

Difficulties in Decision-making: Career Choice for Adolescent Students

Abstract

One of the most crucial decisions that an adolescent has to make in their early life is choice of courses/majors that lead them to desirable careers. The present study focuses on assessing Career Decision-Making Difficulties across three education levels in school and college students. The sample comprised of 410 students from 9th, 11th and 13th year classes, with ages ranging between 14-20 years. Cross sectional research design was used to collect data from public and private sector schools and colleges of Lahore, Pakistan, using convenient sampling. Career Decision-Making Difficulties Questionnaire was the assessment tool to collect data which was analyzed through descriptive statistics and One way Independent sample ANOVA and Post hoc analysis. Results from one way ANOVA revealed that ninth class students reported greater difficulties in Career Decision-Making as compared to 11th and 13th grade students.

Keywords: *Difficulties in decision-making. Career choice, Adolescents*

INTRODUCTION

In Pakistan, around two hundred thousand students pass their matriculation exam every year (Educational Survey, 2015). This huge number of students then struggles with career decision, by thinking about the career path they have to choose. This crucial decision becomes very difficult because whole future of an individual is dependent on this decision such as the decision about what field to choose for studies, what career to opt for, or what institution to join for professional studies. Choosing a career is a complex process and that every adolescent goes through while making career decisions; they need help either of parents, friends or professional career counselors in choosing their career path (Mau, 2011). The current research focuses on exploring what difficulties adolescents go through while making career decisions. Consistent with developmentally focused career theories (Gottfredson, 1981), Career Decision-Making process commences in elementary school, when kids develop their interests and start to see how their capacities identify with the domains of work.

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It proceeds for the duration of the life expectancy (Hartung, Porfeli, & Vondracek, 2005), though middle and late adolescents are not much aware about career choices (Creed, Patton, Prideaux, 2006; Whiston & Keller, 2004). Career choices are not made simply by all young adolescents; most of them go through stages of uncertainty while making a career choice (Gysbers, 2001). Career choices can have long term consequences, as students become obliged to particular career paths for which they need long duration for studies before getting into a profession. A student, thus, is vulnerable in facing certain difficulties during the process of career selection (Gianakos, 2001). Gati, Krausz and Osipow (1996) developed the theoretical categorization of Career Decision-Making difficulties. Gati et al. (1996) accentuate that like other Decision-Making processes, Career Decision-Making process has also certain characteristics, which implies that (i) the procedure includes a person who (ii) picks what he/she feels is the most suitable from different career options (iii) based on evaluation and assessment of available options, aware of the way that these evaluations are assessed both by the characteristics of the educational program/profession and the person.

Gati et al., (1996) proposed a categorization which grasps three major categories, which are further divided into 10 specific classifications of difficulty. The primary significant classification, i.e. Lack of Readiness, incorporates three kinds of difficulty that may begin before any Decision-Making process i.e: (a) lack of motivation to engage in the Career Decision-Making process; (b) general indecisiveness concerning all types of decisions; and (c) dysfunctional beliefs, including irrational expectations concerning the Career Decision-Making process. The two other major difficulties of classifications, i.e. lack of information and inconsistent information, incorporate those difficulties that may emerge during the actual Decision-Making process. Lack of Information incorporates four classes of difficulties: "(a) lack of knowledge about the steps involved in the process, (b) lack of information about the self, (c) lack of information about the various alternatives (i.e., occupations), and (d) lack of information about the ways of obtaining additional information". The third main category, Inconsistent Information incorporates three classifications of difficulty "(a) unreliable information, that is, difficulties related to unreliable or contradictory information (e.g., above average high school grades, but a low SAT score); (b) internal conflicts, that is, conflicts within the individual, such as contradictory preferences or difficulties concerning the need to compromise; and (c) external conflicts, that is, conflicts involving the influence of significant others" (Pecjak, & Kosir, 2007).

