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Original Article

Predicting factors of complicated grief in Iranians after COVID-19 losses: A descriptive–correlational study

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ABSTRACT

Background & Aim: Understanding predictive factors for complicated grief after COVID-19 losses is critical for developing targeted support strategies. This study aimed to examine predictors of complicated grief among Iranians who lost a family member during the pandemic.
Materials & Methods: This descriptive-correlational study was conducted from December 2022 to August 2023. A total of 150 relatives of COVID-19 victims were recruited via convenience sampling. Data were collected using the Inventory of Complicated Grief, the Burdened by Grief and Loss questionnaire, the WHO-5 Well-being Index, and a measure of pandemic-related burden. Data were analyzed using SPSS v. 26, employing chi-square, Fisher's exact test, and multiple logistic regression to identify predictors.
Results: The likelihood of developing complicated grief among women compared to men was 3.77 times higher ($p<0.001$, OR=3.77), and the chance of complicated grief in close family members compared to distant relatives was 4.55 times higher ($p<0.001$, OR=4.55). An increase in psychological well-being score significantly lowered the likelihood of complicated grief in bereaved companions ($p<0.001$, OR=0.86); however, an increase in being burdened by grief and loss scale significantly augmented the likelihood of complicated grief in bereaved companions ($p<0.001$, OR=1.11). However, an increase in the Burdened by Grief and Loss score significantly increased the likelihood of complicated grief in bereaved companions ($p<0.001$, OR=1.11). The prevalence of complicated grief in Iranian people who have lost their family members because of COVID-19 was higher compared to similar studies.
Conclusion: Female gender, close kinship with the deceased, and a heavier psychological burden of loss were significant risk factors for complicated grief, while stronger mental health served as a protective factor. Given the crucial role of nurses in bereavement care, there is an urgent need for structured, supportive interventions and psychological services, ideally delivered through clinical guidelines tailored for these vulnerable groups.

Introduction

The COVID-19 pandemic, as a global health crisis, caused substantial mortality and left millions worldwide to cope with grief (1). The unprecedented number of deaths, the unpredictability of the disease, and strict governmental restrictions, including social distancing and quarantine, substantially altered the normal grieving process (2). “Unlike ordinary bereavement, pandemic-related grief often lacked the social and cultural rituals that would traditionally provide comfort and meaning. Nurses’ experiences during the COVID-19 pandemic in Iran similarly highlighted how restrictions disrupted traditional care and mourning practices, intensifying the emotional burden on families.” (3). These conditions established an environment where grief became more intense, private, and psychologically complex.

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The death of a loved one initiates a natural psychophysiological process that usually resolves within months (4). When this process becomes prolonged and disruptive, it may develop into Complicated Grief (CG) or Prolonged Grief Disorder (PGD), characterized by persistent yearning, disbelief, and difficulty adapting to life without the deceased (5). During the pandemic, restrictions on farewells, burial, and mourning ceremonies intensified risk factors for CG (6). CG has been linked to depression, anxiety, post-traumatic stress, and functional impairment (7). Because of its psychological and functional burden, CG is increasingly regarded as a critical mental-health challenge requiring targeted nursing and psychosocial interventions (8).

Grief responses are shaped by cultural norms and religious beliefs (9). In collectivist societies such as Iran, communal mourning rituals and religious gatherings serve as crucial mechanisms for coping with loss (9). Traditional ceremonies enable emotional expression and social support, supporting the bereaved in reintegrating into daily life. Nevertheless, COVID-19 restrictions led to the closure of mosques and the suspension of mourning assemblies, disrupting these coping structures (10). The absence of such cultural supports, together with enforced isolation, has elevated the risk of CG in Iranian communities.

