Modeling the mediating role of anxiety caused by Covid-19 in the relationship between identity styles and student achievement motivation

Soheila. Hosseini Sadr[1], Abdolhassan. Farhangi*[2], Alireza. Jafari[3]

1. PhD student, Department of Psychology, North Tehran Branch, Islamic Azad University, Tehran, Iran.
2. Assistant Professor, Department of Psychology, North Tehran Branch, Islamic Azad University, Tehran, Iran.
3. Visiting Professor, Department of Psychology, North Tehran Branch, Islamic Azad University, Tehran, Iran

ARTICLE INFORMATION	ABSTRACT
Article type Original research Pages: 214-218 Corresponding Author's Info Email: abdolhassanfarhangi@yahoo.com **Article history:** Received: 2022/17/11 Revised: 2022/09/16 Accepted: 2022/09/22 Published online: 2022/10/02 *Keywords:* *Development motivation, identity styles, Covid-19 anxiety.*	**Background and Aim:** In every educational system, the degree of motivation and academic progress of students is one of the indicators of success in scientific activities. The aim of the present study was to model the mediating role of anxiety caused by Covid-19 in the relationship between identity styles and students' motivation to progress. **Method:** The research design was correlational. The statistical population included all female students of the second year of high school in the 3rd district of Tehran in 2022. The participants were 330 students who were selected by cluster random sampling method. All of them responded to the Hermans (1977) Achievement Motivation Questionnaire, Brozensky's Identity Styles (1989), and Alipour et al.'s Covid-19 Anxiety (2021). Data were analyzed with SPSS24 and Smart PLS 4 software and with structural equation modeling. **Results:** The results showed that progress motivation had a positive and significant relationship with the variables of informational, normative and commitment identity style (P<0.01). Progress motivation showed a negative and significant relationship with the variables of avoidant identity style (P<0.01) and Covid-19 physical anxiety (P<0.05). Avoidant identity style showed a positive and significant relationship with mental anxiety of Covid-19 (P<0.05). No significant relationship was observed between informational, normative and commitment identity styles and physical and mental anxiety of Covid-19. Covid-19 anxiety did not play a mediating role between identity styles and achievement motivation. **Conclusion:** It can be concluded that the model of mediating the role of anxiety caused by Covid-19 in the relationship between identity styles and students' motivation to progress was not confirmed. Pay attention to the components of developing commitment, informational and normative identity styles in developing motivation for progress.

How to Cite This Article:
Hosseini Sadr, S., Farhangi, A., & Jafari, A. (2022). Modeling the mediating role of anxiety caused by Covid-19 in the relationship between identity styles and student achievement motivation. *Jayps*, 3(1): 214-218.

Introduction

Psychologists believe that the motivation of students to learn course material is related to factors such as self-confidence, concentration, hard work and persistence in doing difficult assignments, the desire to continue studying in the hours after the class is over, and choosing assignments that require more effort. (Ashuri et al., 2020; Radel, Sarazin, Wild, 2010). On the other hand, motivation and academic achievement are known as powerful determinants of learners' success or failure (Crow, Fong, and Hough, 2021; Mazelia et al., 2010). An important motivation influencing people's behavior is the need for advancement (Michu, Van Stanquist, & Moradis, 2014). Murray first proposed achievement motivation, and it means a person's tendency to overcome obstacles, try to achieve excellence and maintain high-level standards (Wigfeld et al., 2006). In addition, as a relatively fixed background in people, it is one of the most important motivations or acquisition needs of each person, so its lack affects the learning and academic progress of learners in an unfavorable direction (Smith & Karman, 2019).

Psychologists consider identity as a necessary part of all human beings in all cultures, which continues from birth to death. However, the peak of identity search is in adolescence and its achievement in the third decade of life (Nan, 2019). The formation of social identity determines the individual's place among the crowd. Acquiring a satisfactory role in the group is one of the signs of the development of social identity. Teenagers care about having a suitable social identity, they want to be accepted among friends and be accepted by them. Any isolation and withdrawal can be a sign of a lack of social identity development in adolescents (Romendana et al., 2019). Adolescent social development is under the three factors of peers, school and family (Romendana et al., 2019). The interaction of these three factors takes place in the school, because every teenager is known as a student in society and the social upbringing of his family in the school connects him with his peers and school parents. In any case, if the students are disinterested in the lesson or in other words have a low level of motivation, they will not pay attention to the teacher's explanations (Wong, Giu and Degal, 2020).

