RESEARCH ARTICLE

Missed nursing care and its contributing factors in different domains at tertiary care hospitals, Karachi

Tariq Aziz[1], Amjad Ali[2], Arshad Nawaz[3]

Abstract

Objective: To assess the frequency, types and contributing factors of missed nursing care among registered nurses in a tertiary care setting.

Method: The analytical cross-sectional study was conducted from May to November 2022 at the Dow University Hospital, Karachi, and Dr Ruth Katherina Martha Pfau Civil Hospital, Karachi, and comprised nurses registered with the Pakistan Nursing and Midwifery Council. Data was collected using a validated tool. Data was analysed using SPSS 23.

Results: Of the 232 nurses, 127(54.7%) were males, 105(45.3%) were females, 123(53%) were aged 30-39 years, and 73(31.5%) had work experience of 1-5 years. Nursing care components neglected by the nurses were patient bathing 127(54.7%), attending care conference 108(46.6%) and focussed reassessment 100(43.1%). Factors responsible for missed care were manpower resources identified by 152(65.5%) nurses, material resources by 141(60.8%), and communication factors identified by 84(36.2%).

Conclusion: Various nursing care components were found missing during patient hospitalisation. Major reason for missed care was identified by the nurses as lack of manpower resources.

Key Words: Missed nursing care, Contributing factors, Miss care.

(JPMA 75: 238; 2025) **DOI: https://doi.org/10.47391/JPMA.20048**

Introduction

Patient safety is a crucial global health priority, encompassing a framework of activities designed to establish cultures and processes that ensure patient safety in healthcare settings.[1] Nurses, being the largest group of healthcare professionals, play a vital role in directly caring for patients and actively contributing to the assessment and promotion of patient safety in healthcare settings.[2]

Missed nursing care (MNC) compromises nursing standards, and reducing its occurrence is essential for ensuring patient safety and maintaining the quality of patient care.[3] It refers to the components of nursing care that are unintentionally not provided to the patients.[4] Providing comprehensive nursing care is an essential component of patient care. It plays a pivotal role in the recovery and rehabilitation processes, ensuring that patients receive the necessary support and attention to regain their health and wellbeing.[5] Nurse workload and human resource shortages are common factors that frequently affect nursing care, exacerbating the problem of missed care.[6]

According to a Korean study, the top five MNC items were emotional support with a mean score of 2.20±0.91, followed by documentation, hand-washing, attending an interdisciplinary conference, and turning a patient in on time. Communication and material resources were followed by labour resources as the reasons for not receiving care. The study also found that missed nursing care had positive association with patient fall, injury and medication error, while it was negatively associated with patient safety.[7]

Additionally, a study in the Czech Republic found that the most common MNC activities were core nursing care tasks: ambulation three times daily or as prescribed (36.3%), participating in interdisciplinary rounds (26.3%), providing emotional support to the patients and their families (22.8%), repositioning patients every 2 hours (16.3%), patient education (13.6%), and oral care (13%).[8] A study in Brazil found that MNC was linked to various factors, such as budget cuts, interruptions, the demands related to patient acuity and numbers, high staff turnover, labour and resource shortages, and inadequate staffing levels.[9]

[1-3]Dow Institute of Nursing and Midwifery, Dow University of Health Sciences, Karachi, Pakistan.

Current Affiliation (Author-1): College of NUrsing Male Korangi Karachi

Current Affiliation (Author-2): National institue of Cardiovascular diseases Karachi

Correspondence: Amjad Ali. **Email:** amjadali33398@yahoo.com

ORCID ID: 0000-0002-9071-7261

Submission complete: 04-02-2024 **First Revision received:** 19-04-2024

Acceptance: 13-11-2024 **Last Revision received:** 12-11-2024

Further, a study in Iran reported that MNC could lead to various patient harms, including urinary tract infections (UTIs), bedsores, medication errors, compromised quality of care, patient readmissions, and patient falls.[10] An Australian study linked increased mortality to MNC.[11]

In developing countries, the concept of MNC has not been extensively studied. Only one study[12] has been conducted in Pakistan to date, highlighting the need for further research. The current study was planned to assess the frequency, types, and contributing factors of MNC in an urban, tertiary care setting.

