



The effectiveness of super's theory-based career group counseling in developing self-concept and career decision-making among a sample of gifted students in Jordan

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ABSTRACT

Article History

Received: 10 March 2020

Revised: 8 January 2024

Accepted: 24 January 2024

Published: 25 April 2024

Keywords

Career counseling
Decision-making skills
Gifted students
Group counseling
Jordan
Self-concept
Super's theory.

This study explores the effectiveness of Donald Super's theory-based career group counseling in improving self-concept and career-related decision-making among a sample of gifted students enrolled in King Abdullah II School for Excellence in Jordan. The quasi-experimental study used a total of 56 male and female tenth grade students, who volunteered to participate in the group counseling program. They were randomly distributed into two groups (experimental and control), each consisting of 15 participants. In order to answer the question of the study, a career group counseling program was developed based on Super's theory, and two scales were applied—the Adolescent Self-Concept Short Scale (ASCSS) and the Career Decision-Making (CDM) scale. The career group counseling program was applied to experimental group through 14 sessions (two weekly sessions) each lasting for 90 minutes. The results of the study revealed that there were statistically significant differences at the level of $\alpha = < 0.05$ between the degree of the experimental and control group scores in the post-test on the Adolescent Self-Concept Short Scale and the Career Decision-Making scale in favor of the experimental group, which showed the effectiveness of the program in promoting self-concept and career decision-making.

Contribution/Originality: This study is unique in its application of Super's theory-based career group counseling to gifted students in Jordan using a rigorous quasi-experimental design. By focusing on this specific demographic and employing detailed measurement tools, it provides new insights into the effectiveness of career counseling in enhancing self-concept and decision-making among gifted youths.

1. INTRODUCTION

Given the importance of careers in world societies, surprisingly little attention has been given to career development as an integral part of psychological development among gifted youths. Azzaz (2015) pointed out that awareness among the gifted at an early age helps to determine their educational path, as the formation of professional awareness begins during adolescence and is associated with the search for identity and knowing their goal in life. At this stage, the gifted seek to identify the professions available to them and their suitability. Occupational awareness is one of the factors affecting academic success and professional growth, and the importance of professional awareness is determined by including information and requirements for each profession. This is also the case for counseling gifted students on career and decision-making processes (Kurt, 2016). Talented people have a lot to think about while planning their futures. Some brilliant young individuals struggle when they

have the potential to thrive because they are hampered by vocational indecision, perfectionism, and many personal, familial, and cultural demands. Many teachers and guidance counselors mistakenly believe that these students' already impressive skill sets will ensure their ultimate success in life, and as a result, they fail to address the specific challenges faced by this group (Maxwell, 2007). Vocational counseling is one of the most important psychological and educational services offered to all school students (Silverman, 1993) to support them in exploring and developing their self-concepts and career decision-making skills. In this context, we assume that Super's theory of vocational development (Super, 1974) is unique in its suitability to match gifted students' needs. Donald Super is a major figure in occupational choice theory and self-concept development. Accordingly, this study seeks to explore whether Super's theory-based career group counseling positively impacts gifted high school students' self-concept and career-related decision-making.

The existing research on the efficacy of vocational guidance and counseling programs in improving self-concept and career decision-making skills has rarely utilized populations in the Middle East, including Jordan. In Arab countries, students usually choose a career based on their parents' choices. In Jordan, some findings showed that school and university students face difficulties due to not being well prepared in making career decisions. Specifically, Jordanian students ranked family decisions, religious factors, and the desire to care for others as the three most important factors influencing their career selection (Yousef et al., 2017). Students who chose careers under family pressure or because of a lack of alternative opportunities were more depressed. More importantly, there is still a paucity in experimental research regarding the outcome of specific career interventions that can enhance self-concept and career decision-making skills among gifted school students. It has been found that those students need help through career counseling services (Ozcan, 2017). Based on the above, this article explores the effectiveness of Super's theory-based career group counseling in developing the self-concept and decision-making among a sample of gifted students in Jordan. In general, career counseling helps individuals to explore a variety of career opportunities, narrow their options based on interests and abilities, make career decisions, and develop a plan to attain their goals (Milgram, 1991).

1.1. Gifted Students

Talented people are the real wealth in any society. They are the pioneers of thought and science from whom countries benefit in various areas. Attention to this category is a cultural imperative and indicates the extent to which society is aware of their role and the importance of identifying and caring for these talented individuals. However, the high intelligence of these students, which may help them overcome problems, often causes difficulties, which may lead to anxiety and impede the development of their abilities (Azzaz, 2015). Many gifted students are concerned about their academic and professional future, as some of them cannot determine their future profession. Some of them move from one major to another at the undergraduate level, and they may move from one university to another in search of better opportunities, and the multiplicity of interests of some gifted students may lead to dispersion. Therefore, they need help to make the right decision related to their majors and future professions (Mawhiba, 2014). Exceptionalities include having a disability, multi-potentiality, asynchronous development, poverty, and demographic factors, such as religion and gender. Gifted students are often perceptive and sensitive individuals. They may face problems as a result of their talent and uniqueness, which appear through their interactions with family, school and colleagues and may negatively affect their behavior and prevent them from adjusting on personal, practical and vocational levels. Some of these problems are related to family and parenting styles, such as authoritative figures, coercion and excessive protection. Additionally, they suffer from emotional problems such as anxiety, depression, boredom, frustration, isolation, introversion, suicide, seeking excessive idealism, excessive self-criticism, avoiding dealing with problems, intense competition, lack of self-confidence and a negative self-concept that leads them to social withdrawal and the inability to make decisions in a positive way (Sword, 2003; Wright-Scott, 2018).

Several practical suggestions have been offered to aid career counseling for gifted and talented clients (Colangelo & Assouline, 2000). One piece of advice is to look at a career not as a job but as a way of life. It's not necessary to settle for just one career path; as people grow and learn, they often find it beneficial to switch gears professionally. A person's interests and abilities are not limited to their chosen profession; they might surface in extracurricular pursuits as well. Last but not least, career guidance shouldn't be seen as merely a job-finding service but rather a "value-based activity, examining broad categories of life happiness" (Brown, 2002; Kurt, 2016).