Gysbers, (2001) has also demonstrated that boys and girls significantly differ on categories of Career Decision-Making difficulties. Singaravelu, White and Bringaze (2005) demonstrated that customary female role attributes are continually varying,

implying that education has become equally important for women. Boys reported greater difficulties than girls in external conflicts and dysfunctional beliefs (Gati & Saka, 2001; Tien, 2005; Zhou & Santos, 2007). Tien (2005) found that Career Decision-Making Difficulties caused by dysfunctional thoughts, conflicting conditions, and means of gathering information are some of the concerns for individuals both of different age groups and different stages of Career Decision-Making process. Kleiman, Gati, Peterson, Sampson, Reardon and Lenz (2004) demonstrated that individuals on early stages show higher levels of difficulties regarding future career, compared to individuals on the final stages of decision process. In the same way, those with a higher level of decision difficulties regarding their future career also show a higher degree of dysfunctional thinking related to choosing a career.

A career should be chosen according to one's interests and the scope of the career that leads them to a happy and prosperous future. However, in Pakistan, students are not aware of options available in different fields of education and there is no guidance and coaching for students where they can determine their aptitude, interests and better career opportunities. Beginning a career is the turning point of one's life which is decided through previously explored factors influencing career decisions among secondary school youth (Ahmed, 2008). At a certain stage of a student's life they have to select a subject or field that is a pre-requisite of the career that they want to join in future. This decision has a very important role because it affects their remaining professional life. Students may choose careers according to their interests, demand of time, educational background, socio-economic background, opportunity, personality/gender, motivation and environment (Shahzad, Zahra & Ahmed, 2014). At this point, students face career decision-making, as a vast majority of them have no knowledge about existing options, have no vision of what they could be, have no proper guidance/coaching on career decision-making. Thus the main goal of the study was to explore the kind of difficulties that are common in the Pakistani perspective. By determining the difficulties, training programs and training modules can be developed to help students make better career decisions.

RESEARCH METHODOLOGY

Sample

The sample comprised of 410 young adolescents calculated through G. power software (Faul, Erdfelder, Buchner & Lang, 2009) of class 9th, 11th and 3rd year, age range 14-20 years, ($M=16.51$, $SD=1.67$) from public and private schools and colleges of Lahore. Schools and colleges were selected through simple randomization using random number table. Convenient sampling technique was used to collect data.

