Scientific Journal of Medical Sciences
Volume 2, Issue 2, Spring 2023
Pages: 73-77
Type: Descriptive Study

Relationship of Coronavirus Anxiety and Academic Procrastination in Undergraduate Students

Heyran F.*[1] *MSc*, Shamszade A.R.[1] *MSc*, Imani M.[1] *MSc*, Mohsenpour M.[2] *PhD*, Jamali J.[3] *PhD*

[1] "Student Research Committee" and "Faculty of Nursing and Midwifery", Mashhad University of Medical Sciences, Mashhad, Iran
[2] Nursing and Midwifery Research Center, Mashhad University of Medical Sciences, Mashhad, Iran
[3] Department of Biostatistics, Faculty of Health, Mashhad University of Medical Sciences, Mashhad, Iran

Abstract

Aims: This study aimed to investigate the relationship between Coronavirus anxiety and academic procrastination of Mashhad Nursing and Midwifery Faculty undergraduate students.

Instrument & Methods: This descriptive-correlation study was conducted on the 2nd to 8th-semester undergraduate students (nursing, midwifery, operating room, and medical emergencies) of Mashhad Nursing and Midwifery Faculty who participated in the virtual education sessions from August 1, 2021, to January 30, 2022. The research tools were three electronic questionnaires; demographic questionnaire, Coronavirus Disease Anxiety Scale (CDAS), and Solomon & Rothblum Procrastination Assessment Scale-Student (PASS). Data were analyzed using SPSS 26 software through correlation coefficient tests.

Findings: Academic procrastination had a significant correlation with coronavirus anxiety ($r=0.317$; $p<0.01$), psychological symptoms ($r=0.335$; $p<0.01$), and physical symptoms ($r=0.244$; $p<0.01$). Coronavirus anxiety significantly correlated with procrastination in preparing a project at a certain time ($r=0.2$; $p<0.05$), studying for exams ($r=0.291$; $p<0.01$), and regular and weekly study of lessons and doing homework ($r=0.413$; $p<0.01$).

Conclusion: Coronavirus anxiety is an important factor that causes academic procrastination and decreases learning.

Keywords
Anxiety [https://www.ncbi.nlm.nih.gov/mesh/68001007];
Coronavirus Anxiety [Not in MeSH];
Procrastination [https://www.ncbi.nlm.nih.gov/mesh/?term=Procrastination;
Academic Procrastination [Not in MeSH]

*Corresponding Author
Tel: +98 (51) 38422310
Fax: -
Post Address: Mashhad College of Nursing and Midwifery, Doctor's Intersection, University Street, Mashhad, Iran. Postal Code: -
Email: fatemehheiran_10@yahoo.com
Received: March 1, 2023 Accepted: May 4, 2023 ePublished: June 5, 2023

Introduction

The Coronavirus is a large family of viruses; a novel Coronavirus epidemic first broke out in Wuhan and has been spreading in whole China and the world, including Iran [1]. The high rate of transmission from person to person and making quarantine of people had side effects on people's mental health [2]. Moreover, the unknown nature of the disease and the lack of definitive treatment caused anxiety and worry in the communities [1, 3, 4]. This anxiety caused by coronavirus disease, referred to as "Coronavirus anxiety", can be caused by the unknown nature of the disease; dealing with unknowns always causes anxiety. Indeed, Anxiety is an unpleasant and vague feeling that originates from an unknown resource [4]. Anxiety can weaken the immune system, wrong decision-making by people, mental and emotional problems, fatigue, anger, and wrong behavior [1, 3].

