Validation of an Educational Counseling Model Based on Dawis' Work Adjustment Theory and Its Effectiveness on Motivation and Psychological Capital of University Entrance Exam Students

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A B S T R A C T

The present study aimed to validate the conceptual model of educational counseling based on Dawis' Work Adjustment Theory and to examine its effectiveness on the motivation and psychological capital of university entrance exam students. This research was a mixed-methods study, where the qualitative part utilized conceptual modeling based on content analysis according to the conventional design method, with texts as its instrument. The results of this part indicated that among the concepts of this theory, personality styles containing four dimensions: speed, effort, persistence, and response pattern, were identified as the best concepts for educational counseling. These concepts were selected from this theory, and the conceptual model of educational counseling based on Dawis' Work Adjustment Theory was extracted. The quantitative part was a quasi-experimental or pretest-posttest design with a control group. The sample consisted of 32 female students in the twelfth grade selected by convenience sampling from a high school in Najafabad and then non-randomly assigned into experimental and control groups. The experimental group received an educational package in 8 sessions of 90 minutes each. The research instruments included Harter's Academic Motivation (1981) and Luthans' Psychological Capital Questionnaire (PCQ) (2007). Both groups were evaluated in three stages: pretest, posttest, and follow-up. Descriptive (mean and standard deviation) and inferential (analysis of covariance) statistics were used to examine and analyze the data. The results showed that this method was effective in improving motivation and psychological capital. From the qualitative part, the conceptual model of educational counseling based on Dawis' Work Adjustment Theory was extracted. According to the findings of this study, it can be said that the conceptual model of educational counseling based on Dawis' Work Adjustment Theory is a suitable method for increasing the motivation and psychological capital of university entrance exam students.
Keywords: Educational Counseling, University Entrance Exam Students, Dawis' Work Adjustment Theory, Motivation, Psychological Capital

1. Introduction

One of the most significant exams that Iranian students face throughout their lives for building a better future is the nationwide university entrance exam (Konkur). It is evident that a major part of success in various cultural, occupational, economic, and family areas is closely related to success in the Konkur, which depends on a multitude of factors such as making accurate and principled decisions regarding precise planning, familiarity with correct study methods, access to appropriate educational facilities including supplementary books, experienced and specialist teachers, and problem-solving classes, high psychological energy, and strong motivation (Abdollahi et al., 2022).

Today, educational researchers are seeking to study and investigate variables associated with academic success and effective strategies to meet students' educational and psychosocial needs in response to this societal need. The research literature and related theories indicate that academic progress is a complex issue influenced by cognitive, social, and psychological dimensions and cannot be explained by a single construct or even multiple constructs (Bagheri Faroji et al., 2021; Rahimi Pardanjani et al., 2021; Taghavi et al., 2021; Taziki et al., 2021). Motivational drive is a significant factor that propels success in the Konkur. Motivation is a theoretical structure for explaining behavior and also represents the reasons behind actions, desires, and needs of an individual. Academic motivation generally refers to the motives, needs, and factors that cause an individual to engage in educational environments and pursue an academic degree (Azarian et al., 2019; Code, 2020; Moradi & Maleki, 2015). Motivation includes two types: extrinsic and intrinsic. Extrinsic motivation involves performing a task to obtain a pleasant outcome or avoid an unpleasant stimulus; for example, doing homework to gain others' approval or avoid criticism (Martin et al., 2010; Najafabadi et al., 2012). Extrinsic motivation is aimed at achieving outcomes and incentives, such as rewards that are external to the activity itself. Learning is important for students with extrinsic and performance-oriented motivation because it helps them achieve external goals. These students continually strive to appear intelligent to their classmates, parents, and teachers and are diligent in obtaining grades and scores. Extrinsic motivation refers to the motivation that drives individuals to perform a task due to external rewards and reinforcements (Krispenz et al., 2019; Talebi et al., 2014). Research shows that there is a significant relationship between academic motivation and its internal and external components with satisfaction from future career and field of study (Falakdin, 2021; Tavakoli & Ebrahimi, 2020), and students with good economic status had higher academic motivation compared to students with average economic status (Code, 2020; Tahmasbipour et al., 2021).

Intrinsic motivation involves performing a task for the sake of the task itself. For example, undertaking challenging tasks because the subject matter is enjoyable and brings pleasure. Intrinsic motivation spontaneously arises from psychological needs, curiosity, and innate efforts towards growth. Individuals with an intrinsic motivation orientation engage in activities due to interest, the sense of challenge a particular activity creates (Talebi et al., 2014; Torbatinezhad et al., 2022; Zulalie & Ghorbani, 2014). This type of motivation spontaneously and internally drives individuals toward a specific task, and performing the task is valuable and satisfying in itself, regardless of external rewards (Emre & KIYICI, 2022; Tavakoli & Ebrahimi, 2020).