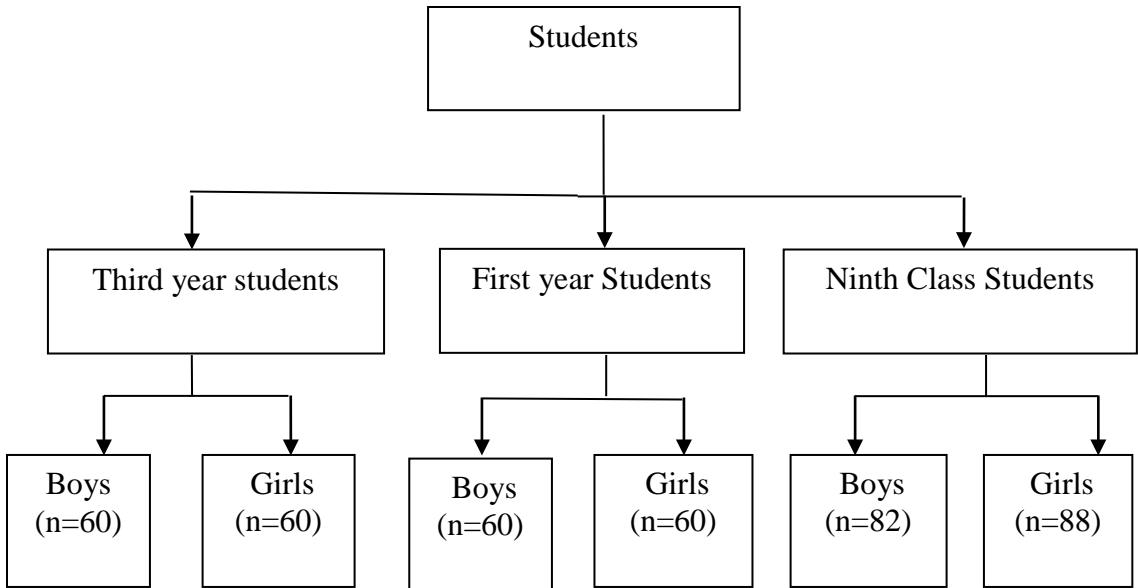


Figure 3.1 Sample Distribution of groups

Measures

Demographic Information Sheet. A self-prepared demographic information sheet was used to solicit information about sample characteristics such as mean age of the sample was 16.51 years, $SD=1.97$, 230 students were taken from public sector schools and 180 from private sector schools, 70% of students chose their subjects, 5.4% agreed with their friends, 21.2% agreed with what their parents wanted; 1.7% what their teachers wanted and 1.5% chose what their siblings wanted.

Career Decision-Making Difficulties - Questionnaire (Gati & Saka, 2001). The 34-item version of the CDDQ (Gati & Saka, 2001) was used to assess difficulties in career decision-making. The CDDQ contains 10 difficulty categories embedded in three major difficulty categories: Readiness (lack of motivation, general indecisiveness, and dysfunctional beliefs), Lack of Information (the stages of Career Decision-Making process, self, occupations, and ways of obtaining additional information), and Inconsistent Information (unreliable information, internal conflicts, and external conflicts). The CDDQ uses a 9-point rating scale ranging from 1 (does not describe me) to 9 (describes me well). The internal consistency ranged from .58 for internal conflicts to .85 for all subscales of Career Decision-Making process (Gati & Saka, 2001). This scale was used after translating into Urdu through complete procedure of mapi guidelines (Mapi research institute, 2007).

Procedure

The topic was approved in the Departmental Doctoral Program Committee meeting; permission was taken from the author to use the scale. The scale was then translated into Urdu through proper use of Mapi guidelines (Mapi research institute, 2007) and an authority letter was issued by the Institute of Applied Psychology, University of the Punjab, Lahore. Career Decision-Making Difficulties Questionnaire (CDMQ) was administered by the researcher to participants. Participants responded to the questionnaire during a class room in their free time. The technique used was group administration and participants were given relevant instructions and explanation regarding the questionnaire's purposes and importance including assurance of the confidentiality of their information, before administration of the questionnaire,. The questionnaires were given to students and the students' queries, were answered. There was no time limit but the approximate time taken to fill the questionnaire was 20 minutes approximately,

Ethical Considerations

In order to conduct this research, following ethical considerations were kept in mind.

1. The study was approved by the Departmental Doctoral Program Committee (DDPC).
2. Permission was taken from concerned authorities for data collection using the authentication letter provided by the Institute of Applied Psychology, University of the Punjab.
3. The scale was used after getting permission from the author.
4. Consent was taken from participants and they were allowed to withdraw from participation and terminate at any point of study they wished to.
5. The participants were assured that the information received would be held confidential and would not be used for any purpose other than this research.
6. Results were reported accurately.

RESULTS & DISCUSSION

Data was analyzed through Descriptive Analysis, One way ANOVA and Post hoc analysis. Initially, assumptions of normality were checked through SPSS by P-P, Q-Q plots and it was observed that data was normally distributed; therefore parametric tests were used on this data.

Table 1

Descriptive Statistics and Reliability Analysis for Time Perspective Inventory, General Decision-Making Styles Scales and Career Decision-Making Difficulties Questionnaire(N=410)