Students are among the people whose academic and social performance is affected by Coronavirus anxiety [5]. According to Freud's theory, anxiety can cause negligence [6]. Procrastination is the tendency to procrastinate and deliberately postpone an action knowing its negative results. Academic procrastination also occurs when there is a deliberate and unreasonable delay in doing academic activities [7-9]. Studies show a significant relationship between anxiety and academic procrastination [7, 10]. In most cases, procrastination leads to increased stress and failure to achieve aims [11]. Academic procrastination also results in reduced accuracy, numerous mistakes in doing homework, poor academic performance, reduced motivation, and low levels of self-esteem [12, 13]. Nasri *et al*. have stated that academic procrastination may cause confusion and irresponsibility [10]. About a quarter of students believe they are procrastinators, which leads to stress and results in their academic decline [14]. According to Mullen, academic procrastination is the most common type among students [15]. The procrastination level has been examined by 70% of students [8]. The prevalence of academic procrastination among students in Iran and the world is between 15% to 20% [9]. The prevalence of academic procrastination among students in Iran and the world is between 15% to 20% [9]. Academic procrastination is one of the main factors in students' academic failure [7].

The studies by Kim and Seo showed that academic procrastination has caused drop out of education in some students [11]. Namian & Hosseinchari have also stated that academic procrastination leads to anxiety and worry [10]. Settler *et al*. believe that psychological problems are one of the factors affecting the prevalence of procrastination. Also, Mati *et al*. show that as the level of anxiety increases, academic procrastination directly and significantly increases [16]. Procrastination in nursing students can reduce their level of knowledge and learning.

Moreover, there is a high rate of depression, anxiety, and nursing mistakes among procrastinating students. According to studies, procrastinating students have had a more unfavorable performance [8]. Since students are among the human capital in society [17], students' performance in the medical sciences field can also affect society's health. This study investigated the relationship between coronavirus anxiety and academic procrastination of Mashhad Nursing and Midwifery Faculty undergraduate students.

Instrument and Methods

This descriptive-correlation study was conducted on the 2nd to 8th-semester undergraduate students (nursing, midwifery, operating room, and medical emergencies) of Mashhad Nursing and Midwifery Faculty who participated in the virtual education sessions from August 1, 2021, to January 30, 2022. A hundred students who had theory course credits in the current academic semester virtually and successfully passed the hospital internship courses were selected by web-based convenient sampling. The exclusion criteria included psychiatric problems and the death of a first-degree relative due to coronavirus. Due to the lack of a similar study, the sample size was 62 based on the Pearson correlation coefficient formula and the correlation coefficient of 0.5, 1% error, and 95% test power.

The research tools were three electronic questionnaires; demographic questionnaire, Coronavirus Disease Anxiety Scale (CDAS), and Solomon & Rothblum Procrastination Assessment Scale-Student (PASS).

Corona Disease Anxiety Scale (CDAS) is a scale to assessment of Coronavirus anxiety among people in society [1]. The instrument's validity in Alipour et al.'s study was reported favorably using the construct validity method of confirmatory factor analysis, and its reliability was 0.91 by Cronbach's alpha coefficient. The questionnaire included 18 items and two components (Psychological symptoms (Items 1-9) and physical symptoms (Items 10-18)). The scale is scored on a 4-point Likert scale (Always: 3 points; most of the time: 2 points; sometimes: 1 point; and never: 0 points). Therefore, the maximum and minimum scores obtained by the respondents are 54 and 0, respectively, and higher scores indicate a higher level of anxiety [1].

Procrastination Assessment Scale-Student (PASS), developed by Solomon and Rothblum, is a scale for the assessment of academic procrastination with its validity (0.8) and reliability (0.861 and 0.781 for the first and second sections) of the Persian version by Mortazavi *et al*. using the CVI method and Cronbach alpha, respectively [18]. The scale had 46 items and two sections; frequency and reasons for academic procrastination [18]. The first section's minimum and maximum scores were 12 and 60, respectively [18].

The questionnaire link was provided to the subjects online through internal and external messengers such as Telegram and WhatsApp. Before completing the questionnaires, the subjects were asked about their willingness to participate in the research and then directed to the question page. The principles of anonymity and confidentiality were observed concerning filling out the questionnaires.

Data were analyzed using SPSS 26 software through Pearson's correlation coefficient for normal data and Spearman's correlation coefficient for others.

Findings

The mean age of the subjects was 21.3±4.7 (18 to 26) years (Table 1).

