

Death Anxiety and Related Factors among Nurses during the COVID-19 Pandemic: A Systematic Review

Mohammad Javad Ghazanfari ^{ID}¹, Raziye Chaghian Arani ^{ID}², Amirabbas Mollaei ^{ID}³, Aghil Mollaei ^{ID}⁴, Atefeh Falakdami ^{ID}³, Poorya Takasi ^{ID}³, Pooyan Ghorbani Vajargah ^{ID}³, Shaqayeq Esmaceli ^{ID}⁵, Hedayat Jafari ^{ID}⁶, Tahereh Yaghoubi ^{ID}⁷, Samad Karkhah ^{ID}^{3*}

1. Department of Medical-Surgical Nursing, School of Nursing and Midwifery, Kashan University of Medical Sciences, Kashan, Iran
2. Student Research Committee, School of Medicine, Kashan University of Medical Sciences, Kashan, Iran
3. Department of Medical-Surgical Nursing, School of Nursing and Midwifery, Guilan University of Medical Sciences, Rasht, Iran
4. Department of Biostatistics, School of Health, Mazandaran University of Medical Sciences, Sari, Iran
5. Imam Khomeini Hospital, Mazandaran University of Medical Sciences, Sari, Iran
6. Associate Professor of Nursing, Department of Medical Surgical Nursing, School of Nursing and Midwifery, Traditional and Complementary Medicine Research Center, Addiction Institute, Mazandaran University of Medical Sciences, Sari, Iran
7. Traditional and Complementary Medicine Research Center, Addiction Institute, Mazandaran University of Medical Sciences, Sari, Iran

Article Type:

Systematic Review

Article History:

Received: 5 May 2022

Revised: 1 Aug 2022

Accepted: 2 Aug 2022

Published: 16 Aug 2022

*Correspondence:

Samad Karkhah,
Department of Medical-Surgical
Nursing, School of Nursing and
Midwifery, Guilan University of
Medical Sciences, Rasht, Iran

samad.karkhah@gums.ac.ir



DOI: [10.29252/jorjanibiomedj.10.3.35](https://doi.org/10.29252/jorjanibiomedj.10.3.35)

Abstract

Background and Objectives: High workload, insufficient resources, and many stressors in the workplace have led to the imposition of physical and psychological pressures on nurses, which exposes them to Death Anxiety (DA). This systematic review aimed to assess the DA and factors associated with its in nurses during the COVID-19 pandemic.

Material and Methods: An extensive search was conducted on Scopus, PubMed, Web of Science, Iranmedex, and Scientific Information Database (SID) databases via keywords including "Death", "Death Anxiety", "Nurses", and "COVID-19", from December 2019 to November 10, 2021.

Results: 818 nurses were enrolled in four papers. Nurses' mean age and work experiences were 31.21 (SD=5.43) and 7.60 (SD=6.73) years, respectively. The mean DA of nurses during the COVID-19 pandemic was 7.30 (SD=2.23). Also, 31.05% of nurses had a high DA level during the COVID-19 pandemic. Age, sex, work experience, working hours per week, childbearing, several patients needing end-of-life care, direct participation in resuscitation operations, patient death, depression, mental health status, and life satisfaction were influential factors in DA nurses during the COVID-19 pandemic.

Conclusion: Thus, nursing policymakers should pay special attention to these factors related to nurses' health maintenance and promotion programs to increase the quality of nursing care for COVID-19 patients. Also, it is recommended that psychological and communication support be provided to nurses during the COVID-19 pandemic.

Keywords: Death [MeSH]; Nurses [MeSH]; Systematic Review [MeSH]; COVID-19 [MeSH]

Highlights

- Nurses' Death Anxiety (DA) levels during the COVID-19 pandemic were moderate.
- Age, sex, work experience, working hours per week, childbearing, several patients needing end-of-life care, cases of direct participation in resuscitation operations, cases of patient death, depression, mental health status, and life satisfaction were influential factors in DA nurses during the COVID-19 pandemic.