Complicated Grief is a multifactorial phenomenon affected by personal, relational, and contextual determinants, especially during pandemics. Büssing and Baumann's conceptual model (2023) states that opportunities to see dying relatives (11), receiving supportive care and accessing psychological assistance can mitigate the burden of CG. Based on this model, individuals' perceived burden and level of psychological well-being act as central mediators linking external circumstances to grief outcomes (10, 11). These relationships are displayed in Figure 1, where CG is conceptualized as an outcome affected by contextual barriers (e.g., restricted farewells) and psychosocial resources (e.g., professional support, resilience). Incorporating this framework into the present study clarifies how perceived burden and psychological well-being jointly shape the risk of CG among bereaved Iranians during COVID-19. Despite the global literature, empirical data from Iran remain limited (9, 12). Thus, the present research applies Büssing and Baumann's model to identify predictors of CG in this cultural context, with the aim of guiding culturally sensitive nursing interventions and informing mental-health policy for future crises.

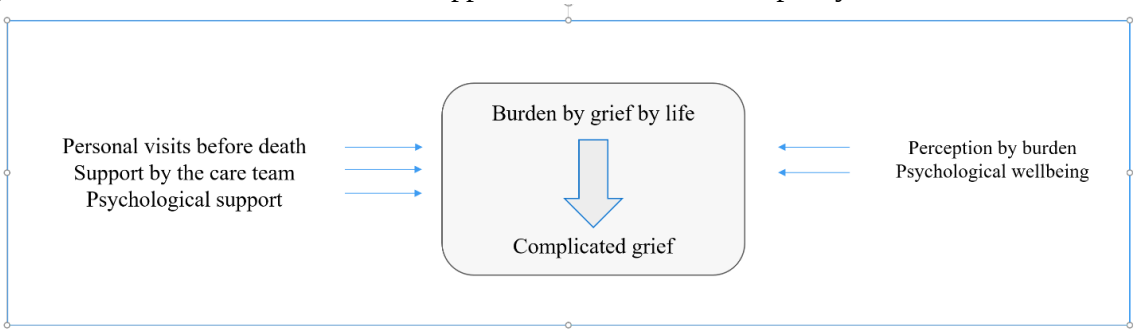

Figure 1. Büssing and Baumann's model (2023)

Methods

Study design and setting

This descriptive-correlational study was undertaken in hospital and community settings across the cities of Isfahan, Arak, and Tehran between December 19, 2022, and August 8, 2023. Data were collected in collaboration with the affiliated university hospitals (Kashani Hospital in Isfahan, Amir Kabir Hospital in Arak, and Taleghani Hospital in Tehran) as well as from bereaved families living in the surrounding urban areas. These cities were selected given their high COVID-19 mortality rates and availability of comprehensive hospital archives, allowing access to reliable patient information.

Participants

Information on the relatives of deceased COVID-19 patients was obtained from the official COVID-19 mortality registry

of the Ministry of Health; from each city, one major COVID-19 referral hospital was chosen, whereby the relatives of patients recorded in the official COVID-19 mortality registry were contacted. The participants were recruited through convenience sampling and were eligible if they were aged 18 years or older, had lost a family member to COVID-19, had experienced grief for more than six months, were willing to join the study, could communicate verbally, spoke Persian, and owned a smartphone (this criterion ensured that participants could complete online questionnaires securely and receive the invitation link). A minimum of six months had elapsed since the loss for all participants. Those with diagnosed psychiatric disorders were excluded.

Although convenience sampling was employed, initial contact lists were derived from archived mortality data, providing verified records of the deceased and their relatives. Sensitivity analysis revealed that a sample size of 150 was sufficient to detect correlations of r=0.20 (representing a small-to-moderate relationship strength) with a power of 0.80 and α=0.05. Of 170 questionnaires distributed, 150 were returned completed (response rate: 88%).

Measures

Data were collected through several questionnaires and separate questions related to participants' experiences of losing their loved ones during the pandemic, entitled "Loss and grief during the Coronavirus Pandemic." The following instruments were utilized: (1) Participants' demographic questionnaire, (2) Inventory of Complicated Grief (ICG), (3) Burdened by Grief and Loss (BGL) scale, (4) WHO-5 Well-being Index, (5) Pandemic-related burden (5NRS).