The covid-19 virus is known for its vague characteristics and high transmission capacity, but these characteristics were not detected at the beginning of the virus's spread. This caused protective behaviors not to be carried out optimally, and people were repeatedly exposed to the virus and its resulting infection (Guan et al., 2020). However, physical health is not the only area that is affected by the spread of the virus among people. People's mental health is also seriously damaged due to various factors, including the role of the media in creating a psychologically unsafe environment and the feeling of lack of social support, as well as the high infection rate with this virus (Sai et al., 2020). Such a dire situation causes a wide range of mental disorders, including anxiety, stress, depressive symptoms, insomnia, denial, anger, and fear, which can have long-term effects on people (Kang et al., 2020). Students are at serious risk of corona anxiety (Ma & Miller, 2020). Therefore, it is important to pay attention to it.

According to the stated content and considering that the motivation to progress as the most important learning factor and on the other hand, identity styles as concepts and psychological factors effective in progress are of interest to psychologists and researchers in the field of psychology. Because so far no research has been done investigating the mediating role of anxiety caused by Corona in the relationship between identity styles and students' progress motivation. The main question of the present study is whether the anxiety caused by Corona plays a mediating role in the relationship between identity styles and students' motivation to progress.

Method

The current research design is a cross-sectional-analytical study in terms of its fundamental purpose. The statistical population of the present study is all the female students of the second year of high school in the 3rd district of Tehran who were studying in the academic year 2021-2022. According to the information of the education department of the 3rd district, the size of the statistical population is 3807 students. Then the sample size was determined using Klein's formula. The value obtained for the sample size was 300 people. The sample was selected by random cluster sampling. In this way, 3 high schools were randomly selected from among all girls' high schools in region 3 and 250 students

were selected by staged cluster sampling and the link to the questionnaires was provided to complete the questionnaires.

Tools

1. Questionnaire of identity styles. The Identity Styles Questionnaire was first designed by Brozensky (1989) to measure the social-cognitive processes used by adolescents in dealing with identity issues and was revised in 1992. This test has 40 questions that measure three different identity processing styles including informational, normative, confused/avoidant. It should be noted that the questions of this questionnaire are scored in the form of a five-point Likert scale (completely disagree = 1, disagree = 2, somewhat agree = 3, agree = 4, completely agree = 5).

2. Corona anxiety questionnaire. The Corona Anxiety Scale was created by Alipour et al to measure the anxiety caused by the spread of the Corona virus. This tool has 18 items and 2 components. Items 1 to 9 measure psychological symptoms and items 10 to 18 measure physical symptoms. The items are scored using a four-point Likert scale (0=never to 3=always) and the score of the tool is calculated with the total score of the items, so the range of scores is between 0 and 54, and a higher score indicates more anxiety about Corona.

3. Progress motivation questionnaire. Hermens progress motivation questionnaire, which requires progress. The questions of this thesis are expressed as incomplete sentences and there are four options after each sentence, and the options are scored according to whether the intensity of the motivation is low to high or high to low. The range of options for each question is 1 to 4 and the range of changes in the total score of the questions is 29 to 116, and the interpretation of the test is based on the total score of the questions, and its standard is calculated from 116.

Results

Among the participants in the research, the age of 182 people was between 15 and 16 years old and the age of 148 people was between 17 and 18 years old. 173 people were first children, 73 people were second children, 59 people were third children and 25 people were fourth children.

The tolerance index for all variables is more than 0.4 and the variance inflation index is less than ten, also the value of the Watson camera is 1.74

which is less than 4 and it can be said that the assumptions have not been violated; Therefore, according to the obtained indicators, it can be concluded that the conditions of path analysis have been met. Also, according to the amount of skewness and elongation, it was within the standard range of 2 and -2, so the assumption of normality of the data was confirmed.

