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Investigating the Associations Among Self-Efficacy, Perceived Social Support, and Career Decision-Making Difficulties Among MDCAT Repeat Candidates in Sialkot, Pakistan: A Cross-Sectional Analysis

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Abstract

Objective: Current study aims to find the relations among Self-efficacy (SE), Perceived social support (PSS) and Career decision making difficulties (CDMD) in individuals who faced failure in MDCAT.

Methodology: In this study, cross-sectional method was used. 500 participants were recruited from academies and universities in Sialkot, Pakistan as sample. SE, PSS and CDMD were assessed using standardized scales. SPSS Version 26 was used for data analysis. The relationships between the studied variables were investigated using Pearson's product-moment correlation.

Results: There is a negative correlation between CDMD and SE (r= -0.143) and a significant positive correlation between PSS and CDMD (r=0.137, p<.05). there is a significant positive correlation between SE and PSS (r=0.332, p<.05).

Conclusion: The findings indicate that while higher self-efficacy is modestly associated with fewer career decision-making difficulties, higher perceived social support is concurrently linked to greater career indecision in this cohort. Given the small effect sizes, these variables operate as minor correlative factors rather than primary psychological predictors. The unexpected positive correlation involving social support may reflect localized resource mobilization or collectivist familial pressure during academic crises. The study underscores the necessity for culturally nuanced career counseling frameworks tailored to MDCAT repeat candidates.

Keywords: career decision making difficulties, MDCAT, perceived social support, repeat candidates, self efficacy

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Introduction

In Pakistan, admission to medical and dental colleges is largely dependent on performance in the Medical and Dental College Admission Test (MDCAT), a highly competitive examination taken by thousands of students each year. Because medicine is commonly associated with financial stability, professional prestige, and family honor, success in the MDCAT is often viewed as a major life achievement.[1] In recent years, increasing competition, limited seats, and controversies surrounding the MDCAT process have intensified academic pressure on students.[2] Many candidates spend years preparing for the examination, and those who are unable to secure admission frequently experience uncertainty regarding their future educational and career pathways.

Academic failure in high-stakes examinations has been associated with emotional distress, reduced confidence, anxiety, and difficulties in future planning.[3] For MDCAT repeat candidates, repeated unsuccessful attempts may challenge their sense of competence and lead to confusion regarding alternative career options.[4] In collectivistic societies such as Pakistan, career decisions are also strongly influenced by family expectations and social comparison, which may further complicate students' adjustment after academic setbacks.[2] Consequently, understanding the psychological factors associated with career decision-making among MDCAT non-passers is important in order to better support this population.

One psychological factor that may be related to students' adjustment after failure is self-efficacy. According to Bandura's Social Cognitive Theory, self-efficacy refers to an individual's belief in their ability to organize and perform actions required to achieve desired outcomes.[3] Students with higher self-efficacy are generally more likely to approach challenges with persistence and confidence, whereas lower self-efficacy has been linked with avoidance, self-doubt, and difficulty coping with setbacks.[19] Previous studies have shown that self-efficacy plays an important role in academic resilience, emotional regulation, and career-related behaviors.[12] Among students preparing for competitive examinations, repeated failure may weaken confidence in personal abilities and contribute to uncertainty regarding future goals.

Career decision-making difficulties (CDMD) refer to problems individuals experience while selecting, committing to, or planning a career path.[11] These difficulties may arise due to lack of information, conflicting expectations, emotional distress, or indecisiveness. Research suggests that students facing academic setbacks often report confusion and hesitation when considering alternative educational or occupational choices.[8] In the Pakistani context, where medicine is frequently regarded as one of the most respected professions, students who do not qualify for medical admission may experience additional pressure from family and society while reconsidering their career direction.

Perceived social support (PSS) is another factor that may be associated with students' psychological adjustment after academic failure. Perceived social support refers to the extent to which individuals believe emotional, informational, or practical assistance is available from family, friends, and significant others.[10] Previous literature has demonstrated that supportive relationships are associated with improved psychological well-being and better coping during stressful life events.[16] However, social support may function differently across cultural contexts. In collectivistic settings, family involvement in educational decisions can sometimes provide reassurance and guidance, but in some cases it may also increase pressure and decisional conflict, particularly when expectations regarding medical careers are high. Therefore, the relationship between perceived social support and career decision-making difficulties may not always be straightforward and requires further exploration within the Pakistani MDCAT context.

