

Mediating Role of Depression Associated with Social Competence, Cognitive Failures and Academic Performance in Students with Specific Learning Disability

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Abstract

Background: Lack of social competence (SC) and cognitive failure (CF) could cause depression in children with specific learning disabilities (SLD) and affect their academic performance (AP). The present study aimed to investigate the mediating role of depression associated with social competence, cognitive failures and academic performance in students with specific learning disabilities.

Methods: The statistical population of this descriptive correlational study consisted of all female students within the age range of 10 to 12 with SLD in the academic year 2020-2021 in Ahvaz, Iran, among whom 178 were selected as the sample through cluster sampling. The research tools included academic performance, the Social Competence Scale (SCS), the Cognitive Failures Questionnaire (CFQ), and the Children's Depression Inventory (CDI). The evaluation of the proposed research model was performed using the path analysis method via SPSS and AMOS software version 24.

Results: The results indicated that all direct paths to AP were significant ($P=0.001$), except for that of CF ($P=0.111$). The mediating role of depression did not show a significant association between the indirect path of SC and AP ($P=0.135$). However, the mediating role of depression caused a significant association between the indirect path of CF and AP ($P=0.010$).

Conclusion: The results herein revealed that the proposed model achieved a desirable fit, which is considered to be a crucial step toward understanding the factors affecting the AP of students with SLD.

Keywords: Specific learning disabilities, Academic performance, Social competence, Cognitive failure, Depression

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1. Introduction

Students with specific learning disabilities (SLD) normally suffer from injuries in one or more aspects of the perceptual processes, which leads to various types of disorder, such as understanding and using language, speech disorder, or writing disorder (Dysgraphia) in these children (1). This disability influences academic skills, such as reading, listening, thinking, speaking, writing, spelling, and mathematical calculations (Dyscalculia), and reduces their success in these areas (2). The expression of learning disorder proposes the need of diagnosing and helping students that constantly encounter failure in education; the students that are not

included within the age framework of children with special needs (3). In the Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5), the American Psychiatric Association stated that SLD in all areas of performance, like reading, writing, and mathematics, is prevalent among approximately 5 to 15% of the students of different cultures (4). Sharifi and Davari (5) demonstrated that 7.69% of male and 6.06% of female students in the first grade and 8.57% of male and 6.54% of female students in the second grade suffer from Dyslexia.

Students with SLD cannot accomplish a desirable academic achievement. They continue their studies with difficulty or drop out of school, which could cause social,

cultural, economic, and emotional-psychological damages to them and ultimately, to the society (6). Academic performance (AP) is considered to be one of the predictive indicators of scientific achievement and promotion (7, 8). Investigations have indicated that learning disability entails more than just educational problems. In order to understand it, various aspects of a child's life, including social, emotional, and behavioral must be taken into account (9).

Social competence (SC) is one of the factors that can affect the AP of a child with SLD. Social problems that are among the characteristics of people with learning disabilities include deficiency in learning and executing a skill (10). Social skills-associated deficiency in people with learning disorders appears during childhood, adolescence, and even continues through their adulthood (11). SC is a person's ability to adopt personal independence and social responsibility (12). Students with learning disabilities have lower SC compared with normal children. SC is defined as a person's ability to accomplish personal goals through maintaining positive social relations (13). Kaeppler and Erath (14) are of the opinion that SC is the same as emotional intelligence; it is a collection of cognitive, emotional, behavioral, and motivational skills that a person requires for successful social and psychological adjustment in order to accomplish their goals. Kim and Shin (15) revealed that social skills and competence have an association with AP.

Another factor that appears to affect the AP of students with SLD is cognitive failure (CF). CF is a multidimensional structure consisting of errors in shaping goals, mistakes in activation of schemes, and errors in the setup of actions (16). If interfered with daily activities, CF might cause major problems. Compensating for these errors in the setup of action can lead to serious injuries and even death (17). Most researchers have emphasized that CF includes distraction, memory problems, errors, and forgetting names. CF is reported to be more frequent in women than in men. Furthermore, the score of CF increases significantly along with the individual's age (18). Shahbaziyanikhonig and Hasani (19) revealed that test anxiety and alexithymia are associated with academic burnout in students. Abolghasemi and Kiamarsi (20) demonstrated that alexithymia and child abuse have a significant association with academic achievement in male high school students.