1. Demographic and contextual data

A structured questionnaire captured participants' age, gender, marital status, education level, occupation, city of residence, and relationship to the deceased, along with details such as presence of chronic diseases in the deceased, duration of illness, opportunity for hospital visitation, place and timing of death, and religious affiliation.

2. Inventory of Complicated Grief (ICG)

The ICG, developed by Prigerson et al. (1995) (13), ascertains symptoms of complicated grief (e.g., disbelief, anger, intrusive thoughts, yearning). It includes 19 items rated on a 5-point Likert scale from 0 ("never") to 4 ("always"), with the total scores ranging from 0 to 76. Interpretation: <8= no grief reaction; 8–33= normal grief; >33= complicated grief. The Persian version (Yosefi et al., 2019) revealed $\alpha = 0.94$ (14); in this study $\alpha = 0.94$.

3. Burdened by Grief and Loss (BGL) Scale

Developed by Büssing et al. (2023), this 9-item tool measures pandemic-related separation distress (e.g., inability to say goodbye, disrupted mourning rituals). Items are scored 0 ("does not apply at all") to 4 ("applies completely"); total range 0–36. Scores < 7= no burden; 7–27= moderate; > 27= severe burden. Sample item: "I could not spend enough time with my relative because of contact restrictions (11)." Cronbach's α was found to be 0.91 in the current study.

4. WHO-5 Well-Being Index

Developed by Bech et al. (2013) (15) and validated in Persian by Shirinabadi Farahani et al. (2023) (16). This 5-item scale evaluates emotional well-being over the past two weeks. Each item is rated 0 ("at no time") to 5 ("all of the time"), with the total range 0–25, then multiplied by 4 to yield 0–100 (≥ 50= acceptable well-being). Higher scores reflect better well-being. Cronbach's α was found to be 0.92 in this study.

5. Pandemic-related burden (5 Numeric Rating Scales; 5NRS)

Five numeric 10-point scales ascertained pressure/stress, anxiety/insecurity, loneliness/social isolation, financial strain, and restrictions in daily life. Responses ranged from

0 (“not at all”) to 10 (“extremely”). The five scores were averaged into a single index; α=0.84 in this sample. Persian validation had already been confirmed by Farahani et al. (2023) (16).

6. Additional contextual variables

Information was also collected on the relationship to the deceased (parents, spouse, siblings, or children), opportunity for final visits, emotional support received, as well as helpfulness of these visits in the grieving process (Table 1).

Table 1. Demographic and clinical characteristics of participants and deceased individuals

Variables	Categories	n	%
Age (years)	Mean ± SD	40.99±11.90	
	>40	82	54.7
	<40	68	45.3
Gender	Male	47	31.3
	Female	103	68.7
Place of dying	Home	59	39.3
	Hospital	91	60.7
Being religious	No	53	35.3
	Yes	97	64.7
Being spiritual	No	50	33.3
	Yes	100	66.7
Are you under medical or psychological treatment (Related to this loss)?	Yes	31	20.7
	No	119	79.3
Comorbidity	No	95	63.3
	Yes	55	36.7
Relational status	Close relative (parents, siblings, spouse, children)	94	62.7
	Far relatives	56	37.3
The possibility of personally visiting a person shortly before death	Yes	137	91.3
	No	13	8.7
Did visiting the person before they died support you emotionally in the situation?	Yes	63	42
	No	87	58
Looking back, my grieving was helpful	YES	48	32
	No	102	68
Possibility of sending an email	Yes	28	18.7
	No	122	81.3
The possibility of video calling shortly before a person’s death	Yes	49	32.7
	No	101	67.3
The possibility of saying goodbye to the person before they die	Yes	52	34.7
	No	98	65.3
Feeling that the relative was emotionally well supported/cared for by the treatment/care team	Yes	24	16
	No	126	84
Speaking to anyone on the treatment/care team shortly after the person died	Yes	26	17.3
	No	124	82.7
Desire to receive spiritual care	Yes	93	62
	No	57	38
Desire to receive psychological support	Yes	102	68
	No	48	32
Attending funeral	Yes	127	84.7
	No	23	15.3