Progress motivation showed a positive and significant relationship with informational, normative and commitment style variables ($P < 0.01$). Progress motivation showed a negative and significant relationship with the variables of avoidant identity style ($P < 0.01$) and corona physical anxiety ($P < 0.05$). Avoidant identity style showed a positive and significant relationship with mental anxiety of Corona ($P < 0.05$). No significant relationship was observed between informational, normative and commitment identity styles and physical and mental anxiety of Corona.

If each of the identity styles increases by one unit, students' achievement motivation increases by 0.54. The direct paths of identity styles to corona anxiety and corona anxiety to achievement motivation are not significant ($P>0.05$). The accuracy test of the model based on statistics (R Square = 0.39) and the quality test of the model based on statistics (Q Square = 0.37) show that the predictions have good accuracy and quality (Chin, 1998). Also, according to the F Square statistic, 42% of the changes in the progress motivation variable are explained by identity styles, and 1% of its changes are explained by Corona anxiety.

The results of the indirect effect of identity styles with the mediation of corona anxiety on motivation to progress is not significant ($P>0/05$). Therefore, according to the research findings, Corona anxiety did not play a mediating role in the relationship between identity styles and motivation to progress.

Conclusion

In explaining the positive relationship between informational style and motivation for progress, it can be mentioned that in informational style, people actively seek to collect, process, and evaluate identity. Therefore, they accept identity information and try to reconsider the characteristics of their identity if they encounter information inconsistent with their identity

(Brzezunsky, 1990). This search feature acts as a behavioral activation and leads to the formation and increase of motivation in people. As Berzonsky (1990) has pointed out in the theoretical background of identity styles, motivation to progress is one of the prominent characteristics of these types of people. In explaining the positive relationship between normative style and development motivation, these people tend to preserve their identity, which will increase their development motivation. In the theoretical background of Brozunsky's (1994) identity styles, it is mentioned that they usually do not accept information that contradicts the basic aspects of their identity, such as their beliefs, values, and goals (Brozunsky, 2008). This factor arouses guilt in them and causes them to worry about avoiding failure and trying to win, which increases their motivation to progress. In explaining the positive relationship between commitment and motivation for progress, commitment is a purposeful and directional reference framework that acts as a resource for restraining, evaluating, and regulating one's own behavior and feedback to the behavior of others. Therefore, the sense of purpose is the result of commitment. The level of identity commitment is different in people. People with informational and normative style have strong personal commitment, and people with a confused-avoidant network have a low level of commitment; Therefore, it can be said that commitment, along with exploration, create a framework based on which people make decisions about their opinions and views and use them to solve their problems. People who are committed to their set goals work hard to achieve them and are highly motivated to progress. In explaining the negative relationship of the confused-avoidant style with progress motivation, it can be stated that according to the theoretical background of Berzonski (2008), these people usually procrastinate and try to postpone their decisions as much as possible. They don't want to face personal problems and issues related to their identity and solve them. Avoidant-intrusive style people are hedonistic, which makes them have low achievement motivation.

Identity style is a personality variable formed in every person from their teenage years. For this reason, it is a basic variable in the human body that directly affects motivation and thoughts. The variables depend on the conditions and the situation in which a person is placed. According to Berzonsky's (2008) theoretical background and identity theory, identity has different levels of stability and durability. Identity refers implicitly to being one, distinct, and consciously separate from others. Adolescence, the fifth stage of Erikson's psychosocial development theory, is a critical period in identity development. Adolescence and maturity is a time when, with physical changes and peer group pressure, necessary preparations for future independence take place. If a person cannot meet social expectations, he will suffer from role confusion, which is caused by the uncertainty of the role. Identity is a dynamic and measured state and includes being aware of the sense of individuality and trying to stabilize personal characteristics and maintain unity with the ideals of the social group in which a person sees himself, and in this way directly affects the motivation to progress.

Conflict of Interest

According to the authors, this article has no financial sponsor or conflict of interest.

References

Anderman, E. M. (2020). Achievement motivation theory: Balancing precision and utility. Contemporary Educational Psychology, 61, 101864.

Ashoori, J., Kajbaf, M. B., Manshaee, G. R., & Talebi, H. (2020). Comparison of the Effectiveness of Web-Based, Cooperative Learning and Traditional Teaching Methods in Achievement Motivation and Academic Achievement in the Biology Course. Interdisciplinary Journal of Virtual Learning in Medical Sciences, 5(2), 25-34.