Although previous studies have examined self-efficacy, social support, and career decision-making separately, limited research has explored how these variables are associated among MDCAT non-passers in Pakistan. Moreover, much of the existing literature has focused on Western populations, which may differ culturally from Pakistani students in terms of family involvement, educational pressure, and career decision-making patterns. The present study therefore aimed to examine the associations among self-efficacy, perceived social support, and career decision-making difficulties in students who were unable to secure admission through the MDCAT.

Based on previous literature, it was hypothesized that self-efficacy would be negatively associated with career decision-making difficulties. The relationship between perceived social support and career decision-making difficulties was explored because cultural and contextual factors may influence how support is experienced among MDCAT repeat candidates. Due to the cross-sectional nature of the study, findings are interpreted as associations rather than causal relationships.

Methodology

Quantitative, cross-sectional and correlational study design was used to examine the association between GSE, PSS and CDMD, in pupils who had failed the Medical and Dental College Admission Test (MDCAT). The design was selected because it would permit the analysis of correlations between variables in the defined population of MDCAT failed students.

This research was conducted in district Sialkot of Pakistan. Sampling was based on both the government and non-government educational institutions, such as Government College Women University Sialkot (GCWUS),

University of Sialkot (USKT), Government Murray College Sialkot, and the University of Management and Technology (UMT), Sialkot campus. MDCAT coaching academies such as KIPS Academy, STEP by Punjab Group of Colleges, PAC (Professional Academy of Commerce), and SKANS School of Accountancy were also included to ensure a heterogeneous sample of MDCAT failed students across academic settings.

According to the sample size table,13 a minimum sample of 364 participants is required for a population of 6,868 individuals at a 95% confidence level and 5% margin of error. To increase statistical power and compensate for potential missing data, a total of 500 participants were recruited.

A purposive sampling technique was employed to recruit participants who met the study eligibility criteria, specifically students who had failed the MDCAT examination. Because purposive sampling is a non-probability sampling method, the findings should be interpreted with caution when generalizing to the broader population of MDCAT-failed students.

The sample included both male and female students aged 17 to 24 years. The age group is a reflection of the normal MDCAT applicants in Pakistan and both sexes were taken to ensure the possible differences between the genders on the psychological variables.

Eligibility criteria required participants to have attempted the MDCAT exam within the past two years, failed to gain admission to a medical or dental college, and be able to understand English. Participants who reported a previous psychiatric diagnosis requiring ongoing treatment or hospitalization were also excluded. Information regarding psychiatric history was obtained through self-report on the demographic information form.

All the participants were informed about the study and their involvement through written informed consent. Data was collected through self-administered questionnaires, which included a demographic form and three standardized psychological scales. The demographic sheet contained details like age, sex, MDCAT attempts, family status, residence, educational history and the main source of support.

To investigate the students' belief in their capacity to complete tasks the general self efficacy (GSE; Schwarzer & Jerusalem, 1995) scale was used.6 It is a ten-item scale examined on a Likert scale and demonstrated 0.86 internal consistency reliability.6 It is an open access scale that is freely available to academics for research purposes.

The issues of CDMD were evaluated through CDMD Questionnaire (CDDQ; Gati, Krausz, & Osipow, 1996).11 This scale is designed with thirty-four questions that examine the readiness, the information deficiency and the inconsistent information on a 9-point Likert Scale (11). The authorization to use was given by signing a permission letter by the original author. Reliability of this scale is also high as the reported Cronbach alpha of the scale is 0.95.11

The third scale was the MSPSS (MSPSS; Zimet et al., 1988).10 This 12-item scale determines perceived family, friend and other significant support.10 With the permission of the author, the author allowed the use of scale in the study through email. Its internal consistency reliability is 0.88.10

The research is compiled with ethical principles of the Declaration of Helsinki (1975, revised 1983). Before the collection of data, the Departmental Ethical Review Committee (DERC) of Government College Women University Sialkot gave its approval regarding the study.

