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The mediating role of cognitive and metacognitive strategies in the relationship between perception of parent-child relationship and test anxiety in girls

Atefeh. Khazaei[1]
Nasrin. Bagheri[2]*
Narges. Babakhani[3]

1. PhD student in Educational Psychology, Department of Psychology, Roudehen Branch, Islamic Azad University, Roudehen, Iran
2. ***Corresponding author:** Assistant Professor, Department of Psychology, Roudehen Branch, Islamic Azad University, Roudehen, Iran
3. Assistant Professor, Department of Psychology, Roudehen Branch, Islamic Azad University, Roudehen, Iran

Email: bagheri.nas@gmail.com

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Abstract

Aim: Exam anxiety is a type of anxiety related to the situation and is experienced as an unpleasant experience and hinders the growth and academic progress of the student. Therefore, it is very important to identify the factors that can prevent exam anxiety. The aim of the present study was to determine the mediating role of cognitive and metacognitive strategies in the relationship between parent-child relationship perception and test anxiety. **Methods:** The research method was descriptive-correlational type. The statistical population of this research included all the female students of the second secondary school in Tehran in the academic year 2018-19, of which 330 were selected using the multi-stage cluster random sampling method. The research tools include parent-child relationship questionnaire; Sarason et al.'s test anxiety scale (1956) and Dawson and McInnery's (2004) cognitive and metacognitive strategies questionnaire. The structural equation modeling method was used to analyze the data. **Results:** The findings of the research showed that the perception of the father-child relationship (P=0.001, β=-0.120) and the perception of the mother-child relationship (P=0.001, β=-0.161) are indirectly related to exam anxiety. **Conclusion:** It can be concluded that cognitive and metacognitive strategies play a mediating role in the relationship between the perception of parent-child relationship and test anxiety in girls.

Keywords: *Social-emotional competency, reflective functioning, family emotional conditions, adults, family.*

Introduction

Exam anxiety is one of the most common disorders among students, which has caused many problems for the educational system (Nunez et al., 2016). It is estimated that 25% of students experience test anxiety (Huntley et al., 2020). Several factors play a role in the formation and strengthening of exam anxiety, including family functioning and parent-child relationship. The way parents interact with children or teenagers has a tremendous impact on the formation of personality and mental health and the occurrence of some psychiatric symptoms (Khanjani et al., 2012). The parent-child relationship includes a set of unique behaviors, feelings, and expectations that are exchanged between parents and their children (Linwood, 2006). The family consists of parents and children who form a network of two-way relationships and have expectations from each other in the form of the members' roles, and the quality of these relationships has an undeniable effect on the development of children and adolescents, especially in the field of their cognitive development. As a result, by reflecting on the quality of the parent-child relationship and scrutinizing it, one can understand the sensitive role of the mother in the relationship with the child and the evolution of his cognitive, emotional, behavioral, and social actions (Bornstein et al., 2012). Koerner and Fitterspatrick (1997) identified two dimensions of conformity orientation and dialogue orientation in family communication patterns. Families that have the orientation of dialogue and listening interact freely with each other and discuss and exchange opinions without restrictions on a wide range of different issues. Conformity orientation is defined by the degree of emphasis on the similarity of attitudes, values and opinions of family members. Therefore, the aim of the research was to answer the question whether the mediating role of cognitive and metacognitive strategies in the relationship between the perception of parent-child relationship and test anxiety is significant?

Method

The research method was descriptive-correlational type. The statistical population of this research included all the female students of the second secondary school in Tehran in the academic year 2018-19, of which 330 were selected using the multi-stage cluster random sampling method. The research tools include parent-child relationship questionnaire; Sarason et al.'s test anxiety scale (1956) and Dawson and McInnery's (2004) cognitive and metacognitive strategies questionnaire. The structural equation modeling method was used to analyze the data.

Results

The findings of the research showed that the perception of the father-child relationship ($P=0.001$, $\beta=-0.120$) and the perception of the mother-child relationship ($P=0.001$, $\beta=-0.161$) are indirectly related to exam anxiety.

Conclusion

The aim of the present study was to investigate the mediating role of cognitive and metacognitive strategies in the relationship between the perception of parent-child relationship and test anxiety.

In a summary, it can be said that the main goal of metacognitive strategies is to provide conditions for learners to become independent learners who can guide,

monitor and modify their cognitive learning processes in the direction of their set goals. Cognitive strategies are used to progress and achieve cognitive goals, and metacognitive strategies are used to monitor these processes, and learning them is effective in academic progress and student performance in the exam situation. Based on the results of this research, it can be said that neurotic and anxious students experience more exam anxiety due to the inefficiency of their cognitive and metacognitive strategies.