Study procedure

An online questionnaire was designed on the Digisurvey platform, with the link shared with the participants. Upon agreement, the questionnaire link was provided to them for completion. The participants were identified through the official COVID-19 mortality registry of the Ministry of Health, which included the full list of confirmed COVID-19 deaths across the three mentioned cities. This registry allowed identification of next of kin, who were then contacted by trained research assistants. Indeed, trained research assistants initially contacted potential participants via telephone to explain the study objectives and obtain verbal consent. Those who agreed received a secure, single-use survey link through their preferred platform (WhatsApp, Telegram, or Email). For the

participants who preferred direct, in-person assistance, often due to the emotional difficulty of recalling their bereavement, two trained researchers conducted meetings with them. About 70% of the completed questionnaires were obtained via these face-to-face sessions. Along the entire data collection process, responses were carefully monitored to prevent duplicate entries or inconsistencies, ensuring that each participant could submit the survey only once.

Data analysis

Data were analyzed using SPSS-V26 software. The normality of the data was assessed using the Kolmogorov-Smirnov test ($p<0.05$). Descriptive analyses (frequency, percentage) were employed to consider CG as the outcome variable. The correlation between the main study variables, BGL, ICG, WHO-5, and pandemic-related burden (5NRS), and demographic factors was explored using chi-square and logistic regression tests. The threshold for statistical significance was 0.05. Since the outcome variable was dichotomous (presence/absence of CG), binary logistic regression was applied. Significant variables were included in the model through the Wald backward method. The impact of individual explanatory variables on the outcome variable was measured using the adjusted odds ratio (AOR) with a 95% confidence interval (CI).

Ethical considerations

All methods were performed in accordance with relevant guidelines and regulations, including the Declaration of Helsinki (2013 revision). Informed consent to participate in the study was obtained from all participants. All experimental protocols were approved by the Cancer Research Center of Shahid Beheshti University of Medical Sciences (IR.SBMU.CRC.REC.1401.026). Once ethics approval was obtained, the researchers secured official permits for sampling and presented them to the selected related centers. The participants were provided informed written consent before completing the questionnaire. The research objectives were explained to all participants. Data confidentiality, privacy, and anonymous data analysis were maintained in all research phases. Further, the specific aims and hypotheses of the study were not disclosed to avoid biased responses or demand characteristics.

Results

The participants had a mean age of 40.99±11.90 years; 69% were women. Roughly 80% reported a lack of receiving any medical or psychological treatment. More than 62.7% had lost a first-degree relative. Among the deceased, 36.7% had at least one underlying condition, with the mean time from illness onset to death being 16.77±14.99 days. About 41% died at home. Further details are reported in Table 1.

As outlined in Table 2, over half reported experiencing CG (51.3%). Further, 48.7% of individuals were severely burdened by grief and loss, while others had no burden or a moderate burden. Specifically, 63.3% of the bereaved had low psychological well-being.

Table 2. Frequency and percentage of participants' main research variables (n=150)

Variables		n	%
Inventory of complicated grief (ICG)	Without/ normal grief	73	48.7
	Complicated Grief	77	51.3
Burdened by grief and loss (BGL)	No burden	12	8
	Moderate burden	65	43.3
	Sever burden	73	48.7
Psychological wellbeing	Low wellbeing	95	63.3
	Moderate	30	20
	High wellbeing	25	16.7

Factors related to grief

The prevalence of CG was higher in grieving women ($p=0.03$), those undergoing medical or psychological treatment ($p<0.001$), being burdened by grief and loss ($p<0.001$), suffering from chronic illnesses ($p=0.05$), low psychological well-being ($p<0.001$), and those with close family relationships (including siblings, parents, and children) with the

deceased (p<0.001). In addition, those who felt a close relationship with the deceased (p<0.001) had significantly higher rates of CG (Table 3).