With the primary goal of the high school education system being to educate students and prepare them for employment, there is a need for the acquisition of some abilities and skills to help students accurately select an academic major that is congruent with their personal and career interests. Consequently, vocational counseling needs to help gifted students to develop their self-concept and decision-making skills because they will have to make important decisions and face difficult problems in their lives.

Accordingly, this study investigates the effectiveness of Super's theory-based vocational group counseling in improving self-concept and decision-making skills among a sample of gifted students enrolled in King Abdullah II School for Excellence in Salt City, Jordan. The following hypotheses were tested: (a) Participation in Super's theory-based vocational group counseling increases gifted students' self-concept and improves their decision-making skills, and (b) the effects of vocational group counseling are differentiated according to gender and group \times gender variable.

Super's theory: Self-concept and decision-making skills that psychologists have referred to work as a means through which individuals "implement a self-concept" (Super, Savickas, & Super, 1996). Donald Super released his hypothesis in 1953 on how people form their sense of self and choose a profession. Super developed his views regarding self-concepts and sociological theory from premises related to trait and factor theory, developmental psychology, and personal construct theory (Kelley, 1955). Super (1990) stated in one of his propositions that work and life satisfaction depend on the degree to which an "individual finds adequate outlets for abilities, needs, values, interests, personality traits, and self-concepts" (p. 208). Super (1957) believed that the degree to which a given individual's career development is successful depends, at least in part, on how well that person is able to identify and implement their career self-concept.

Making career decisions is not a static process. In several theoretical models on the career decision-making process (e.g., (Gati & Asher, 2001; Super, 1990; Tiedeman & O'Hara, 1963)), it has been hypothesized that the way students cope with decisional tasks during a career decision-making process has important consequences for implementing future career decisions (Germeijs & Verschuere, 2007).

Super (1990) hypothesized that career choice is the implementation of self-concepts and that career decisions reflect our attempts to translate our self-understanding into career terms. In order to understand this proposition, it is necessary to have a clear definition of self-concepts and career, as well as a sense of Super's view. Researcher Roy Baumeister defined self-concept as "an individual's belief about himself or herself, including the characteristics of the person, who he is and what the self is." The self-concept of an individual is formed during the stages of development based on the knowledge he carries about himself, for example, he may have an idea of his identity from a physical aspect, and the self-concept consists of several other self-structures, such as self-image, self-efficacy, self-esteem, self-awareness and psychology (specifically social psychology) and focuses on how self-concept develops within the individual's social environmental context and on how self-concept affects people's behavior (Courtney, 2018).

David Hume points out that the self is a set of perceptions, and Paul Thagard believes that the self is a complex system based on four different levels, namely the nervous, psychological, social, and molecular levels. The psychological level refers to how an individual sees himself, e.g., introverted, open, or irresponsible, and many other aspects related to personality. Self-concept also includes other dimensions, such as gender, nationality and race (Thagard, 2014).

Super presented several main considerations in the self-concept approach, namely:

- Everyone differs in their capacity and interests.
- Every individual is qualified according to their characteristics for a number of professions, and they possess the ability to succeed in a number of professions.
- Every profession has a distinct model of abilities, interests, and personal characteristics.
- Growth and experience have a fundamental role in defining self-concept and thus determining the profession and degree of competence and success. Self-concept changes with time and experience, and self-completion begins to a large extent at the end of late adolescence.
- The level and professional stability achieved by an individual is determined by the socio-economic level of the family, the individual's mental capacity, their personal characteristics, and the experiences or opportunities they are exposed to.
- Growth through life stages can be guided in part by facilitating the maturation of abilities and inclinations, by helping to examine reality, and in developing self-concept.
- Professional growth is mainly a process of developing and realizing the self-concept, whereby the self-concept is a combination of inherited capabilities, neurogenesis, the influence of multiple roles in life, a positive attitude, and the approval of those around them.
- Satisfaction with work and life depends on the extent to which an individual finds sufficient outlets for their capabilities, inclinations, personal characteristics and value, and it depends on the stability within a certain profession that is consistent with the individual's lifestyle and their experiences of growth and discovery (Jaber, 1993).

Patton and Creed (2001) stated that in 1990, Super showed a model of a lifestyle using the "arc of life". This two-dimensional image provides a longitudinal dimension to the life cycle, referred to as the full cycle, and is consistent with the life cycle and its different stages, with each stage called a small or partial cycle. The second dimension is "life stages" or the roles that the individual plays through their development stages, such as the childhood stage, the study stage, the youth stage, work, building a family, parenting, and being a grandparent, and this conceptual model leads to some observations:

- Because people are involved in many roles at the same time, success in one role leads to success in the next role, and so on.
- All of these roles affect each other in all kinds of theaters, i.e., life.

Career counseling programs that incorporate career development concepts should include a wide range of counseling techniques and intervention strategies, and Super developed this message over several decades. The following can be used as evidence of an individual's professional maturity:

- Awareness of the need for educational and professional development.
- Accepting responsibility for making professional plans and decisions.
- Planning and participating in obtaining information and completing the necessary training for the profession.
- The availability and understanding of personal and professional information for use in making professional decisions.
- Realism in occupational preferences according to the level of capability, preferences, and socio-economic level.
- Satisfaction with the job that the individual takes (Super, 1957).

The life-span theory Super et al. (1996) opposes traditional career exploration theories by shifting the responsibility of career decisions from the counselor to the client. According to Super, since career exploration and interests tie into how an individual sees him/herself, the client becomes the expert. The counselor encourages the individual to create his or her own career based on the understanding of self.

Interestingly, there is a plethora of group counseling techniques that can be adapted and built in to Super's

theory and other related career developmental theories to increase self-concept and improve decision-making skills to provide a sound basis for developing career group counseling activities (Burnett & Evans, 2016; Pyle, 1986; Pyle & Hayden, 2015). For this paper, we selected some of the activities we used with the experimental group and discuss them briefly below, namely 1. Life design; 2. Work view and life view; 3. Good time journal; 4. Mind maps; 5. The prototype method; and 6. Building a team. Each of these tactics is viewed as a building block to achieving the ideal life and overcoming career challenges (Burnett & Evans, 2016).