The foundations of a child's cognitive development are formed in the family. Communication between members and the level of interaction with children will affect their cognitive development. Using guidance appropriate to the child's level of cognitive development, in challenging situations, can provide them with better use of cognitive strategies. In addition, a person learns to solve problems from family relationships and can extend this ability to his educational problems. In addition to helping a person's cognitive development, the family teaches him to choose and implement the right strategy in any situation.

Every research has its limitations. Among the limitations of the current research, we can mention the use of self-report tool, which limits the generalization of the current findings. Therefore, researchers are suggested to use other methods of data collection in future studies.

References

Abedi, A., Blouk, S., Aghaee, A., & Shoushtari, M. (2013). Investigate standardization ،of cognition and metacognition strategies questionnaire of McInroy and Dawson on Junior high school students of Isfahan city. *Science-Research*, *14*(4), 169-186.

Babaei Menghari, M. M., Zahed, A., Moeini Kia, M., & Yousefi, A. (2016). Simple and multiple Relation Cognitive strategies and time management with exam anxiety high school students. *Rooyesh-e-Ravanshenasi Journal (RRJ)*, *5*(3), 107-120.

Baker, L. (1984). Metacognitive skills and reading. *Handbook of reading research*.

Bornstein, M. H., Suwalsky, J. T., & Breakstone, D. A. (2012). Emotional relationships between mothers and infants: Knowns, unknowns, and unknown unknowns. *Development and psychopathology*, *24*(1), 113-123.

Cheraghian, B., Fereidooni-Moghadam, M., Baraz-Pardejani, S., & Bavarsad, N. (2008). Test anxiety and its relationship with academic performance among nursing students. *Knowledge & Health*, *3*(3-4), 25-9.

Corno, L. (1989). Self-regulated learning: A volitional analysis. In *Self-regulated learning and academic achievement* (pp. 111-141). Springer, New York, NY.

Crişan, C., Albulescu, I., & Copaci, I. (2014). The Relationship between Test Anxiety and Perceived Teaching Style. Implications and Consequences on Performance Self-evaluation. *Procedia-Social and Behavioral Sciences*, *142*, 668-672.

Dowson, M., & McInerney, D. M. (2004). The development and validation of the Goal Orientation and Learning Strategies Survey (GOALS-S). *Educational and psychological measurement*, *64*(2), 290-310.

Everson, H. T., Smodlaka, I., & Tobias, S. (1994). Exploring the relationship of test anxiety and metacognition on reading test performance: A cognitive analysis. *Anxiety, Stress and Coping*, *7*(1), 85-96.

Farokhi, H., Karami, A., & Mir Drikvand, F. (2018). The effect of teaching metacognitive strategies on improving academic achievement and reducing test anxiety in nursing students. *The Journal of Medical Education and Development*, *13*(1), 31-41.

Flavell, J.H, Miller, P.,H. (1998). Social cognition. Handbook of child psychology: Volume 2: Cognition, perception, and language. Hoboken, NJ, US: John Wiley & Sons Inc; 851-98.

Ghaleb, A. B., Ghaith, S., & Akour, M. (2015). Self-efficacy, achievement goals, and metacognition as predicators of academic motivation. *Procedia-Social and Behavioral Sciences*, *191*, 2068-2073.

Guadagnoli, E., Velicer, W,F. (1988). Relation of sample size to the stability of component patterns. Psychol Bull. 1988;103(2):265-75.

Hitches, E., Woodcock, S., & Ehrich, J. (2022). Building self-efficacy without letting stress knock it down: Stress and academic self-efficacy of university students. *International Journal of Educational Research Open*, *3*, 100124.

Hong, E. (2020). Metacognition. In: Pritzker S, Runco M, editors. Encyclopedia of Creativity (Third Edition). Oxford: Academic Press. 140-5.

Hosseini, M., & Samani, S. (2012). A study of the relationship between the family function dimensions and self-regulation in children. *Journal of Family ResearcH*, *8*(3), 305-317.

Huntley, C. D., Young, B., Smith, C. T., & Fisher, P. L. (2020). Uncertainty and test anxiety: Psychometric properties of the Intolerance of Uncertainty Scale–12 (IUS-12) among university students. *International Journal of Educational Research*, *104*, 101672.

Isgör, I. Y. (2016). Metacognitive Skills, Academic Success and Exam Anxiety as the Predictors of Psychological Well-Being. *Journal of Education and Training Studies*, *4*(9), 35-42.

Jaušovec, N. (2011). Metacognition. In: Runco MA, Pritzker SR, editors. Encyclopedia of Creativity (Second Edition). San Diego: Academic Press; 107-12.

Kamali Igoli, S., & Abolmaali Alhoseini, K. (2017). Predicting cognitive emotion regulation strategies according to family communication processes and perfectionism in high school adolescent girls. *Journal of Applied Psychology*, *10*(4), 291-310.