Furthermore, both SC and CF could trigger depression

in students with SLD; therefore, it influences their AP. Depression has always been one of the unknown diseases and one of the most prevalent psychological disorders (21). People with clinical depression experience the following symptoms for two weeks: Change of appetite, weight loss, insomnia, lack of energy, fatigue, feeling of unworthiness and guilt, and diminished ability to think or concentrate (22). Salehi and Mosalman (23) manifested that religious attitude, psychological well-being, and depression are associated with students' AP. As reported by Daraei (24), students' AP is correlated with depression and self-esteem. According to Khazaei and colleagues (25), students' academic achievement has an association with depression and self-esteem.

In general, the problem of academic failure and low AP of students is one of the major issues in a person's academic life and the educational system of every country. Therefore, various social and educational problems facing the students with SLD necessitates devising plans for resolving these problems. The present study used depression as a mediator variable in order to specify how it influences the AP of students with SLD by affecting SC and CF. Accordingly, the present study aimed to investigate the mediating role of depression associated with CP and CF with AP in students with SLD.

2. Methods

The correlational method was employed to accomplish the objectives of the study and the hypotheses were tested using path analysis modeling. The study population included all female students within the age range of 10 to 12 with SLD in the school year 2020-2021. These students were diagnosed with SLD through the screening program carried out in 2020-2021 at the learning disability treatment centers in the four districts of Ahvaz, Iran. Two centers were selected among all-girls learning disability treatment centers in a cluster and 200 questionnaires, containing the variables of the research, were given to the students to complete. Depending on the number of predictor variables in structural equation analysis, the sample size should be at least 10 times the number of variables plus 50 (26). In this study, there was a total of 11 observed variables ($11 \times 10 + 50 = 160$). To reduce sampling error, 200 participants were considered as the sample. The inclusion criteria were SLD, having CF based on cognitive failures questionnaire data,

obtaining a written letter of consent from the parents for their child's participation in the research, age group of 10-12, and not suffering from psychological disorders. The exclusion criteria of the study were failure to answer all the questions of the questionnaire. Finally, 178 questionnaires were analyzed, which were filled out by the participants who had met the conditions.

Research tools

Academic performance: Academic performance is an individual's acquired or learned ability regarding the institutional subjects, which is scored by teachers according to the transcript of students' grades. To calculate academic performance, the grade point average (GPA) of all courses during the academic year was considered. The GPA of the sample scores during the academic year was between 13 and 20 (13 and 14 = needs extra effort, 15 and 16 = acceptable, 17 and 18 = good, and 19 and 20 = very good).

Social Competence Scale (SCS): SCS was initially developed by Kohn and Rosman in 1972. It was designed in two forms, one containing 73 items and the other 64 items (27). It was standardized for elementary students by Gornall in 1980 and its items were reduced to 44 (28). SCS evaluates a child's level of social-emotional functions and two factors of cooperation-surrender against rage-objection. The scores given to the items range from one (Never) to five (Always). Since each item evaluates two opposing poles, some questions were valued as positive or negative. The factor of cooperation-surrender against rage-objection obtained the lowest score of -85 and +7 and the factor of tendency-participation against remoteness-keeping aloof attained the highest scores of -33 and +51. In the study by Morovati and colleagues (29), the construct validity of SCS was examined and confirmed through confirmatory factor analysis (CFA). Ranjbar and Hajloo (28) reported that the views of experts (faculty members and PhD students in psychology and English) were used to confirm the face validity of this scale. The content validity of this scale was reviewed and confirmed by psychologists of Mohaghegh Ardabili University (30). In this study, Cronbach's alpha coefficient was 0.82 for the scale.