Use of the scales was authorized by the original authors through email. Institutional approvals were obtained from the relevant public and private educational institutions and academies. Participants were taken through the study aims, their confidentiality assured and there is voluntary participation of participants. Informed consent was made in writing and the participant was free to discontinue participation at any time without being penalized. Each participant completed the questionnaires in approximately 10 to 15 minutes in a quiet, distraction-free setting.

The SPSS was used (version 26) to analyze data (IBM Corp., Armonk, NY, USA).For both the personal background details and the study-related information, means and standard deviations were computed. The product-moment correlation analysis by Pearson was done to analyze the associations between the variables. The determination of whether career decision-making difficulties predicted self-efficacy and perceived social support was done through linear regression analyses. Independent-samples t-tests were employed to compare differences of the genders. Statistically significant result was specified as $p < 0.05$.

Results

Descriptive statistics and correlations are presented in Table I. Several demographic variables (e.g., age, birth order, socioeconomic status, and number of siblings) showed weak associations with the study variables ($|r| < .20$). For instance, the number of MDCAT attempts was weakly positively associated with career decision-making difficulties ($r = .144$, $p < .01$).

Pearson correlation analysis (N = 500) in Table II indicated a weak negative association between self-efficacy and CDMD ($r = –0.143$, $p < .05$). Self-efficacy was positively associated with perceived social support ($r = .332$, $p < .05$). Perceived social support showed a weak positive association with CDMD ($r = .137$, $p < .05$), which is opposite to the hypothesized direction. This finding is contrary to the study hypothesis. Multiple correlations were examined without adjustment for multiple comparisons, which increases the possibility of Type I

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error.

Linear regression analysis in Table III showed that CDMD was significantly associated with perceived social support (β = 0.137, p < .01) and self-efficacy (β = –0.143, p < .01). However, effect sizes were small, and directionality cannot be inferred due to the cross-sectional design. These associations explain approximately 2% of the variance, indicating limited practical significance.

Table IV presents gender-based mean comparisons on general SE, CDMD, and PSS. Males scored significantly lower on general self-efficacy (M = 26.39, SD = 6.60) compared to females (M = 28.37, SD = 5.79), t(498) = –3.81, p = .003, showing a small effect size (Cohen's d = .32). However, no significant gender differences were found in Table IV for career decision-making difficulties, t(498) = 0.03, p = .868 (Cohen's d = 0.002), or for perceived social support, t(498) = 0.005, p = .577 (Cohen's d = 0.0004), indicating negligible effects in both cases.

A three-cluster solution was obtained using K-means clustering on general SE (tGSE), CDMD (tCDDQ), and PSS (tMSPSS) scores from 500 failed MDCAT students in Table V. Cluster 1 (n = 260; 52%) reported the lowest general self-efficacy, moderate decision related problems, and relatively high perceived social support. Cluster 2 (n = 158; 31.6%) had slightly higher self-efficacy than Cluster 1 but the highest decision-making difficulties and moderate social support. Cluster 3 (n = 82; 16.4%) scored highest in general self-efficacy, lowest in career decision related problems, and lowest in social support (see Table V). ANOVA results confirmed that the clusters differed significantly across all three variables (p < .001 for each). However, no formal validation of cluster stability was conducted.

Figure I illustrates the profiles of self-efficacy (tGSE), career decision-making difficulties (tCDDQ), and perceived social support (tMSPSS) across the three clusters. Cluster 3 shows the highest self-efficacy, Cluster 2 shows the highest career decision-making difficulties, and perceived social support decreases progressively from Cluster 1 to Cluster 3.

Table VI shows the psychometric properties of the measures. The GSE (6) had satisfactory internal reliability with a reliability score of α = .861. The MSPSS (10) also showed high reliability (α = .880). Its subscales, Significant Others (α = .702), Family (α = .704), and Friends (α = .706), each revealed reliable internal consistency values (see Table VI) . The CDDQ11 was found to have high internal consistency (α = .950). Of all subscales, the reliability in Readiness was satisfactory (α = .629), for Lack of Information (α = .629) and Difficulties Related to Inconsistent Information (α = .640). The overall results show that the scales and subscales exhibited an acceptable to excellent internal consistency (see Table VI).