Scales	<i>a</i>	<i>k</i>	Range		Cut off points	<i>M</i>	<i>SD</i>
			Potential	Actual			
Career Decision-Making Difficulties Questionnaire	.93	32	3.2-28.8	7.6-28.6	21	20.04	4.99
Lack of Motivation	.65	3	3-27	3-27	18	16.95	6.97
General Indecisiveness	.49	3	3-27	4-27	22	21.03	5.18
Dysfunctional Beliefs	.54	4	4-36	11-36	32	30.55	5.18
LOI about Career Decision-Making Process	.81	3	3-27	3-27	21	19.32	6.29
LOI about Self	.80	4	4-36	4-36	25	23.31	9.06
LOI about Occupations	.78	3	3-27	3-27	21	19.08	6.56
LOI about Obtaining Additional Information	.73	2	2-18	2-18	14	12.45	4.57
Unreliable Information	.80	3	3-27	3-27	19	16.99	7.35
Internal Conflicts	.79	5	5-45	5-45	30	28.87	11.27
External Conflicts	.74	2	2-18	2-18	13	11.88	5.09
Lack of Readiness	.64	10	3.33-30	11.67-30	23	22.84	4.02
Lack of Information	.91	12	3-27	3-27	20	18.54	5.74
Inconsistent Information	.89	10	3.33-30	3.33-30	20	19.25	7.21

Note. *a*=Cronbach alpha reliability, *k*= no. of items, *M*= Mean, *SD*= Standard deviation, LOI= Lack of information

Table 1 presents the means, standard deviation, range, maximum minimum scores and Cronbach's alpha reliabilities of the 10 scale scores of Career Decision-Making Difficulties questionnaire, the three major categories and the overall scores. Cronbach's alpha reliabilities of the ten subscales varied, ranging from *a*=.49 for the scale of dysfunctional beliefs to *a*=.81 for lack of information about Career Decision-

Making process. Among the three major categories, lack of readiness had the lowest reliability i.e. $\alpha=.64$ and the reliability of two other scales were much higher, $\alpha=.91$ for Lack of Information and $\alpha=.89$ for Inconsistent Information. The reliability of the questionnaire as a whole was $\alpha=.93$.

Table 2

Descriptive Statistics of Career Decision-Making Difficulties for Ninth, First Year and Third Year Students (410)

Variables	9 th class (n=170)		1st year class (n=120)		3 rd year class (n=120)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Career Decision-Making difficulties						
Lack of motivation	18.68	6.64	14.01	6.56	17.43	6.93
General indecisiveness	21.72	4.80	20.41	5.03	20.68	5.75
Dysfunctional beliefs	31.61	3.87	29.87	6.20	29.71	5.45
LOI about CDM process	21.24	4.98	16.89	6.77	19.03	6.60
LOI about self	26.71	7.21	18.51	8.72	23.31	6.93
LOI about occupations	21.28	5.01	16.05	6.95	18.99	6.91
LOI about obtaining additional information						
Unreliable information	20.10	5.39	12.03	6.41	17.53	8.02
Internal conflicts	33.59	9.21	21.12	10.21	29.93	10.87
External conflicts	13.67	4.05	8.46	4.85	12.77	5.01
Lack of readiness	24.00	3.57	21.43	3.77	22.61	4.39
Lack of information	20.71	4.34	15.60	5.84	18.41	6.08
Inconsistent information	22.45	5.74	13.87	6.00	20.08	7.17
Total CDDQ	22.22	3.94	16.83	4.28	20.17	5.29

In table 2 Descriptive statistics for Career Decision-Making Difficulties were calculated across three groups i.e 9th, 11th and 13th year students. Table 2 presented mean and standard deviation for Career Decision-Making Difficulties for ninth, first year and third year students. Mean score through descriptive analysis revealed that 9th class students scored higher on all subcategories and major categories of Career Decision-Making Difficulties as compared to first year and third year students and third year students scored higher than first year students (see mean scores). Students in all three categories scored higher on category of Lack of Readiness which means they have more difficulties in lack of motivation, general indecisiveness and dysfunctional beliefs

Table 3

One way ANOVA for Career Decision-Making Difficulties in 9th Class, First year and Third year students (N=410)

Variables		Sum of Squares	df	Mean Square	F	η^2
Lack of Readiness	Between groups	474.63	2	237.31	17.39***	.07
	Within groups	6150.68	407	15.11		
	Total	6625.32	409			
Lack of Information	Between groups	1838.36	2	919.18	33.84***	.13
	Within groups	11665.04	407	28.66		
	Total	13503.40	409			
Inconsistent Information	Between groups	5300.06	2	2650.03	75.11***	.24
	Within groups	15997.33	407	39.30		
	Total	21297.40	409			
Total CDDQ	Between groups	2046.15	2	1023.07	59.21***	.20
	Within groups	8153.80	407	20.03		
	Total	10199.96	409			

Note. *** $p < .001$. ** $p < .01$.