Introduction

Since December 2019, the COVID-19 pandemic has had significantly impacted the health care system, especially nursing (1-11). High workload, insufficient resources, and many stressors in the workplace have led to the imposition of physical and psychological pressures on nurses, which exposes them to Death Anxiety (DA) (2). DA is a multifaceted concept that includes worries about fear of death for oneself and others, denial of death, reluctance to interact with dying people, and avoiding death. Although DA is a universal concept, its manifestations can vary in individuals with different cultural, mental, social, and professional backgrounds (12). Meanwhile, nurses are exposed to critically ill and dying patients, leading to stress, anxiety, and DA (13, 14). Adverse outcomes of DA among nurses include depression, loss of meaning in life, and psychological distress. These adverse outcomes can reduce professional participation, performance, and quality of care. However, some nurses deal with DA by using avoidant behaviors such as frequent absences from the workplace to reduce exposure to death-related issues and their psychological effects (12). Hence, a study in Turkey found that nurses experienced high levels of depression, anxiety, and insomnia during the COVID-19 pandemic compared to other healthcare workers (2). Another study in Turkey showed that the DA of nurses was at a moderate level (15). Also, a study in Iran showed that 53.5% of nurses had high DA levels (16).

Therefore, this systematic review aimed to assess the DA and its associated factors in nurses during the COVID-19 pandemic.

Materials and Methods

The present review was according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist (17).

Search strategy

An extensive search was conducted on Scopus, PubMed, Web of Science, Iranmedex, and Scientific Information Database (SID) databases via keywords including "Death", "Death Anxiety", "Nurses", and "COVID-19", from December 2019 to November 10, 2021. The syntax used in the strategy of search in the PubMed database was (("Death anxiety") OR ("Death") OR ("Anxiety") OR ("Fear")) AND (("Nurses") OR ("Personnel, Nursing") OR ("Registered Nurses") OR ("Registered Nurse") OR ("Health Personnel") OR ("Health Worker") OR ("Health Caregiver")) AND (("COVID-19") OR ("2019-nCoV disease") OR ("Coronavirus") OR ("Sars-Cov-2") OR ("2019 novel coronavirus infection")). The equivalent of keywords in Farsi was used to search Persian databases. The two researchers independently carried out the search process. Gray literature was ignored due to a lack of accurate findings (18).

Inclusion and exclusion criteria

Original Persian and English papers focusing on DA and related factors in nurses during the COVID-19 pandemic were included in this systematic review. Case reports, conference proceedings, studies with qualitative designs, and reviews were excluded. Also, published studies aimed to assess the DA among nursing students were excluded from this review.

Study selection

EndNote X8 software was used to manage the data. Duplicate articles were deleted electronically and manually, respectively. The title, abstract, and full text of the studies were evaluated based on inclusion/exclusion criteria. In addition, a reference list of eligible papers was evaluated to

prevent the loss of relevant data. The selection process of studies was conducted by two reviewers independently. Studies related to the purpose of the present study were included based on inclusion/exclusion criteria. The third researcher evaluated the paper if a disagreement arose between the reviewers.

Data extraction and quality assessment

The first author's name, year of publication, location, ward, sample size, male/female ratio, age, single /married ratio, level of education, work experience, tool, and key results were extracted from the included studies. Quality assessment of eligible papers was performed using the appraisal tool for cross-sectional studies (AXIS tool). This tool assesses the quality of cross-sectional papers using 20 items (19). Data extraction and quality assessment of included studies were performed by

two researchers independently. Studies with favorable quality were included in this systematic review. The third researcher evaluated the paper if a disagreement arose between the reviewers.

Results

Study Selection

1084 papers were obtained via search in databases, and two studies were obtained via assessment of the reference list of eligible documents. 211 duplicate studies were excluded. After evaluating the title and abstract of the articles, 649 papers were not in line with the purpose of this study, and 211 studies were not original. After evaluating the full text of the articles, four papers were included in this review (Figure 1).

