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Comparison of the timing and reported causes of divorce before and after COVID-19 pandemic among nurses working in the selected hospitals of Tehran, Iran

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Abstract

Background and Aim: Divorce is a multifactorial phenomenon shaped by the interaction of economic, psychological, interpersonal, and family-related factors. Nurses may be particularly vulnerable to work–family conflict because of irregular shifts, long working hours, and continuous exposure to occupational stress. The COVID-19 pandemic further intensified the occupational, psychological, and economic pressures experienced by this group. This study aims to compare the timing and reported causes of divorce among nurses before and after the onset of COVID-19 pandemic.

Materials and Methods: This descriptive, comparative study was conducted among 128 divorced nurses working in 13 selected hospitals of Tehran, Iran. The hospitals were selected using stratified random sampling. Demographic and occupational characteristics as well as reported causes of divorce were collected using a researcher-developed questionnaire. Data was analyzed by SPSS software version 26. The two study groups were compared with respect to selected factors associated with divorce.

Results: Among the 128 divorced nurses, 43.0% had experienced divorce before the pandemic, whereas 57.0% had experienced divorce after its onset. Before the pandemic, spousal neglect of family life was the most frequently reported primary cause of divorce (41.8%), whereas financial problems ranked first after the onset of pandemic (53.4%). Dissatisfaction with sexual relationships increased from 58.6% before the pandemic to 82.0% after its onset (p = .002). The nurses reporting economic factors also increased from 82.0% to 94.5% (p = .003). Verbal violence perpetrated by spouses was reported by 37.5% of the nurses before the pandemic compared to 37.0% after its onset (p = .008).

Conclusion: Among the nurses included in this study, the pattern of reported causes of divorce differed between the pre-pandemic and post-pandemic periods. Economic factors and dissatisfaction with sexual relationships became more prominent after the onset of pandemic, whereas spousal neglect of family life was the leading reported primary cause of divorce before the pandemic. The findings highlight the need for family-centered support strategies for nurses during major health emergencies, including economic support, mental health services, appropriate workload management, and measures to promote work–family balance.

Keywords: Nurses, divorce, COVID-19, marital relationships, work–family conflict, mental health.

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Introduction

The family is one of the most important sources of emotional and social support, and persistent disruption in marital relationships can have adverse consequences for mental health, quality of life, and social functioning. Divorce is not attributable to a single cause, rather it generally results from the interaction of economic, interpersonal, emotional, sexual, psychological, and social factors. Divorce has also become an important demographic and social issue in many countries. According to the UN Demographic Yearbook, 204,301 divorces were registered in Iran in 2022, corresponding to a crude divorce rate of approximately 2.4 per 1,000 population. At the international level, approximately 700,000 divorces were recorded across the European Union in 2024, corresponding to a crude divorce rate of 1.6 divorces per 1,000, although considerable variation exists between countries [6]. These figures highlight the importance of understanding the factors associated with marital dissolution within specific social and occupational contexts. Nursing is a 24-hour, shift-based profession. Systematic reviews have shown that shift work, working hours, control over work schedules, family support, and the organizational environment are associated with nurses' work–life balance [1–4].

The COVID-19 pandemic intensified these pressures in many healthcare settings. Nurses faced high workloads, prolonged shifts, limited resources, risk of infection, and concerns about transmitting the disease to their families. Aggregated evidence has reported substantial levels of stress, anxiety, depression, sleep disturbances, and burnout among nurses during the pandemic [5–9].

Occupational stress extends beyond the workplace. A systematic review found that occupational stress among healthcare workers was associated with disruptions in family communication, reduced shared activities, and increased household responsibilities [10]. A qualitative study of nurses also reported increased level of fatigue, overtime work, distancing from family members, and difficulties allocating time to spouses and children during the pandemic among them [11].

The quality of marital relationships and sexual satisfaction are also important dimensions of marital stability. Studies conducted during the

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pandemic reported reductions in sexual satisfaction and changes in sexual activity and functioning [10,12]. However, longitudinal studies have shown that the magnitude of these changes is not uniform across couples and may depend on individual characteristics and the types of pandemic-related stressors experienced [13,14]. Reviews examining couple dynamics and parenting have likewise confirmed the heterogeneous effects of the pandemic on family outcomes [15].

Economic stress may further reduce families' capacity to cope with conflict. Evidence concerning financial and marital satisfactions, as well as studies addressing working hours, overtime, and nursing workforce conditions, highlights the role of economic and occupational circumstances in family stability and well-being [16–19].