Results were compared and analyzed for three major groups of students of different education level on Career Decision-Making Difficulties questionnaire. One way ANOVA was conducted to analyze the differences. Results demonstrated that there were significant differences among ninth class, first year and third year students on lack of readiness ($F=17.39$, $df=2$, 407 , $p < .001$), lack of information ($F=33.84$, $df=2$, 407 , $p < .001$), inconsistent information ($F=75.11.61$, $df=2$, 407 , $p < .001$) and overall Career Decision-Making Difficulties ($F=59.21$, $df=2$, 407 , $p < .001$)

Table 4

Post hoc Analysis for Differences in 9th Class, First year and Third Year Students (N=410)

DV	Career Decision-Making difficulties		Mean Difference	S.E	95% Confidence Interval	
					Lower Bound	Upper Bound
Lack of readiness	Ninth class	First year	2.57***	.440	1.533	3.61
	Ninth class	Third year	1.396	.485	.250	2.54
	Third year	First year	1.17	.528	-.07	2.42
Lack of information	Ninth class	First year	5.10***	.629	3.62	6.59
	Ninth class	Third year	2.30**	.647	.773	3.83

Inconsistent information	Third year	First year	2.80**	.770	.987	4.62
	Ninth class	First year	8.58***	.703	6.92	10.24
Total CDDQ	Ninth class	Third year	2.37**	.789	.515	4.24
	Third year	First year	6.20***	.854	4.19	8.22
	Ninth class	First year	5.38***	.494	4.22	6.55
	Ninth class	Third year	2.053**	.570	.7076	3.40
	Third year	First year	3.335***	.622	1.86	4.80

Note. *** $p < .001$. ** $p < .01$. * $p < .05$.

Table 4 presented post hoc analysis to analyze differences between groups. Results of post hoc analysis revealed that ninth class students scored higher on three major categories i.e. lack of readiness, lack of information and inconsistent information and overall Career Decision-Making Difficulties as compared to first year and third year students and third year students scored higher on all these categories except lack of readiness. Furthermore, ninth class students also scored higher on subcategories of Career Decision-Making Difficulties i.e. lack of motivation, general indecisiveness, dysfunctional beliefs, lack of information about Career Decision-Making process, lack of information about self, lack of information about occupations, unreliable information, external conflicts and internal conflicts and third year students scored higher on these subcategories except lack of motivation and dysfunctional beliefs.

The current study aimed to explore Career Decision-Making Difficulties in students across three different education levels. Findings of the study indicated that students face more difficulties on the category of lack of readiness. These findings are consistent with earlier researches (Gati & Saka, 2001; Tien, 2001; Hijazi, Tatar & Gati, 2004; Kleiman, Gati, Peterson, Sampson, Reardon & Lenz, 2004; Fabio, Palazzeschi, Levin & Gati, 2014) which also explored Career Decision-Making Difficulties in students of different education levels and found that students showed more difficulty on the category of lack of readiness. The category of lack of readiness contains those difficulties that come before Decision-Making process such as lack of motivation, general indecisiveness and dysfunctional beliefs. If someone scored higher on this category it means that the person has difficulty generally in all kinds of decision-making. Possible explanation for this finding might be that many people have a tendency to be uncertain in different aspects of their lives.