The first tactic, life design, encourages the individual to focus on where he or she is now by analyzing the sociological factors of health, work, love, and play. Burnett and Evans (2016) call it the health/work/play/love dashboard, a method that works similar to car gauges. Instead of measuring gas or tire pressure, this dashboard measures health, work, play, and love. The health/work/play/love dashboard acts as a metric to use beyond career decisions to determine the right work-life balance. Research suggests that having a career is an essential part of someone's life, but the career does not encompass the entire lifespan (Burnett & Evans, 2016). Having time to play and relax, and even as an adult, is important to happiness (Burnett & Evans, 2016).

The second tactic is building a moral compass that aligns with the individual's perspectives of work and life, called the work view and life view. Life view addresses "the ideas about the world and how it works" (Burnett & Evans, 2016), and the work view is how someone views the workforce. By creating work view and life view reflections, the individual understands his or her values and what should be considered when evaluating not only career options but life choices.

The third technique is a good time journal. After establishing their beliefs, keeping a journal or activity log allows people to reflect on their experiences. The good time journal is used to track periods of high engagement and energy and provides cues to "find your way, even if you don't know where you are going" (Burnett & Evans, 2016).

The fourth tactic is mind maps. From the information in the good time journal logs, an individual creates a minimum of three mind maps around the ideas, interests, and social factors that were shown to create high engagement and energy. "Mind mapping works by using...word associations...to open up the idea space and come up with new solutions" (Burnett & Evans, 2016). Mind maps develop a method to become "unstuck" from career indecision. By using word association, individuals can allow their ideas to flow freely and help them discover their interests. Mind mapping acts as a technique to help create career paths, but also to reframe an understanding of a problem (Burnett & Evans, 2016).

The fifth technique is the prototype method/odyssey planning. Using mind maps from the last exercise, the individual creates an odyssey plan. Odyssey plans imagine three versions of the next five years of the client's life. The odyssey plans answer three different questions: "the thing you would do", "the thing you would do if the option was gone", and the "thing you would do if money and image was no object" (Burnett & Evans, 2016). Odyssey planning creates the foundation for the next life design tactic, prototyping. Prototyping allows the individual to act, ask questions and judge whether personal bias or assumptions are correct. Creating a prototype experience exemplifies another option that the individual may pursue to discover what interests them. Common prototype experiences include internships, job shadowing or observing prototype experiences. Prototype experiences allow individuals to do things they are interested in or mentioned in their mind maps and odyssey plans (Burnett & Evans, 2016). After prototyping, life design takes a focused look at failures. Similar to how Krumboltz and Worthington (1999) redefined uncertainty, life design suggests that failures are not bad. Failures mean progress. Something did not work out. Reframe and adjust to see that did not go as expected. Failure and success both offer learning experiences that can be used to build a new life. The failure reframe exercise encourages individuals to learn from their mistakes. In this exercise, individuals write down failures and then categorize them as a mistake, a weakness, or a growth opportunity.

The final technique is building a team. Research suggests that building relationships with others is crucial and can impact the self-efficacy levels that individuals feel when making career decisions. When creating a support

team, life design breaks it down into the various roles of supporters, players, and intimates.

2. LITERATURE REVIEW

Evidence supports the importance of growth and exploration in helping individuals develop their vocational identities and engage in thoughtful career decision-making. Many studies examined the effect of vocational group counseling on self-concept and the improvement of decision-making skills among various samples of students, including those who are gifted. For instance, [Keevers and Bradley \(1999\)](#) investigated the impact of a school-based career development program on adolescent self-concept. Fifty-five ninth grade high school students took part in one of the three study groups; two career intervention groups involved a career interest test followed by specific career exploration, and one of these intervention groups was allocated a longer period of exploration between the intervention and the post-test, whereas the third group was allocated to a control condition. We used the Piers-Harris Children's Self-concept Scale (PHSCS) to administer the pre- and post-tests. The results showed that the lengthier exploration group had statistically significantly higher self-concept scores. The shorter exploration group also showed a self-concept tendency, however it was not statistically significant. [Al-Azeizy \(2011\)](#) compared the effectiveness of Holland's and Super's models in increasing career decision skills among a sample of 36 tenth grade students in the Sultanate of Oman, who were split randomly into three groups. A career group counseling program based on Holland's or Super's theory was applied respectively to the first and second experimental groups, while no treatment was applied to the control group. The results showed that there were significant pre- and post-test differences in the level of career decision-making in favor of the Holland theory experimental group compared to the other two groups, while the Super's theory group performed significantly better in career decision-making compared to the control group. [Al-Jahni \(2012\)](#) conducted a study to explore the effectiveness of a training program based on the theory of the resolution of invention-related tasks in developing decision-making skills among a sample of 88 gifted students in Jeddah, Saudi Arabia, who were assigned randomly to experimental and control groups. The results showed that there were statistically significant differences between the students in the two groups regarding decision-making skills in favor of the intervention group. Also, there was a significant effect for the interaction between the groups and gender in favor of females. [Al-Shoubaki, Al Saaiedeh, and Badah \(2013\)](#) explored the effect of a group counseling program in reducing stress and improving self-esteem among 40 gifted tenth grade students in King Abdullah II School for Excellence. The experimental group ($n = 20$) received a counseling program of eight bi-weekly 60-minute sessions. The control group comprised 20 students who were on the waiting list. The results showed significant differences in stress and self-esteem between the experimental group and the control group. [Rowell, Mobley, Kemer, and Giordano \(2014\)](#) examined the impact of a group career counseling model for improving decision making skills and abilities among a sample of 40 college students. They used a Solomon 4-group design and found that students who participated in the career counseling groups had significantly greater increases in career decision-making abilities than those who did not participate in the groups. [Al-Mutairi \(2015\)](#) conducted a study to investigate the effect of training programs to improve the planning and decision-making skills among a sample of 45 talented female students in the tenth grade in the State of Kuwait. The study sample was distributed between an experimental group ($n = 22$) and a control group ($n = 23$). The results showed that there were statistically significant differences in favor of the experimental group in the Career Planning Scale (CPS) and the Crites Career Decision Scale. [Azzaz \(2015\)](#) aimed to uncover the relationship between vocational awareness and professional decision-making among gifted students at the secondary stage in partnership schools and government schools in the Kingdom of Saudi Arabia and to identify the level of vocational awareness and professional decisions they make, as well as revealing the differences in the level of awareness and professional decisions of the gifted according to gender, school type, and the extent of interaction between them. A descriptive approach was used on a sample of 281 gifted students at the secondary level, of whom 88 were in government schools and 49 were in partnership schools. The occupational awareness scale prepared by Al Subhi (1222) and the