Ashuri, J., Kajbaf, M B., Monshaei, Gh., Talebi, H. (2013). Comparison of the effectiveness of web-based educational methods, collaborative and traditional learning on motivation and academic progress of biology course. Academic journal of e-learning. 5(2), 25-34.

Berzonsky, M. D. (1993). Identity style, gender, and social-cognitive reasoning. Journal of Adolescent Research, 8(3), 289-296.

Cai, H., Tu, B., Ma, J., Chen, L., Fu, L., Jiang, Y., Zhuang, Q., 2020. Psychological Impact and Coping Strategies of Frontline Medical Staff in Hunan Between January and March 2020 During the Outbreak of Coronavirus Disease 2019 (COVID-19) in Hubei, China. Med Sci Monit 26, e924171.

Ghasempour, F., Azimi, M., Sanago, A., & Mobseri, A. A. (2016). Investigating the

relationship between identity styles and achievement motivation in high school students of Sari. Scientific journal of researchers. 16 (2), 52-46.

Ghasempour, F., Azimi, M., Sanagoo, A., & Mobasseri, A. A. (2017). Investigation of relationship between identity styles and achievement motivation in high school students in the city of Sari. Pajouhan Scientific Journal, 16(2), 10-17.

Guan, W. J., Ni, Z. Y., Hu, Y., Liang, W. H., Ou, C. Q., He, J. X., ... & Zhong, N. S. (2020). Clinical characteristics of coronavirus disease 2019 in China. New England journal of medicine, 382(18), 1708-1720.

Huang, S. Y., Kuo, Y. H., & Chen, H. C. (2020). Applying digital escape rooms infused with science teaching in elementary school: Learning performance, learning motivation, and problem-solving ability. Thinking Skills and Creativity, 37, 100681.

Krou, M. R., Fong, C. J., & Hoff, M. A. (2021). Achievement motivation and academic dishonesty: A meta-analytic investigation.

Kulakow, S. (2020). Academic self-concept and achievement motivation among adolescent students in different learning environments: Does competence-support matter?. Learning and Motivation, 70, 101632.

Ma, H., & Miller, C. (2020). Trapped in a double bind: Chinese overseas student anxiety during the COVID-19 pandemic. Health communication, 1-8.

Michou, A., Vansteenkiste, M., Mouratidis, A., & Lens, W. (2014). Enriching the hierarchical model of achievement motivation: Autonomous and controlling reasons underlying achievement goals. British Journal of Educational Psychology, 84(4), 650-666.

Noonan, H. W. (2019). Personal identity. Routledge.

Ramadhana, M. R., Karsidi, R., Utari, P., & Kartono, D. T. (2019). Role of family communications in adolescent personal and social identity. Journal of Family Sciences, 4(1), 1-11.

Rivas-Drake, D. (2008). Perceived opportunity, ethnic identity, and achievement motivation among Latinos at a selective public university. Journal of Latinos and Education, 7(2), 113-128.

Smith, R., & Karaman, M. A. (2019). Development and Validation of the Contextual Achievement Motivation Measure. International Journal of Psychology and Educational Studies, 6(3), 16-26.

Starr, C. R., Hunter, L., Dunkin, R., Honig, S., Palomino, R., & Leaper, C. (2020). Engaging in science practices in classrooms predicts increases in undergraduates' STEM motivation, identity, and achievement: A short-term longitudinal study. Journal of Research in Science Teaching, 57(7), 1093-1118.

Wang, C., Horby, P. W., Hayden, F. G., & Gao, G. F. (2020). A novel coronavirus outbreak of global health concern. The lancet, 395(10223), 470-473.

Wang, M. T., Guo, J., & Degol, J. L. (2020). The role of sociocultural factors in student achievement motivation: A cross-cultural review. Adolescent Research Review, 5(4), 435-450.

Wigfield, A., Eccles, J. S., Schiefele, U., Roeser, R. W., & Davis-Kean, P. (2006). Development of achievement motivation. John Wiley & Sons, Inc.