Cognitive Failures Questionnaire (CFQ): This questionnaire was developed by Broadbent and colleagues in 1982 (31). It contains 25 items, which participants

respond based on a 5-point scale. Its items involve four subscales, namely distraction, memory problems, errors, and forgetting names. The answer to each item is measured based on a 5-point Likert scale, ranging from «Never» to «Always». The total score of the CFQ for each person is obtained from the sum of the scores of the subscales. The face validity of this questionnaire was examined by 10 experts in the field of psychology and English language and it was confirmed by removing the ambiguities of its 25-item form (32). Additionally, the construct validity of the Persian version of this questionnaire was reported in the study of Abbariki and colleagues (32). This research reported a Cronbach's alpha of 0.77 for the questionnaire. In the present study, the Cronbach's alpha coefficient was 0.84 for the questionnaire.

Kovacs' (1983) Children's Depression Inventory (CDI): This is a 27-item self-report scale suitable for children and adolescents whose age range is within the age range of 7 to 17. Each item of the CDI has three options, 0, 1, and 2, and the higher scores indicate the increase in intensity. Zero means no signs of disease, 1 means mild disease, and 2 means severe disease. The construct validity of the Persian version of the CDI was confirmed through confirmatory factor analysis by Mokhtarnia and colleagues (33). The face validity of the CDI was examined by twelve psychologists and it was confirmed by removing ambiguous items (33). In the present study, the Cronbach's alpha coefficient was 0.81 for the questionnaire.

Statistical analyses

The data were analyzed via descriptive statistics (mean and standard deviation), Pearson correlation test, and structural equations with SPSS version 24 and AMOS version 24.

3. Results

The mean and standard deviation (SD) of the participants' age equaled 11.15 and 2.07, respectively. Primarily, the data were monitored to identify outlier data, their normality, and whether they meet or violate the assumptions of path analysis. Collinearity and variance inflation factors were controlled. Since the tolerance index was over 0.10 for SC (0.471), CF (0.523),

Table 1: Mean, standard deviation, skewness, kurtosis, and Pearson correlation coefficients of the research variables

| Variables | M ± SD | Skewness | Kurtosis | 1 | 2 | 3 | 4 |
|----------------------|----------------|----------|----------|----------|----------|---------|---|
| Academic performance | 15.25 ± 3.19 | 0.52 | 0.38 | 1 | | | |
| Social competence | 115.74 ± 18.64 | 0.48 | 0.63 | 0.520** | 1 | | |
| Cognitive failures | 84.13 ± 10.59 | 0.54 | 0.46 | -0.361** | -0.289** | 1 | |
| Depression | 41.49 ± 7.35 | 0.36 | 0.77 | -0.396** | -0.327** | 0.412** | 1 |