professional decision scale prepared by Creed and Patton (1999) were applied. The results showed that the levels of vocational awareness were similar for both public and partnership school students; it came to a moderate degree and there were no statistically significant differences between the average vocational awareness among the gifted in public schools and partnership schools. The results showed that there is a positive, moderate, and statistically significant correlation between the vocational awareness and the professional decisions of the gifted. Ameirah (2016) studied the effect of a training program based on the Perdue model for the secondary school stage in improving self-concept among a sample of 36 gifted students in King Abdullah II School for Excellence in Jordan. Gifted students were split into experimental and control groups, with 18 students in each. The results showed that there were statistically significant differences in self-concept between the experimental and control groups in the post-test in favor of the treatment group. Lam and Santos (2018) conducted a quasi-experimental longitudinal intervention study with 244 first-year Malaysian college students to evaluate the effectiveness of a career course designed to help students in their career decision-making. The intervention (treatment) group consisted of 123 participants who completed the intervention, while 121 participants who did not attend the course but completed the assessments at Time 1 and Time 4 (four weeks after the intervention) were used as the comparison (control) group. After finishing the course, those in the intervention group reported feeling more confident in their ability to make career decisions and had less career hesitation than those in the control group. We also noticed a general decline in stress related to profession choice, but when we broke it down into its component parts, we found that just one of the 10 categories of work-related stress actually improved. Malahayati and Wulandari (2018) explored the effectiveness of career planning training intervention in improving career decision-making and achievement motivation of high school students in Indonesia. The sample consisted of 27 students in the 11th class of high school, with 15 in the experimental group and 12 in the control group. Using the career decision-making self-efficacy (CDMSE) scale and achievement motivation in the pre- and post-tests, the results showed that career planning training was effective in improving self-efficacy in career decision-making. Effective contributions to the research subjects who took part in career planning training were aged 15, constituting 42% of the total sample; career planning training in this study was less effective in the improvement of achievement motivation because it only affected 23%. Finally, the career decision self-efficacy and STEM (science, technology, engineering, and mathematics) self-efficacy of 88 adolescent girls were tested by Falco and Summers (2019), who analyzed the results of a nine-week treatment group consisting of 44 girls. The intervention incorporated the four sources of self-efficacy and addressed perceived career barriers. The results showed that after three months of intervention, the treatment group had significantly higher levels of career decision self-efficacy and STEM self-efficacy than the control group.

Based on the aforementioned literature, the present research investigates the effectiveness of Super's theory for career counseling in improving self-concept and decision-making skills among gifted students in common schools for excellence in Jordan. The main question asks whether or not Super's theory-based career group counseling improves self-concept and decision-making skills among a sample of gifted Jordanian students. This is directly measured by the time*group interaction term in the repeated ANOVA measures.

3. METHOD PARTICIPANTS

This quasi-experimental study explores the effect of Super's theory-based career group counseling on the levels of self-concept and decision-making skills among a group of gifted Jordanian students who were selected purposively from the tenth grade students in the King Abdullah II School for Excellence at the Directorate of Education in Salt City, Jordan. The study comprised 56 students (28 males and 28 females), who were assigned randomly to two groups—the experimental group and the control group.

The participants were purposively selected by staff in the school, and semi-interviews were conducted by the researchers at the pilot stage to apply the study tools. One of the researchers approached the students to

communicate the study's purpose, the confidentiality of response and research data, the freedom of withdrawal, and to obtain parental consent to participate in the study and respond to the questionnaires. All procedures were performed in accordance with the ethical standards with the Helsinki declaration (World Medical Association (WIMA), 2013).

The participants were randomly assigned to either the mixed gender experimental group, which comprised 14 male and 14 female gifted students who were provided with the group intervention, or the waiting list control group of 14 male and 14 female gifted students who continued practicing their regular activities in the same school. Four group leaders worked under the supervision of the first author as facilitators for the experimental group. One of the researchers and the male and female school counselors facilitated the group sessions with the help of a specialized worker at the school who was being trained and acted as a co-leader and timekeeper to ensure accuracy.

4. RESEARCH DESIGN

Initially, a randomized waitlist-controlled design was used. Participants who were eligible were randomly assigned to either intervention (16 two-weekly group sessions for an 8-week group career counseling) or waitlist conditions (regular activities for eight weeks). Participants completed baseline and posttests using valid psychometric instruments: The Piers-Harris Children's Self-concept Scale (PHSCS) (Veiga & Leite, 2016) and the adaptive version of the Career Decision-Making (CDM) Skills Scale (Shruthi & Gomes, 2018; Taylor & Betz, 1983). Both groups were evaluated at Time 1 (pre-test, before the intervention) and at Time 2 (post-test). Comparisons between the two groups and at the two different time points were made using repeated ANOVA measures. A significance level of $p < 0.05$ was chosen to assess significant differences between and within groups. Statistical analyses were performed with SPSS version 15.0 and tested against an alpha level of 0.05 (two tailed).