Decisions are often accompanied by hesitation and fear of failure or commitment. Individuals who are by and large uncertain may in this way hesitate or alter their opinion, multiple times, once they have made a decision. At times they may feel they require others to confirm their choice with a specific end goal to feel that they have made the right decision (Gatti & Osipow, 2010). Another reason might be that high score on dysfunctional beliefs depict illogical beliefs and anticipations about career

decisions: for example, the belief that one selects a career once only and that decision is fundamentally a deep rooted and a life time responsibility or that one occupation can satisfy the majority of a man's goals, may block the Career Decision-Making process (Abbasi, & Sarwat, 2009). The possible explanation for high score in lack of motivation might be that students show unwillingness in making a decision because they are not prepared for it at this point in time. This may indicate that all students were science students and they have already chosen a field; it may also be that they believe that time will help them make a better decision and there is no need to spend time and energy in trying to make a career decision. It was hypothesized that there is likely to be a difference among three education levels or across three age groups in Career Decision-Making difficulties. Findings indicated that ninth class students have more difficulties in Career Decision-Making as compared to first year and third year students. These findings are consistent with earlier studies (Kleiman, Gati, Peterson, Sampson, Reardon & Lenz, 2004; Gati & Saka 2001) which also explored Career Decision-Making Difficulties in young and older students and found that older students face more difficulty than younger ones.

One explanation for these findings might be that these differences are accounted by grade or class-specific characteristics. Students at the earlier stage of education might have not much exposure to career options, opportunities and guidelines which is why they experience more difficulties. According to career maturity theory (Super, 1990) at a younger age, students are not mature enough to make their decision themselves, especially in a culture where parents play the most important role in defining their careers or other choices and this it might be the reason that they experience more difficulties in making career decisions at a younger age/ninth class level. Another finding revealed that third year students have more difficulties as compared to first year students. A possible explanation for this finding might be that as all the students in the sample were science students, they had already chosen science subjects so they might have decided to become doctors or engineers which is why they have fewer difficulties as compared to the other two groups. Similarly, third year students had also chosen science subjects and they were those who did not get admission in medical or engineering and were therefore facing difficulties of Career Decision-Making at this level.

CONCLUSION

Career Decision-Making is an integral skill which is required at each stage of life, from early adolescence onwards. Need of Career Decision-Making becomes vital in the context of Pakistan, where about two hundred thousand students pass their matriculation exam every year and look forward to choosing a career. The present research highlighted Career Decision-Making Difficulties at different stages across three educational levels. Results indicated that ninth class students are facing greater

difficulties regarding Career Decision-Making as compared to first year and third year students, which indicates that there is more need of career counseling at the younger age like 9th grade. This makes more sense in our perspective, since students choose their major at this level, which decides if they go into the engineering or medical lines. Findings also highlighted that public sector students are facing greater Career Decision-Making Difficulties as compared to private sector students. Results imply that there is dire need of career counseling at school and college level, greater attention needs to be paid to 9th graders in public schools. Assistance can be provided through course modules, workshops, or some coaching/counseling at school or individual levels. School counselors can get an understanding of the differences between difficulties arising before engaging in the process of Career Decision-Making and difficulties that arise during the actual process. School counselors can decrease the chance of the emergence of difficulties involving lack of readiness by appropriate preparation, using group (or class) intervention aimed at increasing students' motivation to actively engage in the career decision they are about to make. Instruction about the stages and steps involved in making career decisions may also help decrease the students' general indecisiveness.