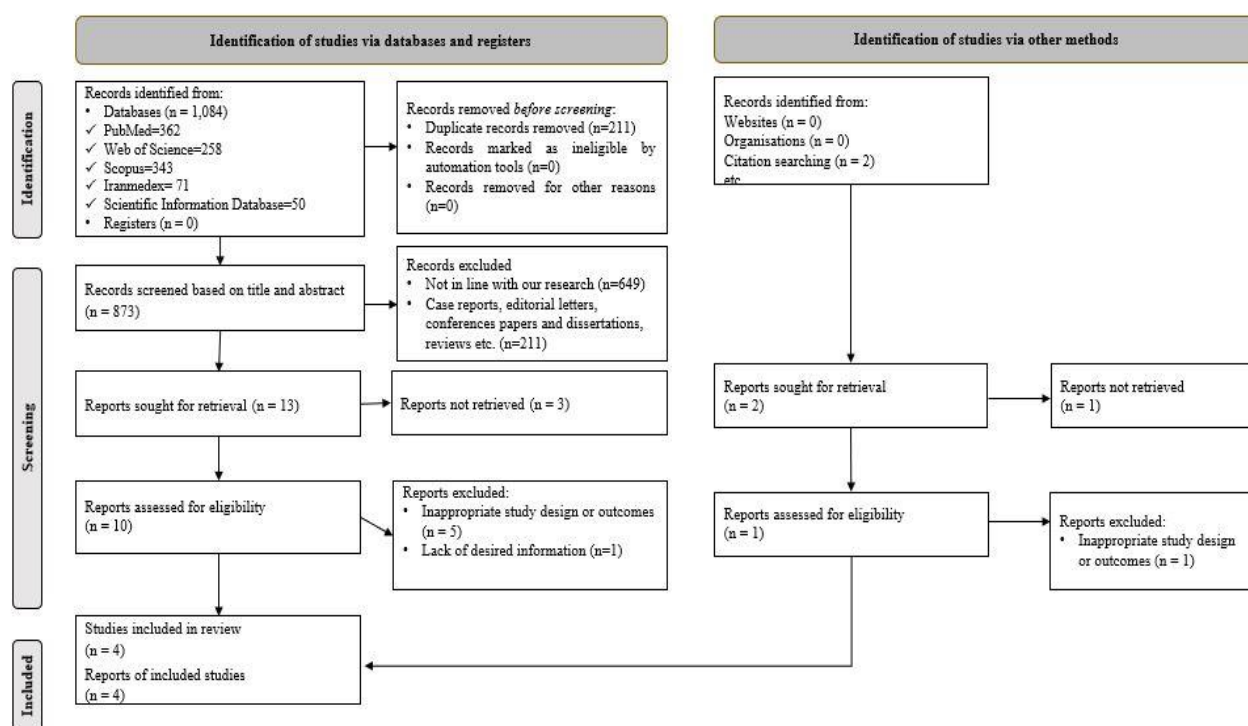


Figure 1. The process of selecting studies

Study Characteristics

818 nurses were enrolled in four studies (15, 16, 20, 21). All studies were cross-sectional. Of the participants, 64.68% were female, 50.74% were married, and 94.49% had a Bachelor of Science in Nursing (BSN) degree. The mean age and work

experience of nurses were 31.21 (SD=5.43) and 7.60 (SD=6.73) years, respectively. Most studies used the Templer's Death Anxiety Scale (T-DAS) to evaluate nurses' DA during the COVID-19 pandemic (n=3) (16, 20, 21). Most papers were performed in Iran (n=3) (16, 20, 21) (Table 1).

Methodological Quality of included study

Based on the AXIS tool, one study did not have a representative of the selection process; one study didn't identify limitations of research; two papers didn't mention sources of funding/conflicts of interest, and ethical approval/consent was attained ([Figure 2](#)).