Although having motivation is one of the important factors for academic success and a driving force for humans, it alone cannot lead to success in the Konkur. There are many individuals who, despite having motivation, fail to achieve desired outcomes due to various reasons such as unclear goals, incompatibility with conditions, and despair (Abdolmaleki et al., 2023; Mikhak & Moradi, 2022). Research indicates that, in addition to the above, enhancing psychological capital as an intervention model can improve performance (Harms et al., 2018) and increase learning motivation and reduce negative attitudes towards work (Harms et al., 2018; Luthans et al., 2007). Psychological capital is a conceptual construct from positive psychology and includes a set of positive traits and abilities that can serve as a strong resource in individual growth and enhancement. The concept of psychological capital comprises four components: 1) self-efficacy (an individual's belief in their abilities to achieve success in specific tasks); 2) optimism (creating positive attributions about current and future successes); 3) hope (having persistence in pursuing goals and following necessary strategies for success); and 4) resilience (enduring difficulties and returning to a normal level of functioning or even improving upon it to achieve successes) (Mohammadi et al., 2021; Saadati & Parsakia, 2023).

Although learning theories explain the process and content of learning, one of the weaknesses in this field is the lack of a theoretical foundation for shaping the process of

educational counseling and extracting counseling techniques.

Despite existing research, the lack of theory in the field of counseling has created one of the significant fundamental and applied gaps in this area. One of the theories that seem to be useful for adaptation to the educational domain is the work adjustment counseling theory (Wilson & Sy, 2021). One of the important concepts they propose is personality style, which shows how individuals deal with tasks. According to Dawis' theory, individuals in work environments have four different personality styles that are effective in adapting to tasks and managing duties, including action speed, effort pattern, effort level, and endurance level, which seem to play an effective role in responding and adapting to educational tasks (Navidi, 2005; Nedkovski et al., 2017; Surjanti & Soejoto, 2018). Response speed refers to an individual's speed in adequately reacting to received stimuli, effort level to the depth of effort towards a task, effort pattern to the rhythm of responses and activities related to a task, and finally, endurance level to an individual's ability to continue the path until task completion (Heydarifard et al., 2016). Personality styles can have significant implications for confronting educational tasks, including success in managing educational tasks. Therefore, the present research aimed to extract the conceptual model of educational counseling based on the adaptation theory in a mixed-method approach in two qualitative and quantitative phases and to examine its content and implementation validity. The results of this study could be effective for educational counselors and university entrance exam students in improving educational constructs. Thus, the present study sought to answer the question of what components the conceptual model of educational counseling based on the work adjustment theory includes and whether it is effective in improving motivation and psychological capital of university entrance exam students.

2. Methods and Materials

2.1. Study Design and Participants

In this research, the validation of the conceptual model of educational counseling based on Dawis' Theory of Work Adjustment and its effectiveness on the motivation and psychological capital of university entrance exam students in Najafabad was investigated. Thus, this research was a sequential exploratory mixed-methods study, with the first phase being qualitative and the supplementary phase quantitative. The qualitative part involved conceptual

modeling based on content analysis according to the conventional design method, while the quantitative part was quasi-experimental, with a pretest, posttest, and follow-up (45 days) design with a control group.

To conduct the research, all concepts of the Work Adjustment Theory were initially extracted from existing texts. Then, the various concepts and constructs extracted through content analysis using the conventional design method were examined and validated by educational counseling experts, confirming the personality styles concept of this theory for developing a conceptual model. Subsequently, a girls' high school in Najafabad was randomly selected from a list of such schools in the city. From 44 volunteer students for this course, 32 who met the entrance criteria were selected and randomly assigned into experimental and control groups, with the control group being placed on a waiting list. The experimental group received eight 90-minute training sessions. Entry criteria for this research included: being in the twelfth grade, having a desire to participate in the university entrance exam, ability and willingness to attend all sessions, not concurrently participating in another educational counseling course, and not suffering from severe mental illness. Exit criteria included: missing more than one training session, repeated tardiness, lack of attention to content, and failure to complete assignments. Before and after the independent variable was applied, both groups were evaluated with pretests and posttests, and 45 days later, in a follow-up phase, and the results were analyzed at the end. After the course, the training was intensively offered to the control group as well. The training took place at the school during official hours, with the agreement of the teacher and the relevant manager, and was conducted by the researcher.