M ± SD: Mean ± Standard deviation; **: P<0.01

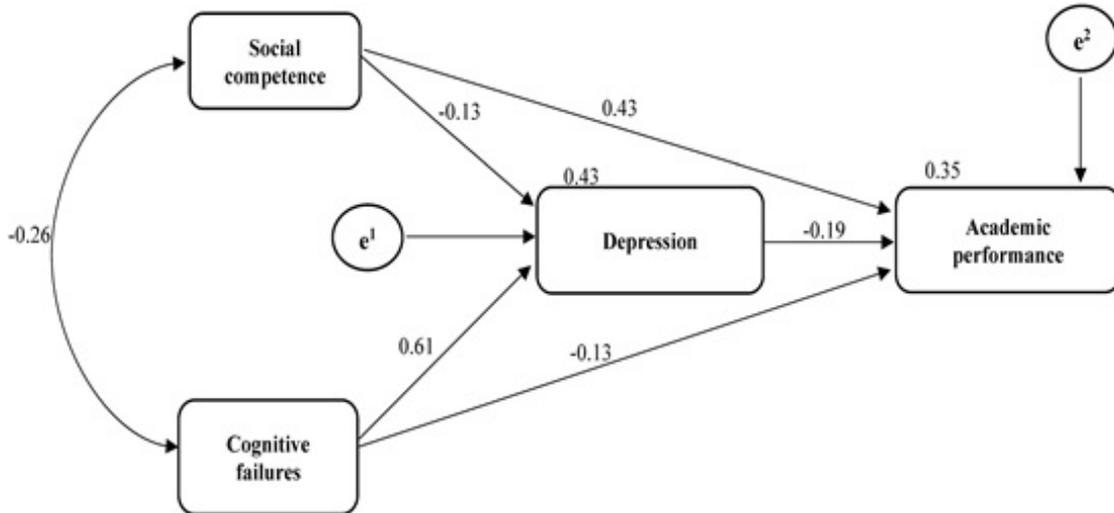


Figure 1: The figure shows the initial model pertaining to the mediating role of depression associated with social competence, cognitive failures and academic performance.

and depression (0.461) and the variance inflation was below 10 for SC (1.236), CF (2.017), and depression (1.458), this assumption was met. In order to assess the independence of errors, Durbin-Watson Test was employed. Considering the fact that the statistic of

Durbin-Watson (1.44) ranges between 1.5 to 2.5, this assumption is met.

Table 1 represents the descriptive statistics, such as mean, standard deviation (SD), skewness, kurtosis, and Pearson correlation coefficient of the research variables.

Table 2: Fit indicators of the initial and final model

| Fit indicators | χ^2 | df | (χ^2/df) | GFI | IFI | TLI | CFI | NFI | RMSEA |
|----------------|----------|----|-----------------|-------|-------|-------|-------|-------|-------|
| Initial model | - | - | - | - | 1.00 | - | 1.00 | 1.00 | 0.411 |
| Final model | 2.250 | 1 | 2.250 | 0.919 | 0.992 | 0.949 | 0.992 | 0.986 | 0.037 |

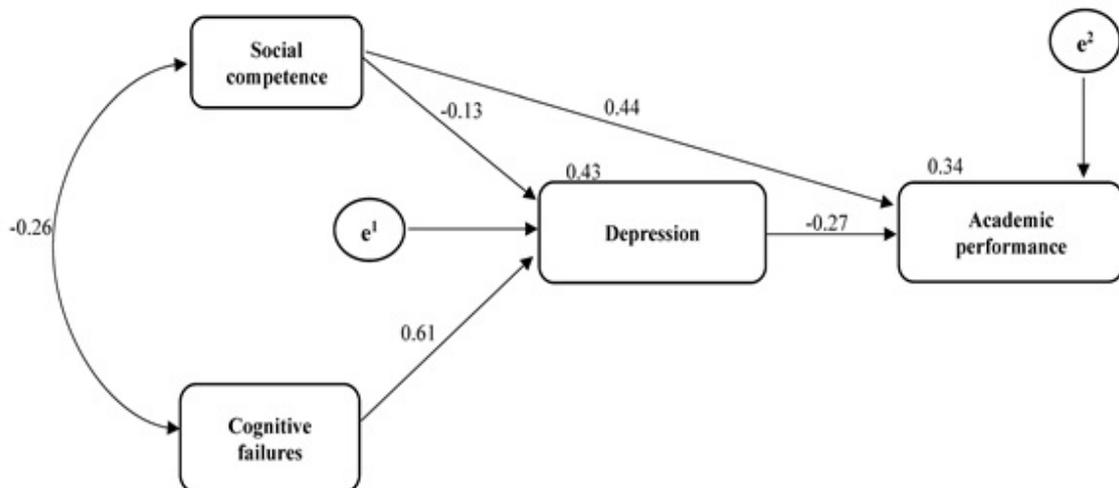


Figure 2: The figure shows the modified final model pertaining to the mediating role of depression associated with social competence, cognitive failures and academic performance.