No statistically significant differences were observed in CG for various factors, including age, place of death, religious or spiritual beliefs, emotional support, communication with the treatment/care team, and desire for support. The detailed p-values for each factor are presented in Table 3. The logistic regression model was manually constructed based on the Wald backward method (Table 4). The variables that showed significant statistical relationships with the dependent variable (CG) were included in the logistic model. Variables were then removed until all p-values were below 0.05. The final logistic regression model revealed that among various parameters, gender, relatives, psychological well-being, and being burdened by grief and loss had significant associations with the prevalence of CG. The likelihood of experiencing CG was 3.77 times higher in women compared to men (p<0.001, OR=3.77(1.39, 10.27)). Also, the chance of chronic grief in close family members compared to distant relatives was 4.55 times higher (p<0.001, OR=4.55 (1.73, 11.92)). An increase in scores from psychological well-being significantly lowered the likelihood of CG in grieving companions (p<0.001, OR= 0.86 (0.80, 0.92)); however, an increase in scores from burdened by grief and loss significantly augmented the likelihood of CG in bereaved companions (p<0.001, OR=1.11(1.06, 1.16)).

Table 3. Intensity of grief scores in subsamples

Variable	Categories	Without/ normal grief	Complicated grief	P-value of Chi-Square Test
Age	<40	40(48.8%)	42(51.2%)	0.97
	>40	33(48.5%)	35(51.5%)	
Gender	Male	29(61.7%)	18(38.3%)	0.032
	Female	44(42.7%)	59(57.3%)	
Place of death	Home	27(45.8)	32(54.2)	0.56
	Hospital	46(50.5)	45(49.5)	
Being religious	No	22(41.5%)	31(58.5%)	0.23
	Yes	51(52.6%)	46(47.4%)	
Being spiritual	No	21(42.0%)	29(58.0%)	0.29
	Yes	52(52.0%)	48(48.0%)	
Undergoing any psychological treatment (related to the loss)	No	7(22.6)	24(77.4)	<0.001
	Yes	66(55.5)	53(44.5)	
Burdened by Grief and Loss	No	10(83.3)	2(16.7)	<0.001
	Moderate	45(69.2)	20(30.8)	
	Sever	18(24.7)	55(75.3)	
Comorbidity	Yes	32(59.3)	22(40.7)	0.05
	No	41(42.7)	55(57.3)	
Psychological wellbeing	Low	32(33.7)	63(66.3)	<0.001
	High	41(74.5)	14(25.5)	
Relational status	Close	35(37.2%)	59(62.8%)	<0.001
	Far	38(67.9%)	18(32.1%)	
The possibility of personally visiting a person shortly before death	No	48(55.2)	39(44.8)	0.06
	Yes	25(39.7)	38(60.3)	
Looking back, was your grieving helpful to you?	No	48(55.2)	39(44.8)	0.06
	Yes	25(39.7)	38(60.3)	
Possibility of sending an email	Yes	10(35.7)	18(64.3)	0.12
	No	63(51.6)	59(48.4)	
The possibility of video calling shortly before a person's death	No	22(44.9)	27(55.1)	0.52
	Yes	51(50.5)	50(49.5)	
The possibility of saying goodbye to the person before they die	Yes	28(53.8)	24(46.2)	0.35
	No	45(45.9)	53(54.1)	
Feeling that the relative was emotionally well supported/cared for by the treatment/care team	No	58(46.4)	67(53.6)	0.21
	Yes	15(60)	10(40)	
Speaking to anyone on the treatment/care team shortly after the person died	Yes	16(61.5)	10(38.5)	0.14
	No	57(46.0)	67(54.0)	
Desire to receive spiritual support	Yes	47(46.1)	55(53.9)	0.35
	No	26(54.2)	22(45.8)	
Desire to receive psychological support	Yes	47(46.1)	55(53.9)	0.35
	No	26(54.2)	22(45.8)	
Attending funeral	No	61(48.0)	66(52.0)	0.71
	Yes	12(52.2)	11(47.8)	

Table 4. Multiple logistic regression model of factors related to complicated grief