2.2. Measures

2.2.1. Academic Motivation

Harter's Academic Motivation Questionnaire is a 33-item form (17 items for intrinsic motivation and 16 items for extrinsic motivation) with six subscales. The reliability coefficient of this test has been reported between .54 and .84, and the test-retest reliability between .58 and .76. Also, the alpha coefficient for the overall scale of extrinsic motivation was .78 and for intrinsic motivation .74, all significant at p < .001 level. Additionally, the validity and reliability of this test were obtained by Mahmoud Bahrani in Shiraz in 2009. The alpha and test-retest reliability for the overall scale of intrinsic motivation were .85 and .86, respectively, and for

the overall scale of extrinsic motivation .69 and .72, with internal consistency coefficients obtained through the correlation of each question with the total scale score ranging from .30 to .78 (Tavakoli & Ebrahimi, 2020).

2.2.2. Psychological Capital

To measure psychological capital, the questionnaire by Luthans et al. (2007) was used. This 24-item questionnaire is based on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree) and includes four subscales: hope, resilience, optimism, and self-efficacy, each consisting of 6 items. In the study by Luthans et al. (2007), the lowest Cronbach's alpha estimated was .88, and The reliability of this questionnaire in this research using Cronbach's alpha method was .71, and its validity coefficient was .66 (Luthans et al., 2007; Saadati & Parsakia, 2023).

2.3. Intervention

2.3.1. Work Adjustment Counseling

To extract the constructs of the educational counseling model, all texts related to Work Adjustment Counseling in career theory books were subjected to content analysis using the conventional design method, and all concepts were extracted based on initial inductive coding, organized, and made comprehensive.

After the qualitative phase of the research, in the quantitative phase, after selecting 32 students conveniently, 32 students were divided into two groups of 16 (one group for Dawis-based counseling and one as the control group). Initially, both groups responded to the motivation and psychological capital questionnaires as a pretest. Then, the counseling group underwent counseling based on Dawis' approach over eight sessions. At the end of the counseling phase, as a posttest, both groups again responded to the motivation and psychological capital questionnaires. Given that the counseling package based on Dawis' theory was developed and used for the first time in this research, its content validity was initially confirmed through examination of content validity ratio calculation (agreement coefficient of .90), and then its effectiveness on metacognitive strategies and exam anxiety was demonstrated through a preliminary study on 5 individuals.

Session One: The student becomes familiar with the nature of their motivation and psychological capital.

- Ask the student to identify their level of academic motivation and psychological capital.
- Ask the student to specify situations that increase motivation and hope for success in the university entrance exam (Worksheet 1).
- Ask the student to identify factors that increase their motivation and psychological capital (Worksheet 2).
- Ask the student to develop an operational plan to increase their motivation and psychological capital (Worksheet 3).

Session Two: Determine the student's level of satisfaction.

- Ask the student to specify the level of satisfaction with the school's administrative staff and teachers (Worksheet 4).
- Encourage the student to discuss satisfaction factors in school in a group discussion.

Session Three: The student learns techniques to increase satisfaction in school.

- Teach the student how to study in school to better learn the lessons.
- Ask the student to identify the types of tasks in school to become a satisfied student (Worksheet).
- The student learns how to complete and present their homework.
- The student learns how to prepare for exams.

Session Four: Determine the student's level of satisfaction.

- Ask the student to specify their level of satisfaction with their school and educational environment (Worksheet).
- Ask the student to specify their level of satisfaction with their academic performance.
- Ask the student to specify their overall level of satisfaction with their life and surroundings.

Session Five: The student learns techniques for achieving satisfaction in school.

- The student becomes familiar with various individuals' styles in study speed.
- The student becomes familiar with various individuals' styles in study intensity.
- The student becomes familiar with various individuals' styles in study rhythm and pattern.

- The student becomes familiar with various individuals' styles in persistence and continuity of study flow.

Session Six: The student learns techniques to increase reading speed.

- The student becomes familiar with different individuals' styles in the amount of time needed to complete tasks (Worksheet).
- Styles include high speed with high accuracy and retention, high speed with high forgetfulness, moderate speed (4-6 pages per hour for memorization subjects) with high accuracy and retention, moderate speed with medium accuracy and retention (at least 65% retention after three days), slow speed (less than 4 pages per hour for memorization subjects) with high accuracy and retention, and slow speed with low retention.
- The student becomes familiar with their agility in completing tasks.
- The student becomes familiar with speed reading techniques (silent reading, eye reading, phrase reading, and exploratory reading) and test-taking techniques, able to take tests within a standard timeframe (40 seconds for memorization subjects and 60 seconds for inferential subjects).