Table 1. Demographic characteristics of the subjects

Parameter		Number	%
Gender	Female	62	62
	Male	38	38
Field of study	Nursing	30	30
	Midwifery	9	9
	Operating room	60	60
	Medical emergencies	1	1
Marital status	Single	84	84
	Married	12	16
Occupation status	Employed	32	32
	Unemployed	68	68
Coronavirus history	Infected	82	82
	Not Infected	18	18

The mean of coronavirus anxiety was 8.68±6.13 (psychological symptoms was 7.42±4.43 and physical symptoms was 1.26±2.45), and academic procrastination was 54.10±57.55.

Academic procrastination had a significant correlation with coronavirus anxiety ($r=0.317$; $p<0.01$), psychological symptoms ($r=0.335$; $p<0.01$), and physical symptoms ($r=0.244$; $p<0.01$).

Coronavirus anxiety significantly correlated with procrastination in preparing a project at a certain time ($r=0.2$; $p<0.05$), studying for exams ($r=0.291$; $p<0.01$), and regular and weekly study of lessons and doing homework ($r=0.413$; $p<0.01$).

Discussion

This study investigated the relationship between Coronavirus anxiety and academic procrastination of Mashhad Nursing and Midwifery Faculty undergraduate students. The results showed a significant relationship between Coronavirus anxiety and academic procrastination. In this regard, Heidarzadeh *et al*. stated that increased mood disorders such as anxiety significantly increase academic procrastination [10]. Also, in accordance with the findings of this study, some studies showed a positive and significant correlation between academic procrastination and anxiety [19-21]. Hesari *et al*. emphasized that there was no significant effect of Coronavirus anxiety on predicting academic procrastination, which is not in accordance with the findings of this study [22]. In explaining this finding, it can be said that anxious people usually show more procrastination due to their tendency to negative experiences such as fear and anger [23]. The studies indicated that anxiety is one of the important factors in procrastination; in other words, since procrastination is associated with anxiety, anxious people are more inclined to avoid behaviors such as procrastination [6]. According to Freud's psychoanalytical theory, anxiety can cause procrastination [22]. The COVID-19 disease is still common in society and causes the death of many people every day. So, it's natural to be worried and anxious due to the fear of the disease, which subsequently affects academic procrastination. The Behaviors caused by anxiety are effective in reducing the quality of homework. Examining the health status simultaneously with academic activities causes a decrease in concentration, which affects academic performance, and as a result, academic procrastination increases [22].

The findings of this study indicate a significant relationship between procrastination in studying for exams and doing homework with coronavirus anxiety and is consistent with the results of some studies [22, 24]. Indeed, Coronavirus anxiety creates a feeling of failure in the person, negatively affecting the learning processes and doing homework; the person will be discouraged from doing the next activity, and consequently, procrastination will appear [22, 25]. In addition, when students cannot control their emotions, which is sometimes caused by Coronavirus anxiety, they may be more tense, and their concentration to perform academic activities will be disturbed [26]. Since the higher the anxiety, the lower the individual's self-efficacy (The individual's ability to control performance and environmental events), it can be concluded that low self-efficacy increases the probability of procrastination [27]. On the other hand, the cognitive theory of stress, the three-part evaluation-anxiety-avoidance model of Lazarus and Folkman, and the study of Robin *et al*. show that a person in a stressful situation first evaluates her conditions and ability. On the other hand, the cognitive theory of stress, the three-part evaluation-anxiety-avoidance model of Lazarus and Folkman, and the study of Robin *et al*. show that a person in a stressful situation first evaluates her/his conditions and ability. Then, if the person sees the situation as inappropriate, postpones his/her duties and assignments to eliminate the resulting worry and anxiety, and this kind of academic procrastination occurs [22]. According to the results of this study, there was a significant relationship between Coronavirus anxiety and academic procrastination. The study by Dehghanmehr *et al*. on medical students indicated a higher prevalence of psychological symptoms of corona anxiety other than the physical symptoms [28]. Coronavirus anxiety affects people's physical and social performance and can lead to depression [22]. People also procrastinate to escape from

psychological problems such as stress, depression, and anxiety, leading to psychological and physical symptoms [22]. On the other hand, the anxiety caused by Coronavirus has reduced the level of tolerance and resilience of people towards the behaviors of others and causes people to show aggressive behaviors. With the prolongation of the Coronavirus epidemic, the level of Coronavirus anxiety also increases, reducing people's resilience [29]. The level of procrastination increases due to the decrease in people's resilience [30].