Discussion

The relationships between self-efficacy, perceived social support, and career decision-making challenges among MDCAT repeat candidates in Sialkot, Pakistan, were investigated in this study. The results provided some support for the study's ideas. Self-efficacy was substantially inversely correlated with professional decision-making challenges, suggesting that students who were more confident in their skills tended to encounter less challenges when making job-related choices. The weakness of this association, however, indicates that among MDCAT repeat applicants, self-efficacy is just one of several elements influencing professional decision-making.[3,12]

According to Social Cognitive Theory, people who have greater confidence in their abilities are more likely to take on challenges head-on and persevere in the face

Table 1. Statistical Overview of Study Variables

Variables	N	M	SD	1	2	3	4	5	6	7	8
Age	500	2.422	.6455	_	-.028	.115*	.055	-.066	-.013	-.007	-.058
Birth order	500	2.012	.8277		_	-.188**	.009	.112*	.084	.068	.094*
No of siblings	500	3.270	.9481			_	.113*	-.071	-.005	-.226**	.006
SES	500	2.038	.5030				_	-.174**	.119**	.022	.154**
Residence	500	1.428	.5304					_	.015	.239**	.139**
Academic performance	500	1.836	.8309						_	.168**	.049
No of attempts for MDCAT	500	1.486	.6802							_	.144**
Family structure	500	1.622	.7564								_

Note. SES means socioeconomic status. p <.05, p <.01. The underscore (_) represents the correlation of variable with itself.

Table 2. Pearson Correlation Analysis showing Challenges in CDMD predict SE and PSS

Measures	n	M	SD	1	2	3
SE	500	27.39	6.26	_		
CDMD	500	164.91	38.89	-0.143	_	
PSS	500	52.75	18.96	.332	.137	_

Note. SE = Self-Efficacy; CDMD = Career Decision-Making Difficulties; PSS = Perceived Social Support; *p < 0.05 (two-tailed).

Table 3. Linear Regression Analysis for Career Decision Making Difficulties predicting General Self Efficacy and Perceived Social Support

	GSE total			MSPSS total		
Variables	B	β	SE	B	β	SE
Constant	189.2		7.74	150.1		5.103
CDDQ total	-.889	-.143	.276	.280	.137	.091

Note. GSE = General Self-Efficacy; MSPSS = Multidimensional Scale of Perceived Social Support; CDDQ = Career Decision-Making Difficulties Questionnaire; *p < 0.05, N = 500.

Table 4. Mean Comparison of Male and Female on SE, CDMD and PSS

Variables	Male		Female		t(498)	p	Cohen's d
	M	SD	M	SD			
SE	26.39	6.59	28.37	5.79	-3.81	.003	.32
CDMD	164.9	38.94	164.8	38.91	.033	.868	.002
PSS	52.75	18.16	52.74	19.65	.005	.577	.0004

Note. SE = Self-Efficacy; CDMD = Career Decision-Making Difficulties; PSS = Perceived Social Support. Cohen's d represents effect size.

Table 5. Cluster Anaylsis Using K-Means

Variable	Cluster 1 (n = 260)	Cluster 2 (n = 158)	Cluster 3 (n = 82)	F(2, 497)	p
Self-Efficacy (tGSE)	26.73	27.25	29.74	7.46	<.001
Career Decision-Making Difficulties (tCDDQ)	157.96	207.52	104.85	926.25	<.001
Social Support (tMSPSS)	50.65	57.67	49.95	8.03	<.001

Note. tGSE = transformed General Self-Efficacy score; tCDDQ = transformed Career Decision-Making Difficulties score; tMSPSS = transformed Perceived Social Support score. F-values from one-way ANOVA tests comparing clusters.

of setbacks, which is consistent with the negative correlation between self-efficacy and career decision-making difficulties.[3] Higher self-efficacy has been linked to increased professional adaptability, career confidence, and decreased decisional uncertainty, according to earlier research.[19,12]

Additionally, a strong positive correlation between perceived social support and self-efficacy was discovered. Higher levels of self-efficacy were typically reported by students who felt more support from friends, family, and significant others. This result is consistent with other research showing that supportive social contexts foster adaptive coping, resilience, and self-assurance.[16,10]

Perceived social support showed a weak but substantial positive correlation with career decision-making

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Table 6. Psychometric Properties for Scales and Sub scales