Table 3: Direct effects between the variables in the initial and final modified model

| Path | Initial model | | Final modified model | |
|--|---------------|-------|----------------------|-------|
| | β | P | β | P |
| Social competence to academic performance | 0.433 | 0.001 | 0.443 | 0.001 |
| Social competence to depression | -0.128 | 0.030 | -0.128 | 0.030 |
| Cognitive failures to academic performance | -0.127 | 0.111 | - | - |
| Cognitive failures to depression | 0.607 | 0.001 | 0.607 | 0.001 |
| Depression to academic performance | -0.191 | 0.017 | -0.269 | 0.001 |

Furthermore, a correlation matrix of the research variables is provided. The results of the Pearson correlation coefficient revealed a significant association between all the research variables ($P < 0.001$). Figure 1 depicts the initial proposed model in order to describe AP on the basis of SC, CF, and depression.

According to Table 2, the Root Mean Square Error of Approximation (RMSEA = 0.411) shows that the initial model needs to be modified. In order to correct the model, the non-significant association between cognitive failures to academic performance was removed. In the final model, the RMSEA was 0.037, indicating a good fit of the model. The modified model is presented in Figure 2.

The results showed a direct association between social competence and academic performance ($\beta = 0.443$; $P = 0.001$) and between cognitive failures and depression in the students with SLD ($\beta = 0.607$; $P = 0.001$). Moreover, there was a negative association between social competence and depression ($\beta = -0.128$; $P = 0.030$) and between depression and academic performance in the students with SLD ($\beta = -0.191$; $P = 0.001$). There were no significant associations between cognitive failures and academic performance in the students with SLD (Table 3).

The results implied a significant indirect path from cognitive failures to academic performance through the mediating role of depression in the students with SLD ($P = 0.010$). The indirect path from social competence to academic performance through the mediating role of depression was not significant (Table 4).

4. Discussion

The present study aimed to investigate the mediating role of depression associated with social competence, cognitive failures and academic performance in students with specific learning disabilities in Ahvaz, Iran. The results indicated a significant positive association between SC and AP. This finding is consistent with the research results of Omidi and Moghtader (34). Accordingly, SLD could be considered as a neurocognitive disorder associated with major problems in reading, writing, and mathematics and has no congruity with a person's considered mental ability. It might influence an individual's daily activity due to factors, such as poor reasoning ability, impaired memory, and lack of problem-solving ability. They experience numerous social issues, the most important of which is the deficiency in learning and performing skills. They are unable to maintain an interpersonal relationship with their teacher and classmates and have lower SC in comparison with others. Students with SLD are ignored by their peers and face disparate problems in maintaining social relationships (20).

According to the findings, there were no significant associations between CF and AP and this path was eliminated. This finding is inconsistent with the findings of studies carried out by Shahbaziyanxonig and Hasani (19) and Abolghasemi and Kiamarsi (20). A meticulous review of studies in this field shows that the association between CF and academic achievement or burnout has been examined using correlation coefficient and

Table 4: Results of analysis of indirect and intermediary paths in the final modified model

| Predictor variable | Mediator Variable | Criterion variable | Initial model | | Final modified model | |
|--------------------|-------------------|----------------------|---------------|-------|----------------------|-------|
| | | | Bootstrap | P | Bootstrap | P |
| Social competence | Depression | Academic performance | 0.043 | 0.207 | 0.061 | 0.135 |
| Cognitive failures | Depression | Academic performance | -0.170 | 0.074 | -0.239 | 0.010 |

regression tests and these relationships have been reported to be significant. However, the present study tested the hypotheses using path analysis. Accordingly, there was a significant association between CF and AP based on the Pearson test. Nevertheless, due to the mediator variable, the total share and effect of CF variable on AP were described using mediator variable, or in other words, indirect association. That is, in this model, the CF variable had an influence on AP and this effect was indirect. Therefore, it could be argued that the findings of the present study are consistent with those of previous works, indicating that CF indirectly affects AP (35). Thus, CF is a multidimensional structure that includes error in action setup. CF in students with SLD includes distraction, memory problems, and forgetting names and subjects and can affect their AP.