Despite extensive research on nurses' mental health, burnout, and work–family conflict during the COVID-19 pandemic, evidence regarding changes in the pattern of reported causes of divorce among nurses across the pre-pandemic and post-pandemic periods remains limited. Therefore, the present study aimed to compare the timing and reported causes of divorce among nurses working in the selected hospitals of Tehran, Iran, before and after the onset of COVID-19 pandemic.

Methods

This descriptive comparative study was conducted after obtaining ethical approval from the Ethics Committee of Islamic Azad University of Medical Sciences, Tehran, under ethics approval code: IR.IAU.TMU.REC.1400.327.

Of the 118 hospitals considered for the study, 13 hospitals were selected using stratified random sampling. The selected hospitals included five public hospitals, six private hospitals, and two hospitals affiliated with the Armed Forces. Nurses currently employed in these hospitals, who had a history of divorce, were subsequently identified and assessed for eligibility.

Divorces that had occurred before 2019 were classified into the pre-pandemic group, whereas divorces occurring from 2020 onward were classified into the post-pandemic group. A total of 128 divorced nurses were ultimately included in the study, comprising 55 nurses in the pre-

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pandemic group and 73 nurses in the post-pandemic group.

The inclusion criteria were a history of employment in the nursing profession, at least a bachelor's degree in nursing, a minimum of one year work experience, no self-reported history of mental illness, no previous participation in a similar study, a history of divorce, and willingness to participate in the study. Unwillingness to continue participation was considered the exclusion criterion.

Data were collected using a researcher-developed questionnaire consisting of two sections. The first section collected demographic and occupational information about the nurses. The questionnaire consisted of two sections. The first section assessed participants' demographic and occupational characteristics, while the second section consisted of 25 items assessing factors potentially associated with divorce and the reported causes of divorce. The items addressed marital compatibility, substance use, interpersonal and verbal behaviors, age difference, interference by the spouse's relatives, financial problems, childlessness, unmet marital expectations, and the spouse's physical or psychological illness. Depending on the nature of each question, participants responded using dichotomous options (yes/no), predefined categorical responses, or five-point response options ranging from "very much" to "very little." For some items, additional follow-up questions were presented when a specific response was selected. Finally, in Item 38, participants were asked to identify the issues that had contributed to their divorce in order of priority, thereby allowing the primary and subsequent reported causes of divorce to be determined according to the participants' responses. The questionnaire was developed based on relevant scientific books and research articles and was prepared with guidance from the supervisors and academic advisors.

The questionnaire was designed to collect and record the data required for the study and included targeted questions addressing individual, social, psychological, economic, and marital factors, as well as the primary reported cause of divorce.

The validity of the questionnaire was assessed using content validity. The questionnaire was developed based on relevant scientific literature

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and articles and through consultation with the supervisors and academic advisors. To assess its content validity, the questionnaire was provided to 10 university faculty members for evaluation. Their comments and recommendations were considered, the necessary modifications were made, and the final version of the questionnaire was prepared for use in the study.

The reliability of the questionnaire was assessed using a test–retest procedure. For this purpose, the questionnaire was completed by 10 eligible individuals who met the study criteria but were not included in the final study sample. The same questionnaire was administered to these individuals again after a 10-day interval, and the results obtained from the two administrations were analyzed to assess the stability and reliability of the instrument. The correlation coefficient obtained from the repeated measurements was used to evaluate the reliability of the questionnaire. These 10 individuals were not included in the main study sample. The test–retest reliability analysis demonstrated a high correlation between the two measurements (r =.85, $p < 0.001$), indicating good temporal stability of the instrument.

After data coding, the data were analyzed using SPSS software version 26. Descriptive variables were summarized using absolute and relative frequencies. Comparisons between nurses whose divorces occurred before and after the onset of the COVID-19 pandemic were performed using appropriate categorical-data tests, including the chi-square test and Fisher's exact test where applicable. A $p \leq 0.05$ was considered statistically significant.

The study was conducted in accordance with relevant ethical principles. Participation in the study was voluntary, and participants were free to accept or decline participation without any consequences. Participants were assured that all information obtained during the study would remain confidential and would be used solely for research purposes. Written informed consent was obtained from all participants before data collection.