4.1. Procedure

Interested individuals self-referred and were provided with an information pack in a special meeting held in the targeted school. In order to collect baseline information, a semi-structured interview was used to assess participants' levels of self-concept and their ability to make decisions (Time 1). After that, people were assigned at random to either the intervention group or the waitlist control group. Those in the waitlist group were informed that they would be free to pursue their usual eight weeks of activities, including reading and attending classes, while those in the intervention group would complete 16 sessions over eight weeks career therapy program at the same time.

The intervention and waiting groups were given follow-up tests eight weeks after the intervention ended (Time 2). As previously noted, the participants were made aware that their involvement was completely optional, and their information would be kept confidential. It was made clear to all participants that they could stop taking part at any time. All procedures were carried out in accordance with the Declaration of Helsinki (World Medical Association (WIMA), 2013) and the ethical guidelines of the profession of psychological counseling and research involving human elements. The King Abdullah II School for Excellence's locally selected competent authorities in Salt City, Jordan, approved the research protocol.

4.2. Outcome Measures

The Adolescent Self-Concept Short Scale (Veiga & Leite, 2016) and the Career Decision-Making Skills Scale (Shruthi & Gomes, 2018; Taylor & Betz, 1983) were used in addition to a demographic sheet to collect the data for this study. An expert in both languages translated the English versions of the two instruments into Arabic using the "forward-backward" procedure recommended by Toma, Guetterman, Yaqub, Talaat, and Fetters (2017), and another expert in both languages translated the Arabic version into English without having access to the original English version. A third, bilingual professor checked for inconsistencies between the Arabic and English

translations and made the necessary adjustments. The two were not found to differ significantly from one another. There have been several translations of these instruments into numerous languages, and validation studies have been conducted on many of these translations, confirming their international applicability. These measures are also available to the general public and can be used without violating any copyrights.

1. The Arabic version of Adolescent Self-Concept Short Scale (Veiga & Leite, 2016) has been used in many educational and psychological types of research and is cited frequently in the literature. It comprises 30 items each of which is rated on a 6-point Likert-type scale ranging from 1 (strongly disagree) to 6 (strongly agree). This scale contains three 6-item subscales: Freedom from Anxiety (AN) measures anxiety and dysphonic mood; Behavior (BE) measures behavioral adjustment, admission or denial of problematic behaviors; Physical Appearance (PA) measures an adolescent's assessment of his or her own physical appearance as well as their appraisals of certain personality attributes such as the ability to express ideas and leadership abilities; Popularity (PO) captures the adolescent's evaluation of his or her own social functioning; Happiness (HA) measures feelings of happiness and satisfaction with life; and Intellectual Status (IS) measures the adolescent's evaluation of his or her own abilities in terms of intellectual and academic tasks. Higher scores indicate greater belief in positive self-concept. Scores on the self-concept scale range from 30 to 180, where scores between 30 and 79 represent low self-concept, scores between 80 and 129 indicate medium self-concept, and scores of 130 and above show high self-concept. The application of the scale should take 10 to 20 minutes. The ASCSS has good psychometric qualities which are indicated by reliability and validity scores (Veiga & Leite, 2016). In the current study, the reliability coefficient for the total ASCSS score from the test-retest reliability (interval of approximately 14 days) was $R = 0.94$, while for the subscales it ranged from $R = 0.93$ – 0.73 . The internal consistency of the Cronbach's alpha for the total score of the ASCSS was ($\alpha = 0.92$), while for the subscales it ranged from $\alpha = 0.79$ – 0.67 . These results of ASCSS presents good psychometric qualities and can be used in our research to assess the multidimensional adolescent self-concept.
2. The adaptive version of Career Decision-Making (CDM) Scale (Betz, Klein, & Taylor, 1996; Shruthi & Gomes, 2018; Taylor & Betz, 1983) was used to assess career decision-making and consists of 40 items following five subskills: Self-knowledge (SK); Career exploration (CE); Goal-setting (GS); Planning (PN); and Solving problems (SP), each consisting of eight items. Participants were asked to rate each statement on a 4-point Likert-type scale ranging from 1 (slightly agree) to 4 (strongly agree). The scores of the total scale ranges from 40 to 160 and are categorized as follows: 40–78 indicates difficulties in decision-making, 79–119 indicates a moderate level, and 120 and above shows high decision-making ability. In the current study, reliability and validity scores were assessed and they showed that the scale had good psychometric qualities. The reliability coefficient for the total score of the CDM scale by the test-retest method was $R = 0.93$, while for the subscales ranged from $R = 0.80$ – 0.69 . Cronbach's alpha for the total score of the CDM scale was $\alpha = 0.94$, while for the subscales it ranged from $\alpha = 0.80$ – 0.75 .

4.3. Career Group Counseling Intervention

To investigate the impact of the career group counseling intervention program (independent variable) on self-concept and decision-making skills (dependent variables), the group counseling sessions were held over a period of eight weeks, with two 90-minute sessions each week. The program includes a set of skills and strategies based on Donald Super's career guidance theory and models for career decision-making and career group counseling (Pyle & Hayden, 2015), including time management skills; developing problem-solving skills; self-exploration; exploring interests, abilities, and exploring the world of jobs; parallel between the career decision-making process and creative problem-solving, and alignment between self and job. The eight-week group counseling program had individual topics for each session (see Table 1). We used career counseling techniques such as life design, work view and life view, good time journal, mind maps, prototype method, building a team (Burnett & Evans, 2016) and worksheets

that guided students on the steps and resources for seeking information such as job descriptions, educational requirements, salary, and anything else they need to know in addition to the use of group counseling techniques, such as modeling, role play, confrontation, self-exploration and homework assignments.