Furthermore, other findings of the present research revealed a significant negative association between depression and AP. This finding is consistent with the research results of Daraei (24). This demonstrates that following an increase in the depression level of students with SLD, their AP is expected to diminish. As most of the students with SLD are considered as passive learners on account of their behavioral and psychological traits, they cannot apply learning strategies for solving academic problems; therefore, they do not believe in their abilities and the experiences of frequent failure are associated with the feeling of rage, disillusionment, and disappointment (36). Thus, various levels of social exclusion resulting from their poor social skills, their limited number of friends, aggressive behavior, and interpersonal conflicts can cause depression and anxiety in them and reduce their effort to obtain academic achievement. In addition, our findings indicated that the indirect path of SC had no significant associations with the mediatory role of depression. However, the indirect path of CF has a significant association with AP through the mediatory role of depression. In the first indirect path, the results demonstrated that despite the direct and significant association of SC and AP, depression failed to play a mediatory role in the aforesaid association in the indirect path. Students with SLD adopt the most negative social status in the classroom due to perceived deviation of the academic and social competence norms. Hence, they have lower SC, which results in their lower academic achievement. Other factors, such as the support of parents, teachers, and peers, could reduce depression.

In the second indirect path, it was revealed that CF had a significant association with AP and mediating role of depression. The association between CF and AP was not significant. However, in accordance with the indirect path, CF in students with SLD could result in their failure to identify, perceive, or describe their emotions and limit their ability to adjust to stressful situations on account of their lack of emotional awareness and inability in cognitive processing of their feelings. These factors cause depression in these students and reduce their AP and achievement. As a result, they keep themselves aloof from their peers and academic environment on account of their CF. Given the fact that the statistical population of the present study consisted of female students with SLD, its results must be generalized to other communities with caution. In the present study, self-report questionnaires were used to collect data, which has its own limitations. Since the questionnaires were provided to the students for answering, the participants' communication with each other may have caused confusion in the answers. Thus, it is recommended to conduct future studies on other groups of samples, such as male students, in order to be able to generalize the results.

5. Conclusion

Social competence had a direct and positive association with academic performance in students with SLD. Cognitive failures and depression were found to have a negative association with academic performance in the students. It could be concluded that the proposed model achieved a desirable fit, which is considered to be a crucial step toward understanding the factors affecting the AP of students with SLD. The result of the present study could be conducive to the education of children with special needs as well as their psychological health. According to the findings of the present study, it could be recommended to carry out studies comparing these variables in students with learning disability and children with special needs at other academic levels.

Ethical Approval

The Ethics Review Board of Islamic Azad University, Ahvaz Branch, approved the present study under the following number: IR.IAU.AHVAVZ.REC.1399.081.

Conflict of interests: None declared.