Session Seven: The student learns techniques for intensive study.

- The student becomes familiar with various study intensity styles including extensive reading, casual, and balanced in the effort made to complete tasks.
- The student becomes familiar with their intensity in completing tasks and the effort they put into completing tasks.
- The student learns when and where to use supplementary books, tests, sample questions from other teachers, and previous years' exam questions.

Session Eight: The student learns techniques to regulate study rhythm and pattern.

- The student becomes familiar with types of response patterns (constant pattern, sinusoidal pattern).
- The student becomes familiar with their own predominant response rhythm and pattern.

- The student is able to design and implement a stable rhythm and pattern for studying through short-term and long-term planning, using performance registration tables to monitor and evaluate their activity progress (Worksheet).

Session Nine: The student learns techniques for persistence and continuity of study flow.

- The student becomes familiar with various styles of pursuit and continuity of study flow (continuous and consistent (bee pattern), slow and deep (turtle pattern), rabbit pattern (fast and fiery), indifferent to tasks (koala pattern)).
- The student becomes familiar with their study pursuit style and evaluates their study process.
- The student learns techniques to deal with boredom and listlessness (managing sleep and diet schedules, balance in weekly planning and including a fixed sports program, positive self-talk, mental imagery, relaxation techniques, etc.).

2.4. Data analysis

At the end of the data obtained from the research implementation were analyzed through covariance analysis using SPSS software.

3. Findings and Results

The descriptive results regarding the sample showed that the average age of the participants was 17.11 years. 70% had parents with education higher than a diploma, 60% were the first child, and the rest were the second child. 20% had an average grade below 17, 70% had an average grade between 17 and 19, and the rest had an average grade above 19.

After extracting the best constructs of the Dawis educational counseling package and organizing all concepts based on initial inductive coding and extracting key concepts, the content validity of the package and the content validity ratio were reviewed and confirmed, and the conceptual model, thematic model, and format of the therapy sessions were extracted. To investigate the research question "Does the educational counseling model derived from the Theory of Work Adjustment have a significant impact on academic motivation and psychological capital?" a multivariate analysis of covariance test was used.

Table 1

Descriptive findings of research variables

Variables	Group	Stage	Mean	Standard Deviation	N
Academic Motivation	Experimental Group	Pretest	104.06	9.80	16
		Posttest	117.62	16.30	16
	Control Group	Pretest	102.87	6.52	16
		Posttest	105.81	15.60	16
Psychological Capital	Experimental Group	Pretest	106.18	18.71	16
		Posttest	124.68	14.95	16
	Control Group	Pretest	111.93	15.45	16
		Posttest	100.00	24.76	16

The results of Table 1 indicate that the mean of academic motivation and psychological capital in the experimental group has increased compared to the posttest. Also, the results show that there is a difference between the mean of academic motivation and psychological capital in the experimental group in the pretest and posttest stages.

To check the equality of the covariances of academic motivation and psychological capital scores in the two groups, Box's M test was used. The results of the Box test show that the difference in covariances of academic motivation and psychological capital in the two groups is not significant ($p = .88$). Additionally, the Shapiro-Wilk test was used to check the normality of the data scores, indicating that the data of academic motivation and psychological capital in all three groups are normal. Also, Levene's test was used to check the equality of variances of variables, showing that the variance of academic motivation and psychological capital does not significantly differ, ensuring the assumptions for using the analysis of covariance test is met.

Table 2

Analysis of Covariance Results for Comparing Academic Motivation and Psychological Capital by Group

Source of Variation	Variables	Sum of Squares	Df	Mean Squares	F	Significance	Eta Squared	Test Power
Pretest	Academic Motivation	896.719	1	896.719	3.786	.062	.119	.468
	Psychological Capital	1792.635	1	1792.635	4.685	.039	.143	.552
Group	Academic Motivation	1007.956	1	1007.956	4.256	.049	.132	.513
	Psychological Capital	5719.779	1	5719.779	14.949	.001	.348	.964
Error	Academic Motivation	6631.968	28	236.856				
	Psychological Capital	10713.117	28	382.611				

Given the confirmation of assumptions, a multivariate analysis of covariance test was used to compare the two groups.

As seen in Table 2, the difference between the two means of academic motivation and psychological capital is significant, and the difference between the two means in metacognitive awareness is not significant. Additionally, the eta coefficient indicates that Dawis' effect explains 13.2% of the changes in academic motivation and 34.8% of the changes in psychological capital. Thus, it can be concluded that the Dawis educational counseling model has an impact on increasing academic motivation and psychological capital.