Table 1. Super's theory-based career group sessions content

| Session no. | General title | The content and purpose of the session |
|-------------|--|--|
| 1 | Introduction of Super's theory of career development | Learning the ropes; meeting the other members of the group and the leader; goal setting; outlining the program's subsequent meetings; setting expectations and ground rules; the agenda for the following weeks; summary of Super's career counseling concepts. This was done simultaneously for the two experimental groups. |
| 2 | Statement of the problem | Evaluation of the impact of negative and low self-concept and a weak decision-making ability on a person's career development. The remaining time was spent with each group discussing their hopes, fears, and general outlook on life after high school. There were also other common misunderstandings concerning various professions and fields of work that were addressed. |
| 3 | Stages of career development and feelings | The aim of this session was to raise awareness of feelings in different situations and their impact on oneself and others by enabling group members to identify their feelings and raise awareness of self-feelings and identify the impact of these feelings on their mental health. Also, this session introduced the stages of career development and raised awareness of the changes, thoughts and feelings associated with these stages. |
| 4 & 5 | Notions related to self-concept | These two sessions introduced some ideas related to self-concept anxiety, physical appearance, behavior, popularity, happiness, and intellectual status. It also covered the importance of recognizing these related selves and how to identify the terms and concepts associated with the concept of self and distinguish between them (Tendencies, abilities, values, personality traits). |
| 6 | Self-perception | This session focused on self-perception regarding thoughts, feelings and behavior, as well as identifying the negative and positive talk with the self and its effects on career and job inspirations. |
| 7 | Problem-solving skills | Help participants to acquire problem-solving skills, introduce them to problem-solving methods, and train participants on them to explore themselves and their college interests. |
| 8 | Time management | Practice effective use of time by introducing group members to the concept of time management and its importance, identify time wasters, and train on effective time management methods. |
| 9 | Decision-making | Help participants to understand the concept and the stages of decision-making and the implementation and practical application in decision-making (Self-knowledge; career exploration; setting goals; planning; solving problems). |
| 10 | Setting goals and the importance of work | Through this session, group members will be able to distinguish between long-term and short-term goals. This session will help them to know what the group members want and where they will be. Others know what their potential is but do not know how to reach it. Explain the vision of the self and identify the appropriate ways that help them achieve their goals, and because goals are an important part of the journey, we devoted this session to identifying the goals and steps and then identify priorities to achieve the goals. |
| 11 | Career discovery | The main activity planned for this session pertained to researching jobs and occupations. Good planning for the future helps people make sound decisions regarding their career. It also looks at how values affect one's life and career choices and will include ideas about the nature of the work and the profession that each of the members of the group wants, the available jobs in the market, the requirements and challenges associated with it, and the skills and knowledge necessary to help them determine the type of study or training they need. |
| 12 | Harmonization | Identify the concept of harmonization, the person-environment fit, vocational needs and work values, and the demands of labor professionals. The members of the group can then harmonize between the self-tendencies and interests, values and principles, and the requirements of different |

| Session no. | General title | The content and purpose of the session |
|-------------|-----------------------------------|---|
| | | careers. |
| 13 | Closing up | A review of the previous objectives, procedures and practices during the sessions, collectively reviewing and summarizing what was covered in the sessions and discussing what is being asked of the participants, reassurance of the efficiency of the program during the post-implementation of self-concept and professional decision-making. |
| 14 | Feedback, wrap-up and termination | A review of the knowledge and group experience gained during the sessions, and asking members whether they are able to apply these new concepts. Identify any benefits of participation in the career group counseling program in addition to providing support to other members in the group and feedback by members of the group after the program has ended. |

5. RESULTS OF THE STUDY

Demographics: Table 1 contains details of the experimental and control groups and the total study sample that consisted of 56 gifted male and female students in tenth grade secondary education. The ages of the participants ranged between 15–16 years ($M = 15.57$, $SD = 0.49$). The highest proportion (57.1%) of the participants were 16 years old. All the participants came from intact families and were living with their biological parents. Also, the Chi-square (χ^2) value did not indicate significant group differences ($\alpha < 0.05$) in these demographic variables (see Table 2).

The Shapiro–Wilk test for data normality, Levene's test for homogeneity of variances, Box's M test for equality of the covariance matrices of dependent variables across the groups, and Mauchly's test for data sphericity and demonstrating error covariance equality across groups were used to check for assumptions of repeated ANOVA measures.

Table 2. Total, control and experimental group demographic variables ($n = 56$).

| Variable | No. | Total ($n = 56$) | Control group ($n = 28$) | Experimental group ($n = 28$) | (χ^2) |
|---------------------|-----|-----------------------|-------------------------------|------------------------------------|--------------|
| Male | 28 | 28 (50%) | 14 (25%) | 14 (25%) | -- |
| Female | 28 | 28 (50%) | 14 (25%) | 14 (25%) | |
| Age group (Year) | 15 | 24 (42.9%) | 10 (17.9%) | 14 (25%) | 1.167 |
| Age (Year) | 16 | 32 (57.1%) | 18 (32.1%) | 14 (25%) | |
| | 56 | 15.57 (0.49) | 15.64 (0.48) | 15.50 (0.51) | -- |

The ASCSS and its subscales produced the following results: the Shapiro–Wilk test (0.953 , $P = 0.241$), Levene's test ($f = 0.254$, $P = 0.616$), and Mauchly's test (0.657 , $P = 0.510$). For the CDM scale and its subscales, the results are as follows: Shapiro–Wilk test (0.975 , $P = 0.725$), Levene's test ($f = 1.410$, $P = 0.240$), Mauchly's test (1.155 , $P = 0.316$), and Box's M test for the two variables and their respective subscales of self-concept and decision-making (44.072 ; 14.489 ; $\alpha < 0.05 = 0.100$; 0.917).

Descriptive findings for the means and corresponding standard deviations from the pre-test and post-test at the end of treatment, the comparisons between the two groups, and the signification of within and between group effects were calculated using SPSS. The results of repeated analysis of variance measures (ANOVA 2×2), changes in outcomes between Time 1 (pretreatment) and Time 2 (post-treatment) for the ASCSS and CDM scale and their subscales are provided in Table 3 and Table 4, respectively.