REFERENCES

- Abbasi, N. M., & Sarwat, N. (2009). Factors Inducing Career Choice: Comparative Study of Five Leading Professions in Pakistan. Institute of Management Sciences, Bahauddin Zakariya University, Multan, Pakistan.
- Ahmed, M. (2008). An assessment of factors influencing career decision of in-school youths. *Pakistan Journal of Social Sciences*, 5(3), 222-225.
- Callanan, G. A., & Greenhaus, J. H. (1992). The career indecision of managers and professionals: An examination of multiple subtypes. *Journal of Vocational Behavior*, 41, 212-231.
- Creed, P., Patton, W., & Prideaux, L. (2006). Causal Relationship Between Career Indecision and Career Decision-Making Self-Efficacy: A Longitudinal Cross-Lagged Analysis. *Journal of Career Development* 33(1), 47-65.
- Fabio, D. A., Palazzeschi, L., Levin, N., & Gati. (2014). *Journal of Career Assessment*. 1-13. doi: 10.1177/1069072714535031.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149-1160.
- Gati, I., & Saka, N. (2001). High School Students' Career-Related Decision-Making Difficulties. *Journal of Counseling and Development*, 79, 331-340.
- Gati, I., Krausz, M., & Osipow, S. H. (1996). A taxonomy of difficulties in career decision-making. *Journal of Counseling Psychology*, 43(4), 510-526.
- Gati, I., Osipow, S.H. (2004). The structure of vocational interests. *Journal of Career Assessment* 6 (3), 347-364.
- Gianakos, I. (2001). Predictors of Career Decision-Making self-efficacy. *Journal of Career Assessment*, 9(2), 101-114
- Gottfredson, L. S. (1981). Circumscription and compromise: A developmental theory of occupational aspirations. *Journal of Counseling psychology*, 28(6), 545.
- Gysbers, N. C. (2001). School guidance and counseling in the 21 st century: Remember the past into the future. *Professional School Counseling*, 5, 96-105.

- Hartung, P. J., Porfeli, E. J., & Vondracek, F. W. (2005). Child vocational development: A review and reconsideration. *Journal of vocational behavior*, 66(3), 385-419.
- Hijazi, Y., Tatar, M., & Gati, I. (2004). Career Decision-Making Difficulties Among Israeli and Palestinian Arab High-School Seniors. *Professional School Counseling*, 8(1), 64-72. Retrieved from <http://www.jstor.org/stable/42732416>.
- Kleiman, T., Gati, I., Peterson, G., Sampson, J., Reardon, R., Lenz, J. (2004). Dysfunctional Thinking and Difficulties in Career Decision-making. *Journal of Career Assessment*. 12, 312-333.
- Mann, L., Harmoni, R., & Power, C. (1989). Adolescent decision-making: The development of competence. *Journal of Adolescence*, 12, 265-278.
- Mapi research institute. (2007). Process of translation and adaptation of instruments. Retrieved from https://www.researchgate.net/figure/Linguistic-Validation-MAPI-Research-Institute-process-Adapted-from-Mear-I_fig1_8992990
- Mau, J. C. W. (2011). Cultural Dimensions of Career Decision-Making Difficulties. *The Career Development Quarterly*. 53(1).
- McMahon, M., & Patton, W. (1997). Gender differences in children and adolescents' perceptions of influence on their career development. *The School Counselor*, 44, 368-376.
- Pecjak, S., & Kosir, K. (2007). Personality, Motivational Factors And Difficulties In Career Decision-Making In Secondary School Students. *Psychological Theme*, 16(1), 141-148.
- Shahzad, M. N., Zahra, S. T., & Ahmed, M. A. Determinants and Influences on Students' Carrer Choice. *Universal Journal of Management and Social Sciences*, 4(3).
- Singaravelu, H., White, L., Bringaze, T. (2005). Factors influencing international students' career choice: a comparative study, *Journal of Career Development*, 32, 46-59.

- Super, D. E. (1990). A life-span, life-space approach to career development. In D. Brown & L. Brooks (Eds.), *Career choice and development: Applying contemporary approaches to practice* (2nd ed., pp. 197–261). San Francisco, CA: Jossey-Bass.
- Tien, S. H., (2001). Career Decision-Making Difficulties perceived by college students in Taiwan. *Bulletin of Educational Psychology*, 33(1), 87-98.
- Whiston, S.C., & Keller, B.K. (2004). The influences of the family of origin on career development: A review and analysis. *The Counseling Psychologist*, 32, 493–568
- Zhou, D., & Santos, A. (2007). Career Decision-Making Difficulties of British and Chinese international university students. *British Journal of Guidance and Counselling*, 35(2), 219-235.