The current statistical population was limited to Mashhad University of Medical Sciences. Due to the online mode of academic education, the sampling was conducted by the web-based convenience method. Since COVID-19 continues to spread worldwide, Coronavirus anxiety control should be considered, and planning and the applicable strategies should be considered. It suggested conducting studies to decrease Coronavirus anxiety and its effect on academic procrastination.

Conclusion

Coronavirus anxiety is an important factor that causes academic procrastination and decreases learning.

Acknowledgments: None declared by the authors.

Ethical Permissions: The proposal of this study has been registered in the research system of Mashhad University of Medical Sciences (Researcher System) with the code 991628, and its ethics code is IR.MUMS.NURSE.REC.1400.031.

Conflicts of Interests: There was no conflict of interest.

Authors' Contribution: Heyran F (First Author),, Introduction Writer/Main Researcher (20%); Shamszade AR (Second Author), Methodologist (20%); Imani M (Third Author), Assistant Researcher (20%); Mohsenpour M (Fourth Author), Assistant Researcher/Statistical Analyst (20%); Jamali J (Fifth Author), Discussion Writer (20%)

Funding/Support: None declared by the authors.

References

1- Alipour A, Ghadami A, Alipour Z, Abdollahzadeh H. Preliminary validation of the Corona disease anxiety scale (CDAS). J Health Psychol. 2020;8(32):163-75. [Persian]

2- Bayanfar F. Predicting corona disease anxiety among medical staffs in Tehran based on Five Factor theory of personality. Iran J Health Psychol. 2020;2(2):113-26.

3- Allah Tavakoli M. Coping with stress of COVID- 19 epidemic. J Jiroft Univ Med Sci. 2020;7(1):253-4. [Persian]

4- Ezazi Bojnourdi E, Ghadampour S, Moradi Shakib A, Ghazbanzadeh R. Predicting Corona anxiety based on cognitive emotion regulation strategies, health hardiness and death anxiety in Diabetic patients. IJPN 2020;8(2):34-44. [Persian]

5- Asadi M, Kiani A, Azimi L, Gharibi Z. Determining the self-care Behaviors relating to the COVID-19 in students based on COVID-19 anxiety and demographic characteristics: A cross-sectional study. J Clin Psychol. 2021;13(2):169-80. [Persian]

6- Noori T, Nilforooshan P. University students' academic procrastination: The role of coping styles with stress and the dual dimensions of perfectionism. N Educ Approach. 2016;11(1):21-40. [Persian]

7- Salehi L. Application of "Social Cognition Theory" in predicting the factors affecting academic procrastination among students of Alborz university of medical sciences in 2017. JMED. 2018;12(4):269-81. [Persian]

8- Khanbabayi Gol M, Mirmazaheri R, Dorosti A. Relationship between procrastination and optimism in undergraduate nursing students of medical sciences universities of northwest Iran-1397. J Nurs Educ. 2018;7(4):48-54. [Persian]

9- Azizian F, Ramak N, Vahid F, Rezaee S, Sangani A. The effectiveness of cognitive simulation techniques group training on academic engagement and academic procrastination in nursing students. J Nurs Educ. 2020;9(2):54-62. [Persian]

10- Heidarzadeh A, Mohammad AS, Soltan AJ, Azizzadeh FM, Hashemi Nasab FS. Prevalence of Academic Negligence and its Relationship with Students'Mood DisordersatKerman University of Medical Sciences. Jundishapur Univ Med Sci. 2017;7(4):325-33. [Persian]

11- Motie H, Heidari M, Bagherian F, Zarani F. Providing mindfulness-based educational package for evaluating academic procrastination. Iran J Psychiatry Clin Psychol. 2019;25(1):26-41.