DA and factors associated with its in nurses during the COVID-19 pandemic

The mean DA in nurses during the COVID-19 pandemic was 7.30 (SD=2.23). Also, 31.05% of nurses had a high DA level during the COVID-19 pandemic. Age (n=2), sex (n=1), work experience (n=1), working hours per week, childbearing, several patients needing end-of-life care, cases of direct participation in resuscitation operations, cases of patient death (n=1), depression (n=1), mental health status (n=1), and life satisfaction (n=1) were influential factors in DA nurses during the COVID-19 pandemic. A study in Iran found a significant negative relationship between DA and variables such as sex and mental health status (16). Also, another study in Turkey found a significant negative relationship between DA and life satisfaction during the COVID-19 pandemic ([15](#)).

Discussion

This systematic review showed moderate nurses' DA levels during the COVID-19 pandemic. Age, sex, work experience, working hours per week, childbearing, several patients needing end-of-life care, direct participation in resuscitation operations, patient death, depression, mental health status, and life satisfaction were influential factors in DA nurses during the COVID-19 pandemic.

Although nurses' DA was moderate, there were vast differences in the DA range in the included studies (DA range in the included studies: 2.92% to 69.09%). A study in Turkey ([15](#)) showed that 14.35% of nurses had a high DA level. In contrast, a study in Iran ([20](#)) found that this rate was 69.09%. The causes of these contradictions include culture, religion, and nurses' attitudes

toward death and care for dying patients ([16](#), [20](#), [22](#)).

As presented in the present study, age, sex, work experience, working hours per week, childbearing, several patients needing end-of-life care, cases of direct participation in resuscitation operations, cases of patient death, depression, mental health status, and life satisfaction were influential factors in DA nurses during the COVID-19 pandemic. Stress and burnout during the COVID-19 pandemic can predict DA in nurses ([15](#)). A study in Spain found that stress, anxiety, and high workload can lead to burnout in nurses and, ultimately, higher levels of DA in them ([22](#)). Therefore, it is recommended that future research be done by considering variables such as culture, religiosity, and religion in nurses in this field. Psychologists and behavioral scientists can play an essential role in reducing nurses' DA by developing educational interventions in this area.

Limitations

This review included English and Persian studies, which assess DA and related factors in nurses during the COVID-19 pandemic. However, the main limitation of the present study was language bias. Also, not all studies in this field may be found despite a systematic search of various databases.

Implications for nursing managers and policymakers

Based on the present study's findings, nurses' DA was at a moderate level during the COVID-19 pandemic. The current pandemic puts nurses at a high DA level due to increased workload and job stress which can affect the physical and mental health of nurses and, consequently, reduce the quality of nursing care. Therefore, nursing policymakers can reduce the DA of nurses by using appropriate educational programs and coping strategies with DA to consider DA-related factors in nurses such as culture, religion, cases of direct participation in resuscitation operations, cases of patient death, depression, and mental health status, and life satisfaction.