Khanjani, Z., ESMAEILI, A. B., & Gholamzadeh, M. (2012). The role of parenting styles in predicting anxiety thoughts and obsessive compulsive symptoms in adolescents.

Koerner, A. F., & Fitzpatrick, M. A. (1997). Family type and conflict: The impact of conversation orientation and conformity orientation on conflict in the family. *Communication Studies*, *48*(1), 59-75.

Koroshnia, M., & Latifian, M. O. R. T. E. Z. A. (2008). An investigation on validity and reliability of revised family communication patterns instrument. *Journal of Family Research*, *3*(12), 855-875.

Lindsay, P. H., & Norman, D. A. (2013). *Human information processing: An introduction to psychology*. Academic press.

Linwood, A, S. (2006). Parent–child Relationships. In: Krapp K, Wilson J, editor. The Gale encyclopedia of children's health: infancy through adolescence. Detroit: Gale.

McGuire, S. Y. (2015). *Teach students how to learn: Strategies you can incorporate into any course to improve student metacognition, study skills, and motivation*. Stylus Publishing, LLC.

Mohammadi, Y., Kazemi, S., Tahan, H., & Lalozaee, S. (2017). Relationship between metacognitive learning strategies, goal orientation, and test anxiety among students at Birjand university of medical sciences. *Journal of Medical Education*, *16*(1).

Najmi, S. B., & Feizi, A. (2011). Study on Structural Relation of Family Functioning and Self Esteem with Academic Achievement in Female High School Students.

Norman, D. A. (Ed.). (2013). *Models of human memory*. Elsevier.

Núñez-Peña, M. I., Suárez-Pellicioni, M., & Bono, R. (2016). Gender differences in test anxiety and their impact on higher education students' academic achievement. *Procedia-Social and Behavioral Sciences*, *228*, 154-160.

Panadero, E., Jonsson, A., & Botella, J. (2017). Effects of self-assessment on self-regulated learning and self-efficacy: Four meta-analyses. *Educational Research Review*, *22*, 74-98.

Parviz, K., & Sharifi, M. (2011). Relationship between cognitive and metacognitive strategies and educational success in urban and rural high school students. *Educ Strategy Med Sci*, *4*(1), 1-6.

Pintrich, P. R., & Schunk, D. H. (2002). *Motivation in education: Theory, research, and applications*. Prentice Hall.

Putwain, D., & Daly, A. L. (2014). Test anxiety prevalence and gender differences in a sample of English secondary school students. *Educational Studies*, *40*(5), 554-570.

Rasouli, R., Alipour, Z. M., & Ebrahim, T. P. (2018). Effectiveness of cognitive learning strategies on test anxiety and school performance of students. *International Journal of Educational and Psychological Researches*, *4*(1), 20.

Ritchie, L. D., & Fitzpatrick, M. A. (1990). Family communication patterns: Measuring intrapersonal perceptions of interpersonal relationships. *Communication research*, *17*(4), 523-544.

Saif, A. A. (2019). Modern Educational Psychology: Learning and Education Psychology. Tehran.

Samani, S., & Behbahani, M. (2012). Communication Pattern in Different types of Family in Family Process and Content Model. *Biannual Journal of Applied Counseling*, *1*(2), 119-134.

Schunk, D, H.(2011). Learning Theories: An Educational Perspective United Kingdom: Pearson.

Seo, D., & Taherbhai, H. (2009). Motivational beliefs and cognitive processes in mathematics achievement, analyzed in the context of cultural differences: A Korean elementary school example. *Asia Pacific Education Review*, *10*(2), 193-203.

Soliemanifar, O., & Behroozi, N. (2015). Role of personality traits, learning styles and metacognition in predicting critical thinking of undergraduate students. *Education Strategies in Medical Sciences*, *8*(1), 59-67.

Vanderstoep, S. W., Pintrich, P. R., & Fagerlin, A. (1996). Disciplinary differences in self-regulated learning in college students. *Contemporary educational psychology*, *21*(4), 345-362.

Whitton, D. (2015). *Teaching and learning strategies*. Cambridge University Press.

Winn, A. S., DelSignore, L., Marcus, C., Chiel, L., Freiman, E., Stafford, D., & Newman, L. (2019). Applying cognitive learning strategies to enhance learning and retention in clinical teaching settings. *MedEdPORTAL*, *15*, 10850.

Yosefi, N., Amani, A., & Hosseini, S. (2017). A study of the relationship between family function and test anxiety and the mediating role of differentiation among students. *Journal of School Psychology*, *5*(4), 52-74.

Zimmerman, B. J. (2013). Theories of self-regulated learning and academic achievement: An overview and analysis. *Self-regulated learning and academic achievement*, 1-36.