Variable	Categories	OR	95% CI for OR	Sig.
Gender	Male		**Reference category**	
	Female	3.77	(1.39, 10.27)	**<0.001**
Relational status	Distant relative		**Reference category**	
	Close relative	4.55	(1.73, 11.92)	**<0.001**
Psychological wellbeing		0.86	(0.80, 0.92)	**<0.001**
Burdened by grief and loss		1.11	(1.06, 1.16)	**<0.001**

Discussion

This study intended to identify predictors of complicated grief (CG) among the Iranian population bereaved by COVID-19. More than half of the participants experienced CG, a prevalence likely shaped by cultural norms and expectations (17). These findings well indicate how grief experiences are context-dependent and affected by local mourning traditions. Since grief is deeply embedded in cultural context, its manifestations can vary widely across societies (12). Comparable results were reported by Von Blanckenburg et al. (2023) in Germany, with 44.4 % of bereaved individuals fulfilling criteria for CG six months following COVID-related deaths (18).

The COVID-19 pandemic intensified grief reactions by disrupting mourning rituals, restricting social contact, and producing unexpected loss. Studies undertaken in the Netherlands, Germany, and Iran consistently indicate more severe grief responses during the pandemic compared to pre-pandemic periods (19). These findings suggest that both the prevalence and the intensity of CG were heightened during COVID-19.

In Iran, traditional mourning ceremonies are strongly valued, yet quarantine and strict social-distancing measures prevented families from attending funerals or bidding farewell to loved ones. During early pandemic phases, the bodies of deceased patients were not returned to families and were buried by hospital authorities (20). Such experiences created profound psychological distress, reinforcing unexpressed grief responses, which is in accordance with the findings of the current study (20).

In this study, women were 3.77 times more likely to develop CG than men. Similar findings were observed by Nielsen et al. (2017), confirming that female gender is a consistent risk factor for CG (21). This gender disparity may reflect emotional expression styles, coping expectations, and cultural norms surrounding mourning. Women generally express and share grief more openly, viewing emotional disclosure as beneficial, while men often internalize or suppress grief (22).

Social factors also contribute: women live longer, confront higher caregiving burdens, and experience greater financial stress, which can aggravate grief outcomes (19). Moreover, in Iranian culture, prolonged mourning in women is often socially reinforced. Indeed, women who continue wearing dark clothing or avoid social gatherings for extended periods are admired as virtuous, perpetuating chronic bereavement roles.

The likelihood of CG was 4.55 times higher among close relatives compared to distant ones. Losing a spouse, parent, or child was associated with more intense grief than losing extended kin, in accordance with previous research (23). These results confirm that emotional proximity is a key determinant of bereavement severity.

The death of an attachment figure often results in a mismatch between the enduring mental representation of the loved one and the reality of their absence (24). This incongruence manifests as longing, preoccupation, and diminished interest in daily life. For those with strong attachment bonds, accepting the loss takes longer and can lead to chronic CG symptoms (25).

Another important finding was the inverse relationship between psychological well-being and CG. Participants with lower well-being reported significantly higher CG scores. Although the cross-sectional design limits causal inference, depressive or anxious states may intensify grief responses. This bidirectional

relationship reveals that addressing mental health during bereavement may lower the risk for CG.

Several studies have noted that depression, anxiety, and prior grief reactions are major predictors of CG (26, 27). Wicochea (2023) reported that CG correlates strongly with depression, with psychological inflexibility and lack of social support serving as mediators (28).

CG and depression are mutually reinforcing conditions (29). Those with poor baseline mental health are more vulnerable to CG, in turn exacerbating emotional distress. The present analysis highlights the critical importance of supporting bereaved individuals' mental health, especially during pandemics, through early screening and intervention. Even subclinical distress can contribute to persistent grief and secondary complications (30).

A rise in BGL scores significantly predicted CG. The BGL instrument ascertains perceived difficulty in parting from relatives due to pandemic-related constraints (24). Its items reflect feelings such as "I couldn't spend enough time with my relatives due to communication limitations." This finding exhibits how restricted farewells disrupt normal mourning trajectories and can convert acute grief into prolonged grief. When individuals cannot say goodbye, emotional resolution remains unfulfilled, elevating long-term grief risk.