Table 1. Features of eligible studies in this systematic review

First Author/year	Location	Ward	Sample Size	M/F ratio (%)	Age (mean±SD)	Single/Married ratio (%)	Level of education (BSN/MSN/Ph.D.) (%)	Work experience (mean±SD)	Questionnaire	Key results	DA rate (Mean±SD)
Belash <i>et al.</i> , 2021 (20)	Iran	ICU	110	N/A	31.47 (SD=2.10)	39.09/60.91	N/A	N/A	T-DAS	DA was among ICU nurses during the COVID-19 pandemic at the following levels: <ul style="list-style-type: none"> • 30.91% of nurses had a low DA level • 69.09% of nurses had a high DA level There was a significant correlation between DA and variables such as age, working hours per week, childbearing, several patients needing end-of-life care, direct participation in resuscitation operations, and cases of patient death.	8.93 (SD=3.79) out of 15
Farokhnezhad Afshar <i>et al.</i> , 2021 (16)	Iran	Emergency department/ICU/Operating room/Oncology/Psychiatry/General/dialysis/Nursing office	208	50.96/49.04	32.45 (SD=6.45)	43.75/56.25	91.35/8.65/0	9.24 (SD=7.53)	T-DAS	53.36% of nurses had a high DA level during the COVID-19 pandemic. There was a significant negative correlation between DA and variables such as sex (P=0.001) and mental health status (P < 0.05).	4.37 (SD=0.97) out of 15
Karabağ Aydın <i>et al.</i> , 2021 (15)	Turkey	ICU/Emergency department/ Medical-surgical/Operating room	411	34.79/65.21	28.11 (SD=6.27)	62.04/37.96	100.00/0/0	5.96 (SD=5.94)	R-DAS	Nurses' DA levels were moderate during the COVID-19 pandemic. DA was among nurses at the following levels: <ul style="list-style-type: none"> • 2.92% of nurses had a very low DA level • 31.39% of nurses had a low DA level • 51.34% of nurses had a moderate DA level • 14.35% of nurses had a very high DA level. There was a significant negative correlation between DA and life satisfaction during the COVID-19 pandemic (P < 0.05).	57.33 (SD=16.20) out of 100
Nobahar <i>et al.</i> , 2021 (21)	Iran	General/ICU	89	20.22/79.78	32.80 (SD=6.90)	15.73/84.27	92.13/7.87/0	N/A	T-DAS	Nurses' DA levels during the COVID-19 pandemic were as follows: <ul style="list-style-type: none"> • 30.34% of nurses had a low DA level • 60.67% of nurses had a moderate DA level • 8.99% of nurses had a high DA level. There was a significant correlation between DA and variables such as age, work experience (P=0.05), and depression (P=0.05) during the COVID-19 pandemic.	7.32 (SD=1.75) out of 15

ICU: Intensive Care Unit; **T-DAS:** Templer's Death Anxiety Scale; **R-DAS:** Revised Death Anxiety Scale.

		Belash <i>et al.</i> , 2021	Farokhnezhad Afshar <i>et al.</i> , 2021	Karabağ Aydın <i>et al.</i> , 2021	Nobakar <i>et al.</i> , 2021
Introduction	Clear aims	*	*	*	*
	Appropriate design	*	*	*	*
Methods	Sample size justified	*	*	*	*
	Population defined	*	*	*	*
	Sample representative of population	*	*	*	*
	Selection process representative	*	*	-	*
	Measures to address non-responders	-	-	-	-
	Appropriate outcome variables	*	*	*	*
	Valid measures	*	*	*	*
	Defined statistical significance	*	*	*	*
	Methods described	*	*	*	*
	Results	Results data described	*	*	*
Concerns about non-response bias		-	-	-	-
Non-responder information described		-	-	-	-
Results internally consistent		*	*	*	*
Results presented for analyses		*	*	*	*
Discussion	Conclusions justified	*	*	*	*
	Limitations identified	-	*	*	*
Others	Funding sources or conflicts of interests	*	-	-	*
	Ethical approval/consent attained	*	-	-	*

Figure 2. Quality of eligible studies

Conclusion

Overall, nurses' DA levels during the COVID-19 pandemic were moderate. Also, 31.05% of nurses had a high DA level during the COVID-19 pandemic. Age, sex, work experience, working hours per week, childbearing, several patients needing end-of-life care, direct participation in resuscitation operations, patient death, depression, mental health status, and life satisfaction were influential factors in DA nurses during the COVID-19 pandemic. Thus, nursing policymakers should pay special attention to these factors related to nurses' health maintenance and promotion programs to increase the quality of nursing care for COVID-19 patients. Also, it is recommended that psychological and communication support be provided to nurses during the COVID-19 pandemic.

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How to cite:

Ghazanfari M.J, Chaghian Arani R, Mollaei A, Mollaei A, Falakdami A, Takasi P, Ghorbani Vajargah P, Esmaeili SH, Jafari H, Yaghoubi T, Karkhah S. Death Anxiety and Related Factors among nurses during the COVID-19 Pandemic: A Systematic Review. *Jorjani Biomedicine Journal*. 2022; 10(3):35-42.