12- Jafari A, Seyyed Khorasani MS. The prediction of academic procrastination based on emotional intelligence with mediating role of psychological capital in medical sciences students. Educ Strategy Med Sci. 2018;11(2):39-47. [Persian]

13- Khormaee F, Azadi Dehbidi F. Explaining procrastination students based on religious structures - moral patience (Structural equation modeling). Iran J Culture Islamic Univ. 2017;7(1):77-92. [Persian]

14- Moshtaghi S, Moayed Far H. The role of intelligence beliefs and achievement goals orientation in prediction of students academic procrastination. Educ Dev Judishapur. 2016;7(1):28-36. [Persian]

15- Mesrabadi J, Mashhooni S. Discrimination of students of medical sciences with high and low academic achievement based on the components of academic procras-tination and stressors. ISMJ. 2019;22(4):200-13.

16- Motie H, Heidari M, Bagherian F, Zarani F. Determining Factors of Academic Procrastination. Sadra Med J. 2018;6(4):275-86.

17- Enayati T, Rastegar Tabar F. Relationship between Student's Attitudes toward their University and Academic Burnout: Examining the Mediating Role of Academic Procrastination. Strides Dev Med Edu. 2017;14(1):20-30. [Persian]

18- Mortazavi F, Mortazavi SS, Khosrorad R. Psychometric properties of the Procrastination Assessment Scale-Student (PASS) in a student sample of Sabzevar university of medical sciences. Iran Red Crescent Med J. 2015;17(9).

19- Kınık Ö, Odacı H. Effects of dysfunctional attitudes and depression on academic procrastination: does self-esteem have a mediating role?. Br J Guid Couns. 2020;48(5):638-49.

20- Smoltz FG. Academic procrastination and its effects on perceived stress and mental well-being: Are compensatory health beliefs and self-compassion mediators or moderators of the relation between academic procrastination on perceived stress or mental well-being?. Univ Twente Stu Theses. 2019.

21- Besharat MA, Farahmand H, Gholamali Lavasani M. The mediating role of procrastination in the relationship between perfectionism pathologies and depression/anxiety symptoms. Dev Pscychol. 2018;14(55):235-47. [Persian]
22- Hesari M, Rezaei AM, Talepasand S. Predicting academic procrastination based on psychological distress and corona anxiety. Rooyesh. 2022;11(3):219-32. [Persian]
23- Taj S, Shirkavand M. Prediction of academic procrastination of nursing students based on primary maladaptive schemas and self-efficacy. N Strategy Instructional Adm. 2018;1(2):15-23.
24- Nordby K. Student procrastination: Measurement, reduction and environmental factors [dissertation]. Norway: The Arabic University of Norway; 2020.
25- Shahrokhi M, Nasri S. Examining the relationship between perfectionism and exam anxiety with academic procrastination in students. J N Thought Educ .2014;10(2):161-83. [Persian]
26- Khorshidi FR, Sarami G, Naderi H, Shojaei AA. Structural equation modeling on test anxiety and locus of control on academic achievement by achievement motivation as a mediator. J Psychol Sci. 2018;17(69):619-27. [Persian]
27- Motie H, Heidari M, Bagherian F, Zarani F. Cognitive-emotional model of students academic procrastination: Mindfulness and time perception. J Res Behav Sci. 2019;16(3):353-64.
28- Dehghanmehr S, Mir N, Ghayami-Keshtgar N, Kord-Salarzehi F. Evaluation of anxiety due to COVID-19 disease and its mortality in internship students in the field before entering the department at Zabol university of medical sciences. J Zabol Med School, 2022; 5(2): 54-59. [Persian]
29- Mikaeili N, Rahimzadegan S, Taheri H. The prediction of university students aggression based on corona anxiety, cognitive empathy and affective empathy. Rooyesh. 2022;10(11):51-60. [Persian]
30- Namaki Bidgholi Z, Sadighi Arfaee F. Relationship between mindfulness and resiliency with academic procrastination in Kashan university. Mod Psychol Res. 2017;12(45):281-301. [Persian]