4. Discussion and Conclusion

This research aimed to develop an educational counseling model based on the Theory of Work Adjustment and to examine its implementation validity on the academic motivation and psychological capital of university entrance exam students. In addition to confirming the content validity of this model, the results of this research also supported the effectiveness of this method on the academic motivation and psychological capital of university entrance exam students. The outcomes in terms of the effectiveness of this method on the aforementioned variables were consistent with the results of other studies on the effectiveness of psychological interventions on academic variables (Abbasi Fashami et al., 2020; Ahmadzadeh Samani et al., 2021; Asli Azad et al.,

2019; Badri Gargari, 2019; Bayrami et al., 2021; Dahmardeh & Nastiezaie, 2019; Farid et al., 2021; Fouladi et al., 2018; Ghodsi et al., 2018; Gholizadeh & Manzari, 2019; Habibi-Kaleybar et al., 2019; Haqnazari et al., 2022; Hoseinkhani et al., 2021; Jabarzadeh Chaharbrod et al., 2023; Khedri et al., 2022; Khodabandehlu et al., 2021; Maddahi & Maddah, 2014; Mehraban et al., 2022; Mikhak & Moradi, 2022; Moradi & Maleki, 2015; Motamed Yeganeh et al., 2020; Parsakia et al., 2022; Peyamannia, 2021; Pirabasi & Safarzadeh, 2018; Salajegheh & Bakhshani, 2014; Salam & Astuti, 2023; Shiroodaghaei et al., 2020; Taghizadeh et al., 2018; Tahmasbipour et al., 2021; Tarazi et al., 2020; Tavakoli & Ebrahimi, 2020; Yar-Ahmadi et al., 2018; Zahmatkesh et al., 2018; Zarenezhad et al., 2019). In explaining the effectiveness of this method on academic motivation, it should be noted that academic motivation, in general, refers to the motives, needs, and factors that cause an individual to attend educational environments and obtain an academic degree (Code, 2020; Emre & KIYICI, 2022; Torbatinezhad et al., 2022). Therefore, it seems that familiarizing students with how to manage school assignments and succeed in the university entrance exam, as well as self-awareness of their personality style in facing assignments, the rhythm of performing tasks, intensity of reaction to assignments, and pursuit of tasks on one hand, and performing counseling tasks during the session on the other hand, have helped participants to experience new insights into a new aspect of personality style in the educational context (Hajloo et al., 2020; Kong et al., 2021; Mohammadi Farahmand, 2021), which has overall increased their desire and motivation for academic success.

Furthermore, the results of the covariance analysis showed that the Dawis educational counseling method significantly affects the increase of psychological capital in university entrance exam students which is also supported by previous research (Dehghannezhad et al., 2017; Faraj Zadeh et al., 2020; Khosroshah et al., 2012; Mahfud et al., 2020; Nasiri Takami et al., 2020; Sheikh Zeineddin et al., 2018; Sun et al., 2022).

Regarding the explanation of the effectiveness of the Dawis educational counseling model on increasing psychological capital, it can be said that since psychological capital comprises four dimensions: hope, optimism, resilience, and self-efficacy, the Dawis educational model appears to have been effective in improving psychological capital. The Dawis educational counseling method taught individuals to identify the types of tasks in school, recognize satisfying factors and satisfaction in school, and use them to

increase self-efficacy. Also, by familiarizing with different learning styles, individuals became acquainted with speed, intensity, rhythm, and continuity, identifying their learning style and familiarizing with the learning styles of successful individuals, thus enhancing their own learning style and increasing hope and optimism. Additionally, students learn to increase resilience through continuous and consistent learning patterns and techniques for dealing with boredom.

It appears that the educational counseling model derived from this research, by increasing motivation and psychological capital of university entrance exam students, will lead to improved academic performance and success in the entrance exam.

This study is not without limitations in terms of the generalizability of the results. Moreover, the conceptual model derived from the findings is based on the Theory of Work Adjustment. Therefore, further research to expand knowledge in this area and operationalize the themes from this study for use in educational guidance and counseling programs for students is recommended to subsequent researchers. Furthermore, in light of the findings of this research, it is suggested that school counselors consider the concepts of this theory as a strategy to enhance academic performance and prevent academic decline.

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Declaration of Interest

The authors of the study declare no conflict of interest related to the research.

Ethics Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Authors' Contributions

All authors contributed equally in this article.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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