 27% groups were significantly different from each other in terms of items and subscales.

All the results of the reliability and validity analysis support the Turkish form of the Career and Talent Self-Efficacy Scale is a reliable and valid measurement tool. This study has several limitations. First, the research has limited data only collected from 13-18 age students. This scale's reliability and validity can be examined by applying in different aged adolescents. This research should be repeated with different individuals, including adolescent participants in this study who live in other regions, have other races, grown up different environmental conditions, and have different family attitudes. In this way, researchers can reach valid information about adolescents.

There were some limitations in this study. First, the age ranges of samples were restricted. Second, the sample groups are only of Turkish adolescents in school. Further studies of adolescents randomly should be selected from diverse age groups, cultural backgrounds, educational backgrounds, and geographical areas should be undertaken to build the validity and reliability database of the Career and Talent Development Self-efficacy Scale. In conclusion, this research is an important first step in measuring a career and talent development self-efficacy among adolescents. This study was limited by our focus on youths residing in a single geographic region. And while we believe that respondents' subjective experiences are important to understand, this focus also has limitations, in that objective measures/observations (e.g., of career and talent development self-efficacy) might reveal a different pattern of results.

There can be some suggestions as a result of validity and reliability studies. Despite this initial adaptation of the Career and Talent Development Self-efficacy Scale suggests that it seems both a reliable and a valid measure of career and talent development self-efficacy, some important points indicate areas that require further research. First, the current study did not include behavioral or experimental correlates. For example, the generalizability of our findings is limited by our recruitment of only adolescent students whose age ranged from 13 to 18. Thus, the next goal will be to obtain a relatively heterogeneous group of participants rather than only groups of students in Turkey.

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Appendix A: Items of the The Turkish Form of Career and Talent Development Self-Efficacy Scale

1	Akademik konulardaki yeteneklerimi keşfedebilirim.
2	Bağımsız çalışabilirim.
3	Kariyer hedeflerimi ve bu hedeflere giden yolları keşfedebilirim.
4	Ders dışı etkinlikler aracılığıyla, güçlü yönlerimi tanıyabilirim.
5	Sorumluluk gerektiren görevleri üstlenebilecek cesaretim var.
6	Seçeğim kariyere göre ilgi alanları geliştirebilirim.
7	Belirlediğim akademik hedeflere ulaşabilirim.
8	Verilen görevleri düzenli yapabilirim.
9	Farklı meslekler için gereken özellikleri anlayabilirim.
10	Eğlence faaliyetlerini, ilgi alanlarıma göre seçebilirim.
11	Verilen işleri zamanında bitirebilirim.
12	Gördüğüm derslerin, kariyer gelişimime olan katkısının farkındayım.
13	Deneyimlerimi zenginleştirmek için çeşitli etkinliklere ve yarışmalara aktif katılabilirim.
14	Başkalarına yardım için sorumluluk alabilirim.
15	Okul yaşamım, gelecekteki eğitimim ile kariyerim arasındaki ilişkiyi anlayabilirim.
16	Ders dışı etkinliklerde belirlediğim hedeflere ulaşabilirim.
17	Eğitim, oyun ve dinlenme zamanlarımı kendim belirleyebilirim.
18	Sevdiğim ve yapabileceğime inandığım mesleği, çevreme tanıtabilirim.