Table 3. Changes in outcomes between Time 1 (Pre-treatment) and Time 2 (Post-treatment/Post-waitlist) for ASCSS and its subscales.

| Scale | Time | Waitlist (n = 28) | Intervention (n = 28) | F | *P | (η ²)** |
|------------|-----------|-------------------|-----------------------|---------|-------|---------------------|
| | | Mean (SD) | Mean (SD) | | | |
| ASCSS | Pre-test | 128.41 (16.5) | 125.48 (14.5) | 115.722 | 0.001 | 0.707 |
| | Post-test | 111.52 (10.8) | 142.56 (10.3) | | | |
| Subscale 1 | Pre-test | 15.31 (4.5) | 14.22 (4.4) | 41.600 | 0.001 | 0.464 |
| | Post-test | 13.97 (2.9) | 18.00 (3.4) | | | |
| Subscale 2 | Pre-test | 19.80 (3.1) | 20.32 (2.6) | 52.087 | 0.001 | 0.520 |
| | Post-test | 16.63 (3.1) | 21.69 (2.2) | | | |
| Subscale 3 | Pre-test | 16.66 (4.8) | 16.47 (3.1) | 36.841 | 0.001 | 0.434 |
| | Post-test | 14.52 (4.1) | 19.42 (2.7) | | | |
| Subscale 4 | Pre-test | 18.99 (3.9) | 19.60 (3.1) | 40.754 | 0.001 | 0.459 |
| | Post-test | 16.24 (2.9) | 21.00 (2.3) | | | |
| Subscale 5 | Pre-test | 18.02 (4.3) | 16.54 (4.5) | 30.457 | 0.001 | 0.388 |
| | Post-test | 15.37 (3.6) | 19.86 (2.4) | | | |
| Subscale 6 | Pre-test | 18.41 (2.8) | 18.66 (3.0) | 35.412 | 0.001 | 0.425 |
| | Post-test | 16.05 (2.8) | 20.05 (1.9) | | | |

Note: ASCSS = Total adolescents' self-concept short scale; 1. Free from anxiety; 2. Physical appearance; 3. Behavior; 4. Popularity; 5. Happiness; 6. Intellectual status.

* p-value for Time x Condition interaction effect.

** Eta-squared (η²) computed by $Eta^2 = SS_{effect} / SS_{total}$.

Table 3 displays the results of the changes in the outcomes between Time 1 (pre-treatment) and Time 2 (post-treatment). There was a significant differential rate of change in self-concept and each of its six subscales' mean scores between the intervention and waitlist groups from Time 1 and Time 2. There was also a significant differential rate of change in both self-concept and career decision-making between the intervention and waitlist groups from Time 1 and Time 2 (see Table 3 and Table 4). The mean increase in self-concept (ASCSS) for the intervention participants was 17.08 compared with a decrease of 16.09 for the waitlist participants, $F(1, 47) = 111.258$, with signification of $P < 0.001$, $P = 0.001$, Eta-squared (η^2) = 0.703 (see Table 3). Also, the findings of the repeated ANOVA measures of self-concept and its six subscales indicate that there was a statistically significant main effect for Time, $F(6, 43) = 12.684$, $p < .0005$; Wilk's $\Lambda = 0.361$, partial $\eta^2 = 0.639$; and that the Time x Condition effect for the ASCSS scores was significant, $F(6, 43) = 25.754$, $p < .0005$; Wilk's $\Lambda = 0.218$, partial $\eta^2 = 0.782$.

Table 4. Changes in outcomes between time 1 (Pre-treatment) and time 2 (Post-treatment/post-waitlist) for CDM and its subscales.

| Scale | Time | Waitlist (n = 28) | Intervention (n = 28) | F | P* | (η ²)** |
|------------|-----------|-------------------|-----------------------|--------|-------|---------------------|
| | | Mean (SD) | Mean (SD) | | | |
| CDM | Pre-test | 111.33(9.6) | 109.08(11.9) | 89.031 | 0.001 | 0.650 |
| | Post-test | 105.55(10.9) | 132.09(7.7) | | | |
| Subscale 1 | Pre-test | 21.85 (2.0) | 20.80(2.8) | 26.555 | 0.001 | 0.356 |
| | Post-test | 19.87(2.6) | 23.78(2.5) | | | |
| Subscale 2 | Pre-test | 17.94(3.4) | 16.48(2.9) | 57.556 | 0.001 | 0.545 |
| | Post-test | 18.11(2.8) | 23.17(1.9) | | | |
| Subscale 3 | Pre-test | 20.37(2.6) | 21.02(2.8) | 80.840 | 0.001 | 0.627 |
| | Post-test | 18.93(2.3) | 24.78(1.8) | | | |
| Subscale 4 | Pre-test | 18.66(2.7) | 19.58(3.3) | 44.412 | 0.001 | 0.481 |
| | Post-test | 18.76(2.6) | 23.41(2.0) | | | |
| Subscale 5 | Pre-test | 20.78(3.4) | 19.60 (3.7) | 44.995 | 0.001 | 0.484 |
| | Post-test | 19.58(2.7) | 24.14 (1.6) | | | |

Note: CDM = Total career decision-making scale; 1. Self-knowledge; 2. Vocational exploration; 3. Goal setting; 4. Planning ability; 5. Problem solving.

* p-value for time x condition interaction effect.

** Eta-squared (η²) as computed by $Eta^2 = SS_{effect} / SS_{total}$.

Similarly, Table 4 shows the results of the changed in outcomes between Time 1 and Time 2 for Career Decision-Making and its five subscales. There was a significant differential rate of change in decision-making and

each of its five subscales' mean scores between the intervention and waitlist groups from Time 1 and Time 2. The mean increase in CDM for the intervention group was 23.01 compared with a reduction of 5.78 for the waitlist group, $F(1, 54) = 89.031$, with signification of $P < 0.001$, $P = 0.001$, $\eta^2 = 0.650$ (see Table 3). The findings of the repeated ANOVA measures of the CDM Scale and its five-subscales show that there was a statistically significant main effect for Time, $F(5, 44) = 9.1564$, $p < 0.001$; *Wilk's Λ* = 0.490, *partial η^2* = 0.510, and that the Time \times Condition effect for the CDM scores was significant, $F(5, 44) = 19.532$, $p < 0.001$; *Wilk's Λ* = 0.311, *partial η^2* = 0.689.