Results

A total of 128 divorced nurses from 13 selected hospitals were included in the study. Of these, 55 nurses (43.0%) had experienced

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divorce before the COVID-19 pandemic, whereas 73 nurses (57.0%) had experienced divorce after its onset. Women constituted the majority of participants in both groups, accounting for 74.5% of the pre-pandemic group and 86.3% of the post-pandemic group. In both groups, the most common age category was 26–30 years, and a bachelor's degree was the most frequent educational level. Insufficient income was reported in both groups and was more frequently reported during the post-pandemic period.

As shown in Table 1, several individual, social, psychological, and economic factors were reported in relation to divorce during the two study periods. Dissatisfaction with sexual relationships and economic factors were more frequently reported after the onset of pandemic. Verbal violence was reported by the divorced nurses at similar frequencies in the two groups, while the proportions reporting no history of physical illness and no disagreement related to childlessness also differed between the two periods. Some factors, including mutual trust between spouses and adequate income, were reported in only one of the study periods.

Comparison of selected factors between the two study periods showed statistically significant differences. Dissatisfaction with sexual relationships increased from 58.6% before the pandemic to 82.0% after its onset ($p = .002$). Similarly, the proportion of nurses reporting economic factors increased from 82.0% to 94.5% ($p = .003$). Verbal violence was reported by 37.5% of nurses before the pandemic and 37.0% after its onset, and according to the reported statistical analysis, this difference was statistically significant ($p = .008$).

Regarding the primary reported causes of divorce, Table 2 shows a notable change in the distribution of causes between the two periods. Before the pandemic, spousal neglect of family life was the most frequently reported primary cause of divorce,

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accounting for 41.8% of cases. After the onset of pandemic however, financial problems became the leading reported cause, accounting for 53.4% of cases. Infidelity was reported in 25.5% of cases before the pandemic and 21.9% after its onset, whereas interference by relatives accounted for 14.5% and 19.2% of cases, respectively.

Overall, the findings indicated a shift in the pattern of reported factors associated with divorce among nurses. In particular, financial problems and dissatisfaction with sexual relationships were more frequently reported after the onset of pandemic, whereas spousal neglect of family life showed a substantial decline as the primary reported cause of divorce.

Table 1. Most frequently reported factors associated with divorce in individual, social, psychological, and economic domains before and after the COVID-19 pandemic

Domain	Factor	Before the pandemic (%)	After the pandemic (%)	*p*
Individual	No history of physical illness	86.7	78.0	.184
Individual	No disagreement related to childlessness	82.8	91.8	.142
Individual	Mutual trust between spouses	43.0	36.0	.450
Individual	Adequate income	58.0	67.0	.030
Individual	Dissatisfaction with sexual relationship	58.6	82.0	.002
Individual	Verbal violence	37.5	37.0	.008
Individual	No spousal infidelity	68.8	61.7	.386
Social	Family interference in marital life	39.8	43.8	.642
Psychological	Psychological and emotional dissatisfaction with marital expectations	32.8	34.1	.871
Economic	Economic factors	82.0	94.5	.003

Note: The factors presented are those with the highest reported percentages within their respective domains. Domain classification was based on the content of the questionnaire and relevant literature, not on factor analysis. Percentages are calculated within each study group.

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Table 2. Primary reported causes of divorce among nurses before and after the COVID-19 pandemic

Primary reported cause of divorce	Before the pandemic n (%)	After the pandemic n (%)
Spousal neglect of family life	23 (41.8)	4 (5.5)
Infidelity	14 (25.5)	16 (21.9)
Financial problems	10 (18.2)	39 (53.4)
Interference by relatives	8 (14.5)	14 (19.2)
Total	**55 (100.0)**	**73 (100.0)**

Discussion

The present study demonstrated a notable shift in the pattern of reported factors associated with divorce among nurses between the pre-pandemic and post-pandemic periods. Before the COVID-19 pandemic, spousal neglect of family life was the most frequently reported cause of divorce, whereas financial problems became the leading reported cause after the onset of pandemic. In addition, economic factors and dissatisfaction with sexual relationships were reported more frequently in the post-pandemic group. These findings suggest that the relative importance of marital, economic, and interpersonal stressors may have differed across the two periods. However, because the study included only divorced nurses and did not assess the population at risk of divorce in either period, these findings should be interpreted as differences in the pattern of reported causes rather than evidence of a change in the incidence of divorce.