Scales	M	SD	Number of items	Cronbach's α
General Self Efficacy	27.39	6.26	10	.861
Multidimensional Scale of Perceived Social Support	52.75	18.96	12	.880
Significant others	17.39	7.03	4	.702
Family	17.93	7.82	4	.704
Friends	17.42	6.73	4	.706
Career Decision Making Difficulty Questionnaire	164.91	38.89	34	.950
Readiness	52.42	14.45	10	.629
Lack of information about	56.83	18.82	12	.629
Difficulties related to inconsistent information	44.91	18.5	10	.640

Note. Cronbach's α indicates internal consistency reliability. Items 7 and 12 in CDDQ were validity items and excluded from reliability analysis.

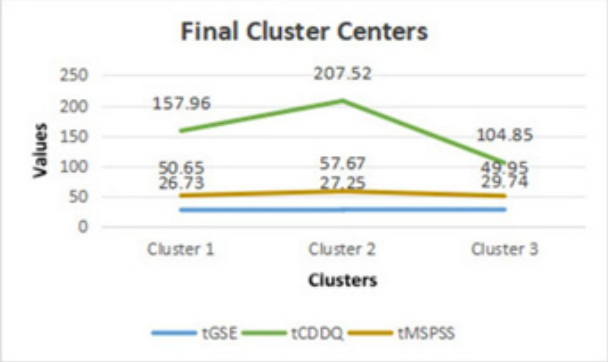

Figure 1: Final cluster centers graph

Note: The blue line (tGSE) rises in Cluster 3, indicating highest self-efficacy. The green line (tCDDQ) peaks in Cluster 2, reflecting greatest career difficulties. The yellow-beige line (tMSPSS) is highest in Cluster 1 and lowest in Cluster 3, showing decreasing perceived social support across clusters.

challenges, which was unexpected. Family participation in job and educational choices can offer practical and emotional support in collectivistic societies like Pakistan, but it can also increase pressure to live up to family expectations.[2] As a result, even though they receive a lot of assistance, students could encounter more decisional conflict.

Regression analysis also revealed a strong relationship between occupational decision-making challenges and self-efficacy and perceived social support. The variance explained, however, was minimal, indicating little practical value. Thus, a variety of factors, such as academic achievement, parental expectations, professional knowledge, personality traits, and socioeconomic circumstances, are likely to have an impact on career decision-making challenges.[11]

Despite the minor impact size, gender comparisons showed that female individuals had considerably greater levels of self-efficacy than male participants. Regarding perceived social support and career decision-making challenges, there were no discernible gender differences. These results imply that career-related challenges after failing the MDCAT are often comparable for both sexes.

Several limitations should be acknowledged. First, the cross-sectional design makes it impossible to determine a cause. Second, the generalizability of results is limited by purposive sampling. Third, answer biases can have an impact on self-report measures. Lastly, self-efficacy and perceived social support should be viewed as minor correlates rather than substantial predictors of career decision-making difficulties since, although statistically significant associations being found, impact sizes were small.

The study adds to the scant literature on MDCAT repeat applicants in Pakistan in spite of these drawbacks. The results emphasise the value of career counselling programs that address social impacts on profession choices and family expectations while boosting self-efficacy. Longitudinal designs should be used in future studies, and more psychological and contextual factors that influence professional decision-making challenges should be explored.

Conclusion

This study concludes by highlighting the significance of lowering professional hurdles among MDCAT failures. Strong self- belief and a supportive environment

are protective psychological traits that help students bounce back from academic setbacks and change their professional options. To transform times of collapse into chances for reorientation and development, focused interventions and institutional initiatives are required.

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Authors' Contribution Statement

NC contributed to the conception, design, acquisition, analysis, interpretation of data, drafting of the manuscript, and critical review of the manuscript. AS contributed to the acquisition, analysis, interpretation of data, and drafting of the manuscript. US contributed to the acquisition, analysis, and interpretation of data. FS contributed to the analysis, interpretation of data, and drafting of the manuscript. KR contributed to the acquisition, analysis, and interpretation of data. AA contributed to the acquisition, analysis, interpretation of data, and drafting of the manuscript. All authors are accountable for their work and ensure the accuracy and integrity of the study.

Conflict of Interest

Authors declared no conflict of interest

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None

Data Sharing Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.