These results have both psychosocial and policy relevance. Identifying at-risk groups, especially women, close relatives, and those with low psychological well-being, can guide targeted bereavement interventions. Integrating grief counseling and culturally sensitive mental health support within Iran's primary care system could alleviate CG's long-term consequences. Future studies should apply longitudinal designs to clarify causal pathways and to ascertain culturally adapted interventions.

Study limitations

Given the reduction in the number of COVID-related deaths during the study period and the challenges related to accessing eligible participants, the relatively small sample size could be a limitation of the present study. Also, owing to the cross-sectional design of the study, no causal interpretations can be drawn.

Conclusion

This study found a strikingly high prevalence of complicated grief among Iranian bereaved along the COVID-19 pandemic, with more than half of participants meeting the criteria for prolonged grief disorder. Female gender, close kinship, and greater subjective burden were identified as risk factors, while better psychological well-being appeared to provide protection.

These findings point to the importance of nurses and mental-health professionals in early recognition of CG as well as timely support for vulnerable populations. Integrating grief screening into bereavement care protocols, especially for women and close relatives, could ameliorate access to psychological services and social support systems.

Future work, ideally through longitudinal studies, should explore the course of CG in diverse cultural settings and evaluate the effectiveness of targeted nursing interventions, such as enabling final farewells or strengthening resilience. Developing culturally grounded bereavement care guidelines informed by predictors identified in this study may boost mental-health outcomes in present and future health crises.

Data availability

The data sets generated during the current study are not available for public reasons because they are based on the statements of nursing policymakers; however, they are available at the reasonable request of the author.

Conflict of interest

The authors declare that they have no competing interests.