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References

- Kohli A, Sharma S, Padhy SK. Specific Learning Disabilities: Issues that Remain Unanswered. *Indian J Psychol Med.* 2018;40(5):399-405. doi: 10.4103/IJPSYM.IJPSYM_86_18. PubMed PMID: 30275613; PubMed Central PMCID: PMC6149300.
- Seghatoleslami A, Masoudi M, Saghebjo M, Taheri M. Aerobics or Pilates: Which is More Effective in the Performance of Wechsler Acid Profile Among Children with Learning Disabilities? A Randomized Comparison Trial. *Int J School Health.* 2019;6(3): e90020. doi: 10.5812/intjsh.90020.
- Poletti M. WISC-IV Intellectual Profiles in Italian Children with Specific Learning Disorder and Related Impairments in Reading, Written Expression, and Mathematics. *J Learn Disabil.* 2016;49(3):320-35. doi:10.1177/0022219414555416. PubMed PMID: 25349093.
- Vidyadharan V, Tharayil HM. Learning Disorder or Learning Disability: Time to Rethink. *Indian J Psychol Med.* 2019;41(3):276-278. doi: 10.4103/IJPSYM.IJPSYM_371_18. PubMed PMID: 31142931; PubMed Central PMCID: PMC6532374. Sharifi A, Davari R. Prevalence of learning disabilities in first and second grade students of elementary school in Chaharmahal Va bakhtiari Province. *Journal of Learning Disabilities.* 2012;1(2):63-76. doi: jld-1-2-91-1-4. Persian.
- Sainio PJ, Eklund KM, Ahonen TPS, Kiuru NH. The Role of Learning Difficulties in Adolescents' Academic Emotions and Academic Achievement. *J Learn Disabil.* 2019;52(4):287-298. doi: 10.1177/0022219419841567. PubMed PMID: 30957647.
- Gao Z-h. Chairing an academic pathology department: challenges and opportunities. *J Clin Pathol.* 2019;72(3):206-212. doi: 10.1136/jclinpath-2017-204963. PubMed PMID: 29705737.
- Khaleghinezhad SA, Shabani M, Hakimzadeh R, Nazari Shaker H, Amerian M. Prediction of High School Students' Life Satisfaction and Academic Performance Based on Locus of Control and Self-Esteem. *Int J School Health.* 2016;3(3):e60223. doi: 10.17795/intjsh-31924.
- Grosche M, Volpe RJ. Response-to-intervention (RTI) as a model to facilitate inclusion for students with learning and behaviour problems. *European Journal of Special Needs Education.* 2013;28(3):254-269. doi: 10.1080/08856257.2013.768452.
- Cavioni V, Grazzani I, Ornaghi V. Social and emotional learning for children with Learning Disability: Implications for inclusion. *The International Journal of Emotional Education.* 2017;9(2):100-109.
- Lee IH, Rojewski JW, Gregg N, Jeong S-O. Postsecondary Education Persistence of Adolescents with Specific Learning Disabilities or Emotional/Behavioral Disorders. *The Journal of Special Education.* 2014;49(2):77-88. doi: 10.1177/0022466914524826.
- Huber L, Plötner M, Schmitz J. Social competence and psychopathology in early childhood: a systematic review. *Eur Child Adolesc Psychiatry.* 2019;28(4):443-459. doi: 10.1007/s00787-018-1152-x. PubMed PMID: 29637284.
- Booker JA, Dunsmore JC. Affective Social Competence in Adolescence: Current Findings and Future Directions. *Social Development.* 2017;26(1):3-20. doi: 10.1111/sode.12193.
- Kaepler AK, Erath SA. Linking Social Anxiety with Social Competence in Early Adolescence: Physiological and Coping Moderators. *J Abnorm Child Psychol.* 2017;45(2):371-384. doi: 10.1007/s10802-016-0173-5. PubMed PMID: 27282759.
- Kim S-H, Shin S. Social-Emotional Competence and Academic Achievement of Nursing Students: A Canonical Correlation Analysis. *Int J Environ Res Public Health.* 2021;18(4):1752. doi: 10.3390/