One of the most important findings was the shift in the primary reported cause of divorce from spousal neglect of family life before the pandemic to financial problems after its onset. In the present study, spousal neglect of family life accounted for 41.8% of the primary reported causes before the pandemic, whereas financial problems accounted for 53.4% after the onset of pandemic. This finding is consistent with the findings of Grable, et al. (2007), who reported that

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individuals with greater financial satisfaction were significantly less likely to consider divorce, indicating an important relationship between financial conditions and marital stability [16]. Although this study was conducted nearly two decades ago, the persistence of a similar association in the present study suggests that the relationship between financial conditions and marital stability may remain relevant despite substantial changes in the economic and social context over time. Our findings extend this evidence by showing that financial problems were not only reported as an associated factor, but also became the most frequently reported primary cause of divorce among nurses in the post-pandemic group.

The increase in reported economic factors from 82.0% before the pandemic to 94.5% after its onset further emphasizes the importance of financial conditions. Among nurses, financial pressures may have interacted with demanding work schedules, overtime, and family responsibilities. Bae reported that nurse staffing and work schedules are associated with outcomes such as turnover, job satisfaction, and burnout, while Yildiz et al. found a significant relationship between work-family conflict and nurses' turnover intention [17–19]. Although these studies did not directly examine divorce, their findings support the possibility that occupational and work-family pressures may contribute to difficulties in maintaining stable family relationships. In comparison, the present study specifically identified economic problems as the leading reported cause of divorce after the onset of pandemic. Nevertheless, the cross-sectional and retrospective nature of the present study does not allow to determine causal relationship between pandemic-related economic conditions and divorce.

Another important finding was the significant increase in dissatisfaction with sexual relationships, from 58.6% before the

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pandemic to 82.0% after its onset (p =.002). This finding is consistent with the results of Osur et al. who reported that the proportion of married participants experiencing sexual dissatisfaction increased during the COVID-19 pandemic compared with the pre-pandemic period [12]. Similarly, Qaderi and colleagues in a systematic review and meta-analysis found a significant reduction in sexual satisfaction during the COVID-19 pandemic [13]. In addition, Vigl et al. in a prospective cross-national study, observed a decline in relationship satisfaction during the first year of the pandemic, although changes in sexual satisfaction varied according to whether individuals were cohabiting or non-cohabiting and according to individual vulnerabilities and pandemic-related stressors [14]. The findings of present study are therefore broadly consistent with previous evidence, while suggesting that sexual dissatisfaction may have been particularly prominent among nurses who subsequently experienced divorce.

Several factors may help explain this pattern, including psychological distress, fatigue, reduced privacy, changes in daily routines, increased family responsibilities, and occupational exhaustion. However, the findings of Vigl and colleagues also demonstrate that couples do not respond uniformly to pandemic-related stressors, highlighting the importance of individual and relationship characteristics [14]. Therefore, the present study should not be interpreted as demonstrating that COVID-19 directly caused sexual dissatisfaction or divorce.

Psychological factors showed a relatively modest increase, from 32.8% before the pandemic to 34.1% after its onset. This finding can be considered in light of the substantial psychological burden documented among nurses during the pandemic. Al Maqbali et al. in a systematic review and meta-analysis, reported

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considerable levels of stress, depression, anxiety, and sleep disturbance among nurses during COVID-19 [5]. Similarly, Varghese and colleagues reported a decline in nurses' mental health globally during the pandemic, while Marvaldi and colleagues documented substantial anxiety, depression, trauma-related symptoms, and sleep disorders among healthcare workers [6,7]. Galanis and colleagues also identified a considerable burden of burnout among nurses during the pandemic [8]. These findings are generally consistent with the present study, in which psychological factors remained an important component of the reported factors associated with divorce. However, the relatively small difference between the two study periods in the present study suggests that psychological factors may have remained important rather than showing a marked change in their reported frequency.

In the present study, verbal violence was reported at similar descriptive frequencies before and after the pandemic (37.5% and 37.0%, respectively). Although the difference in percentages was small, the reported statistical analysis indicated a significant difference (p = .008). This result should therefore be interpreted primarily according to the statistical analysis rather than the magnitude of the descriptive difference. Piquero and colleagues in a systematic review and meta-analysis reported evidence of increased domestic violence during the COVID-19 pandemic [20]. The findings of present study do not show a similar descriptive increase in verbal violence among divorced nurses. This difference may reflect the specific occupational and demographic characteristics of the study population, as well as the fact that the present study examined verbal violence specifically within a group of nurses who had experienced divorce.