Thus, taken together, these findings suggest that the independent variable has had an effect on the dependent variables in this study. In other words, Super's theory-based career counseling has been significantly effective on increasing self-concept and career decision-making among gifted, tenth grade, male and female high school students. Further, the ANOVA analysis for the experimental group showed that there was a significant main effect on the outcomes for gender in the post self-concept total and free from anxiety subscales $F(1, 27) = 6.553, 7.620$; $p = 0.017, 0.01$; $d = 0.201; 0.227$). The results showed that males ($M = 147.09; 19.59$; $SD = 8.3; 3.1$) outperformed females ($M = 138.08; 19.59$; $SD = 10.3; 3.0$) for total self-concept and the free from anxiety subscale, respectively. In contrast, there was a significant main effect for gender, $F(1, 27) = 12.431$, $p = 0.002$, $d = 0.323$) in the post self-knowledge decision-making subscale; the findings indicate that females ($M = 25.18$; $SD = 1.5$) outperformed males ($M = 22.38$; $SD = 2.6$).

6. DISCUSSION AND IMPLEMENTATION

The aim of this study was to investigate the effectiveness of career group counseling based on Super's theory on the improvement of self-concept and career decision-making among gifted tenth grade students. The results of this study revealed that the career intervention group showed a bigger increase in self-concept (71%) and bigger improvements in career decision-making skills (63%). These findings are consistent with previous studies (e.g., (Al-Shoubaki et al., 2013; Ameirah, 2016; Keevers & Bradley, 1999; Lau, Khan, Abdullah, & Chew, 2011)). In fact, this result can be attributed to the effectiveness of the career group counseling program based on Super's theory-based techniques, where specific activities were carried out in the sessions to educate the gifted participants in our sample with the process of self-discovery and how to increase self-awareness. There was harmony between the students, and they recognized the most important features that set them apart and their common qualities, tendencies, and traits.

Also, the results of the career group counseling efficacy in improving decision-making skills among gifted participants in the career treatment group are consistent with other literature results (e.g., (Al-Azeizy, 2011; Al-Jahni, 2012; Al-Mutairi, 2015; Falco & Summers, 2019; Lam & Santos, 2018; Malahayati & Wulandari, 2018; Rowell et al., 2014)), which indicates that, compared with the control group, participants in the career treatment group improved significantly in career decision-making abilities after the test.

Moreover, this advantage in the career intervention group was significantly different by gender. Further interesting patterns emerged when gender differences in self-concept and career decision-making changes between the pre- and post-tests were examined. For the males, total ASC and Freedom from Anxiety increased significantly between the pre- and post-tests, whereas for the females, self-knowledge decision-making increased significantly during the same period of time.

This significant finding regarding gender differences regarding total self-concept favoring males seems to go against previous studies that found no gender-related effects (e.g., (Harter, 1999; Mboya, 1999)) but are consistent with the results of other studies (Hoge & McSheffrey, 1991; Hosova & Duchovicova, 2019; Li, 1988; Rudasill, Capper, Foust, Callahan, & Albaugh, 2009). The overall trend favoring males in the adolescent stage may indicate that the patriarchal legacy is something that may play out in psychosocial functioning in this developmental stage or that the patriarchal influences are more salient in contemporary Jordanian society. The emotional and social

issues of highly gifted pupils often stem from inadequate self-concept. The structure of self-concept is formed by traditional variables such as age, gender and culture.

The results of this study revealed no significant overall CDM difference between the two groups, only the mean self-knowledge decision-making subscale score was significantly higher for the female population (female $M = 25.18$; $SD = 1.5$; male $M = 22.38$; $SD = 2.6$). This indicates that gifted males and females benefited from career exploration activities similarly in this study. Similar to the gifted population, the results suggest that gender-specific decision-making abilities stem from the reality of giftedness. Gender has been shown through this research to have little effect on the CDM scores. It can also be concluded that the push for gender balance could pose a challenge for the career choices of gifted men. This minor finding is largely inconsistent with research on the issue of gender differences in the career choice processes, which found that when males and females choose a career, they made their decisions based on the traditional masculine and feminine attributes, which is still consistent with Bem's gender schema theory (Gati, Givon, & Osipow, 1995). However, given that the whole study group comprised gifted male and female students, we noticed that participants did not choose traditional gender careers; both sexes showed equally high aspirations for professional careers with prestigious classification. This supports what Petersen (1982) found in her study of gifted female students using Super's developmental approach.

7. CONCLUSIONS

The following two points emerged based on the results of this research: (1) all gifted middle and high school students should have regular meetings with counselors to discuss their current and future academic programs, and (2) theory-based vocational counseling seems to be a straightforward and cost-effective way to improve student self-concept and career choice outcomes.

Finally, the results of this study suggest that career group intervention is an effective therapeutic method for enhancing the self-concept and career decision-making skills of a select group of gifted high school students, and that further research should focus on exploring the relationships between career interventions and academic achievement and positive student behaviors.

Given the finding that career guidance and academic counseling are potentially very effective for middle school students, greater investment in these activities in the middle schools should be made, and this should also be a focus for future research. Super's theory posits that the participant should be a reflection of ideas and experiences that may be attractive to talented residents in the process of making meaningful career choices and forming identity (Maxwell, 2007).

8. LIMITATIONS

Several limitations may have influenced the results of this study. The sample consisted of 56 gifted students in tenth grade in high school, aged 15–16 years old, who are considered the elite in educational society, do not need any help with their life choices, receive very special care, and live in particular settings which present unique challenges regarding their access to career interventions.

Generalizability is limited by the exclusion of individual gifted participants. Other limitations include a relatively small sample size and the absence of follow-up tests to collect a number of events and outcomes that affect longitudinal power.

Despite these limitations, our results support the utility of career group intervention for gifted adolescents who face problems in their self-concept and suffer from difficulties making career choices, and its continual effectiveness one month directly after treatment completion.

Funding: This study received no specific financial support.

Institutional Review Board Statement: The Ethical Committee of the Directorate of Education in Salt, Jordan has granted approval for this study (Ref. No. M.S.244).

Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

Competing Interests: The authors declare that they have no competing interests.

Authors' Contributions: All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

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