- ijerph18041752. PubMed PMID: 33670218; PubMed Central PMCID: PMC7916968.
15. Mecacci L, Righi S. Cognitive failures, metacognitive beliefs and aging. *Personality and Individual Differences*. 2006;40(7):1453-1459. doi: 10.1016/j.paid.2005.11.022.
 16. Donnelly JE, Hillman CH, Castelli D, Etnier JL, Lee S, Tomporowski P, et al. Physical Activity, Fitness, Cognitive Function, and Academic Achievement in Children: A Systematic Review. *Med Sci Sports Exerc*. 2016;48(6):1197-222. doi: 10.1249/MSS.0000000000000901. PubMed PMID: 27182986; PubMed Central PMCID: PMC4874515.
 17. Grass J, Strobel A, Strobel A. Cognitive Investments in Academic Success: The Role of Need for Cognition at University. *Front Psychol*. 2017;8:790. doi: 10.3389/fpsyg.2017.00790. PubMed PMID: 28559876; PubMed Central PMCID: PMC5432647.
 18. Shahbaziyanikhonig A, Hasani O. The role of test anxiety and alexithymia in students academic burnout. *erj*. 2017;4(35):36-50. Persian.
 19. Abolghasemi A, Kiamarsi A. The Relationship between Metacognition and Cognitive Failures in the Elderly. *Advances in Cognitive Sciences*. 2009;11(1):8-15. Persian.
 20. Miller AH, Raison CL. The role of inflammation in depression: from evolutionary imperative to modern treatment target. *Nat Rev Immunol*. 2016;16(1):22-34. doi: 10.1038/nri.2015.5. PubMed PMID: 26711676; PubMed Central PMCID: PMC5542678.
 21. Kennedy SH. Core symptoms of major depressive disorder: relevance to diagnosis and treatment. *Dialogues Clin Neurosci*. 2008;10(3):271-7. doi: 10.31887/DCNS.2008.10.3/shkennedy. PubMed PMID: 18979940; PubMed Central PMCID: PMC3181882.
 22. Salehi I, Mosalman M. Evaluation of the Relationship between Religious Attitude and Depression, Anxiety and Stress in Students of Guilan University. *JRH*. 2015;3(1):57-64. Persian.
 23. Daraei M. An investigation of the relationship between depression and self-esteem with academic performance. *Yafte*. 2018;19(5):117-126. Persian.
 24. Khazaei T, Sharif-Zadeh GH, Akbariya M, Piri M, Ghanbarzadeh N. Relationship between depression, self-esteem, and academic achievement of students in Birjand, 2013. *Mod Care J*. 2013;10(2):141-148. Persian.
 25. Tabachnick BG, Fidell LS. *Using multivariate statistics*. Allyn & Bacon/Pearson Education; 2007.
 26. Kohn M, Rosman BL. A social competence scale and symptom checklist for the preschool child: Factor dimensions, their cross-instrument generality, and longitudinal persistence. *Developmental Psychology*. 1972;6(3):430-444. doi: 10.1037/h0032583.
 27. Gornall ME. Validity of the Kohn Social Competence Scale for use with elementary school children. University of British Columbia; 1980. doi: 10.14288/1.0094796.
 28. Morovati Z, Bahramian H, Maktabi G. Validity, Reliability and Factor Analysis of the Social Competence Scale in Primary School students in ahvaz. *Journal of Educational Psychology Studies*, 2014;10(18):181-200. doi: 10.22111/jeps.2014.2146.
 29. Ranjbar MJ, Hajloo N. Psychometric Properties of Persian Version of Perceived Social Competence Scale in Adolescents. *Quarterly Social Psychology Research*, 2016;5(20):99-112. Persian.
 30. Broadbent DE, Cooper PF, FitzGerald P, Parkes KR. The Cognitive Failures Questionnaire (CFQ) and its correlates. *British Journal of Clinical Psychology*. 1982;21(1):1-16. doi: 10.1111/j.2044-8260.1982.tb01421.x.
 31. Abbariki A, Yazdanbakhsh K, Momeni K. The effectiveness of computer-based cognitive rehabilitation on reducing cognitive failure in Students with Learning Disability. *Psychology of Exceptional Individuals*. 2017;7(26):127-157. doi: 10.22054/jpe.2017.22223.1571. Persian.
 32. Mokhtarnia I, Habibi M, Kholghi H, Mohammadi E, Kalantari F. The Study of psychometric properties of the self-rating depression scale for children and adolescents. *Rooyesh*. 2018;7(4):1-22. Persian.
 33. Omidi S, Moghtader L. The Relationship between Social Skills, Emotional Expression Styles, and Body Dysmorphia with Academic Performance among School Students in Rudbar City, Iran. *Int. J. School. Health*. 2021; 8(3)

- Afzalipour Journal of Clinical Research. 2017;2(3-4):69-77. doi: 10.22122/AJCR.2017. 53 941.
34. Wallace JC, Kass SJ, Stanny CJ. The cognitive failures questionnaire revisited: dimensions and correlates. *J Gen Psychol.* 2002;129(3):238-56. doi: 10.1080/00221300209602098. PubMed PMID: 12224809.
35. Nelson JM, Liebel SW. Socially Desirable Responding and College Students with Dyslexia: Implications for the Assessment of Anxiety and Depression. *Dyslexia.* 2018;24(1):44-58. doi:10.1002/dys.1563. PubMed PMID: 28744994.