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Infidelity showed a modest decline from 25.5% before the pandemic to 21.9% after its onset, whereas interference by relatives increased from 14.5% to 19.2%. These differences illustrate that marital factors did not change uniformly across the two periods. Sentieiro and colleagues in a systematic review of couples and parenting during the COVID-19 pandemic emphasized that relationship and family experiences varied according to relationship characteristics, parenting demands, social context, and available resources [15]. The pattern observed in the present study is consistent with this broader evidence that the effects of pandemic on family relationships were heterogeneous rather than uniform.

Occupational stress among nurses may also have affected family relationships indirectly through fatigue, work-family conflict, and reduced availability for family members. Yarifard and colleagues in a study of nurses in northwest Iran found above-average levels of work-family conflict and burnout, and reported a significant and positive relationship between work-family conflict and dimensions of burnout [3]. These findings are particularly relevant to the present study because both investigations involved nurses in Iran and highlight the interaction between occupational demands and family life. Similarly, Yavaş Çelik and Kiliç, in a qualitative study of nurses during the COVID-19 pandemic, reported family relationship breakdown and difficulties with intra-familial coping, with nurses describing high level of distress related to separation from family members [11]. The present study complements these findings by demonstrating that, among nurses who experienced divorce, economic problems and sexual dissatisfaction became more prominent factors after the onset of pandemic.

The findings are also supported by the systematic review of Tekin and colleagues,

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who examined the effects of occupational stress on healthcare workers' family members before and during COVID-19. Their review identified consequences involving mental health, family relationships, quality of life, social life, and practical aspects of family functioning [10]. Together with the findings of present study, this evidence suggests that occupational stress may extend beyond the workplace, even influencing family relationships. However, the present study provides a different perspective, because it focused specifically on divorced nurses and examined changes in the reported factors associated with divorce across two time periods.

From a practical perspective, the findings indicate that support programs for nurses during future health emergencies should address both occupational and family-related needs. Billings and colleagues, in a systematic review and qualitative meta-synthesis, identified multiple forms of support considered important by frontline healthcare workers during COVID-19 and previous pandemics, while Wong and colleagues reported evidence regarding interventions aimed at reducing burnout and improving nurses' mental health [24,21]. In light of the present findings, such interventions could be complemented by family-centered measures, including more appropriate shift scheduling, reduction of excessive overtime, greater flexibility in work schedules, confidential psychological support, and access to individual or couples' counseling. Since economic problems emerged as the leading reported cause of divorce in the post-pandemic group, employment-related and economic support may also warrant consideration in future crisis-response programs.

Overall, the present findings reinforce the multifactorial nature of divorce among nurses. The pattern of reported factors differed between the pre-pandemic and post-

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pandemic periods, particularly with respect to financial problems, sexual dissatisfaction, and the primary cause of divorce. The findings are broadly consistent with previous research demonstrating the effects of financial stress, occupational strain, psychological distress, and pandemic-related disruption on family and intimate relationships. However, the present study adds an occupationally specific perspective by showing that, among nurses who had experienced divorce, financial problems replaced spousal neglect of family life as the most frequently reported cause of divorce after the onset of pandemic. These findings should be interpreted cautiously, as the study design does not permit causal conclusions or estimation of changes in the overall incidence of divorce.

This study has several limitations. The use of self-reported data may have introduced recall and reporting bias, particularly regarding sensitive issues such as sexual dissatisfaction, infidelity, and verbal violence. In addition, because only divorced nurses were included and the population at risk of divorce was not assessed, the findings represent distribution of the reported causes among the study participants rather than population-level divorce rates. Finally, the study was conducted in selected hospitals of Tehran, which may limit the generalizability of its findings to nurses in other healthcare settings or regions.

Conclusion

Among the nurses included in this study, the pattern of reported causes of divorce differed between the pre-pandemic and post-pandemic periods. Spousal neglect of family life was the most frequently reported cause of divorce before the pandemic, whereas financial problems became the leading reported cause after its onset. Dissatisfaction with sexual relationships and economic factors were also more frequently reported after the onset of pandemic.

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The findings highlight the multifactorial nature of divorce and suggest that major health emergencies may alter the relative prominence of different occupational, economic, psychological, and marital stressors. COVID-19 cannot be considered a direct cause of divorce based on the present study, but the pandemic may have increased vulnerability within marital relationships by intensifying economic, occupational, psychological, and family-related pressures. Future longitudinal studies with larger samples, representative sampling, and clearly defined populations at risk of divorce are recommended to determine whether the observed differences reflect broader changes in divorce incidence and to identify the mechanisms linking occupational and pandemic-related stressors with marital instability.

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Conflict of Interest

The authors declare no conflict of interest.

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