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References

1. World Health Organization. Number of COVID-19 cases and deaths reported to WHO (cumulative total) 2024 [Available from: https://data.who.int/dashboards/covid19/deaths?n=o.
2. Javadi SMH, Sajadian M. Coronavirus pandemic a factor in delayed mourning in survivors: A letter to the editor. Journal of Arak University of Medical Sciences. 2020;23(1):2-7.
3. Sina V, Seyede Mona N, Parvin M. Nurses' experiences of caring for COVID-19 patients: A systematic review of qualitative studies. Nursing Practice Today. 2024;11(2):107-23.
4. Nakajima S. Complicated grief: Recent developments in diagnostic criteria and treatment. Philosophical Transactions of the Royal Society B: Biological Sciences. 2018;373(1754):20170273.
5. Shear MK. Complicated grief. New England Journal of Medicine. 2015;372(2):153-60.
6. Jordan TR, Wotring AJ, McAfee CA, Polavarapu M, Cegelka D, Wagner-Greene VR, et al. The COVID-19 pandemic has changed dying and grief: Will there be a surge of complicated grief? Death Studies. 2022;46(1):84-90.
7. Khoury B, Barbarin O, Gutiérrez G, Klicperova-Baker M, Padakannaya P, Thompson A. Complicated Grief during COVID-19: An International Perspective. International Perspectives in Psychology. 2022;11:214-21.
8. Diolaiuti F, Marazziti D, Beatino MF, Mucci F, Pozza A. Impact and consequences of the COVID-19 pandemic on complicated grief and persistent complex bereavement disorder. Psychiatry Research. 2021;300:113916.
9. Rassouli M, Farahani AS, Mojen LK, Ashrafizadeh H. The Impact of Culture and Beliefs on Cancer Care. Global Perspectives in Cancer Care: Religion, Spirituality, and Cultural Diversity in Health and Healing. 2022;215.
10. Lightbody S, Catt L, Ahmad A, Glover D, Whitney J, Hasan S. Bereavement in the time of COVID-19: Learning from experiences of those bereaved as a result of deaths in an acute hospital setting in 2020. OMEGA-Journal of Death and Dying. 2022:00302228221113214.
11. Büssing A, Baumann K. Experience of loss and grief among people from Germany who have lost their relatives during the pandemic: the impact of healthcare professionals' support. Frontiers in Public Health. 2023;11.
12. Shear MK. Grief and mourning gone awry: pathway and course of complicated grief. Dialogues in Clinical Neuroscience. 2012;14(2):119-28.
13. Prigerson H, Maciejewski P, Reynolds C, Bierhals A, Newsom J, Fasiczka A, et al. Inventory of Complicated Grief: A scale to measure maladaptive symptoms of loss. Psychiatry Research. 1995;59:65-79.
14. Yousefi S, Mayeli P, Ashouri A. Psychometric Properties of the Persian Version of the Inventory of Complicated Grief. Omega. 2024;90(1):302-17.
15. Bech P, Olsen LR, Kjoller M, Rasmussen NK. Measuring well-being rather than the absence of distress symptoms: a comparison of the SF-36 Mental Health subscale and the WHO-Five well-being scale. International Journal of Methods in Psychiatric Research. 2003;12(2):85-91.
16. Farahani AS, Kerdar SH, Ashrafizadeh H, Büssing A, Mehrnoush N, Akbari ME, Karami M, Tajalli S, Mojen LK, Rassouli M. The predictors of spiritual dryness among Iranian cancer patients during the COVID-19 pandemic. Frontiers in Psychology. 2023 Jan 20;13:1024009.
17. First M, Pies R, Zisook S. Depression or bereavement? Defining the distinction. Medscape News: Psychiatry and Mental Health. 2011.
18. von Blanckenburg P, Seifart C, Ramaswamy A, Berthold D, Volberg C. Prolonged Grief in Times of Lockdown During the COVID-19 Pandemic. Omega. 2023:302228231182738.
19. Shahini N, Abbassani S, Ghasemzadeh M, Nikfar E, Heydari-Yazdi AS, Charkazi A, et al. Grief Experience After Deaths: Comparison of Covid-19 and non-Covid-19 Causes. Journal of Patient Experience. 2022;9:23743735221089697.
20. Farahti M. Psychological Impacts of the Spread of Coronavirus in Society. 2020;1(2):207-25.
21. Nielsen MK, Neergaard MA, Jensen AB, Vedsted P, Bro F, Guldin M-B. Predictors of Complicated Grief and Depression in Bereaved Caregivers: A Nationwide Prospective Cohort Study. Journal of Pain and Symptom Management. 2017;53(3):540-50.
22. Stroebe M, Stroebe W, Schut H. Gender differences in adjustment to bereavement: An empirical and theoretical review. Review of General Psychology. 2001;5(1):62-83.
23. Thimm JC, Kristoffersen AE, Ringberg U. The prevalence of severe grief reactions after bereavement and their associations with mental health, physical health, and health service utilization: a population-based study. European Journal of Psychotraumatology. 2020 Dec 31;11(1):1844440.
24. Shear K, Monk T, Houck P, Melhem N, Frank E, Reynolds C, Sillowash R. An attachment-based model of complicated grief including the role

of avoidance. European archives of psychiatry and Clinical Neuroscience. 2007 Dec;257(8):453-61.
25. Shear K, Shair H. Attachment, loss, and complicated grief. Developmental Psychobiology. 2005;47(3):253-67.
26. Tang S, Xiang Z. Who suffered most after deaths due to COVID-19? Prevalence and correlates of prolonged grief disorder in COVID-19-related bereaved adults. Globalization and Health. 2021;17(1):19.
27. Breen LJ, Lee SA, Neimeyer RA. Psychological risk factors of functional impairment after COVID-19 deaths. Journal of Pain and Symptom Management. 2021;61(4):e1-e4.
28. Shear MK, Ghesquiere A, Glickman K. Bereavement and complicated grief. Current Psychiatry Reports. 2013;15:1-7.
29. van Denderen M, de Keijser J, Huisman M, Boelen PA. Prevalence and correlates of self-rated posttraumatic stress disorder and complicated grief in a community-based sample of homicidally bereaved individuals. Journal of Interpersonal Violence. 2016;31(2):207-27.
30. Field NP. Unresolved grief and continuing bonds: An attachment perspective. Death Studies. 2006 Sep 1;30(8):739-56.