Subject and Methods

The analytical cross-sectional study was conducted from May to November 2022 at the Dow University Hospital (DUH), Karachi, and Dr Ruth Katherina Martha Pfau Civil Hospital, Karachi (CHK). After approval from the ethics review board of the Dow University of Health Sciences (DUHS), Karachi, the sample size was worked out using the Power Analysis & Sample Size 232 Nurses Software (PASS) version 21[13] with 80% power to detect a Pearson correlation of 0.408[14] between the total domain of MNC and the labour resource factor of MNC scores among nurses, with P=0.05. The sample was raised using purposive sampling technique after permission from the respective hospital administrations and written consent from the participants. Bedside nurses who were registered with the Pakistan Nursing and Midwifery Council (PNMC) were included, while nurses at the management level, like nursing managers, superintendents and supervisors, nurses working in outpatient departments (OPDs) and those who were on leave during the data-collection period were excluded.

The participants were individually approached at their workplaces, and were provided a structured, validated, self-reporting questionnaire. The primary investigator cross-checked the nurses' responses with patient files, and verbally confirmed the information with the patients to minimise chances of bias.

Data was collected using the MISSCARE tool, which has a high reliability[14] (0.86 for Part-1 and 0.89 for Part-2) and validity (0.89).[15] The questionnaire was translated into Urdu with the assistance of a language expert. The tool comprised three parts: Part-1 included demographic variables, Part-2 consisted of 24 elements of nursing care divided into 9 domains, and Part-3 comprised 17 items of contributing factors divided into 3 domains.

In Part-2, a 3-point Likert scale ranging from 1 = never missing to 3 = always missing was used to evaluate nursing care. Mean scores for each domain were converted into percentages. Scores <60% indicated low MNC, while scores >60% indicated high MNC. In Part-3, a –point Likert scale ranging from 1= not a reason to 3 = major reason was used to score the responses. Mean scores for each domain were converted into percentages. Scores <60% were considered ineffective reasons for MNC, while scores >60% were deemed effective reasons.

Data was analysed using SPSS 26. Data was expressed as frequencies and percentage. P<0.05 was considered significant.

Results

Of the 232 nurses, 127(54.7%) were males, 105(45.3%) were females, 123(53%) were aged 30-39 years, and 73(31.5%) had work experience of 1-5 years (Table 1).

Within the domain of patient assessment, the highest MNC always missed was focussed reassessment 100(43.1%), while glucose monitoring was never missed by 186(80.2%) nurses. Nursing care components neglected by the nurses were patient bathing 127(54.7%) and attending care conference 108(46.6%) (Table 2).

The relationship between communication and documentation was positive and significant. (r=0.227, p=0.001). Labour resources were positively and significantly correlated with patient assessment (r=0.274, p=0.001), feeding (r=0.281, p=0.001), hygiene (r=0.314, p=0.001), mobilisation (r=0.247, p=0.001), and response

Table-1: Demographic characteristics (n=232).

Participants characteristics	N = 232	%
Hospital:		
Dow University Hospital Karachi	93	40.1
Dr. Ruth KM Pfau Civil Hospital Karachi	139	59.9
Age (Years):		
18-29years	77	33.2
30-39years	123	53.0
≥ 40 years	32	13.8
Gender:		
Male	127	54.7
Female	105	45.3
Marital status:		
Married	165	71.1
Unmarried	67	28.9
Experience		
<1year	14	6.0
1-5years	73	31.5
5-10years	71	30.6
>10years	74	31.9
Working Area		
Critical Area	92	39.7
Medical Unit	85	36.6
Surgical Unit	55	23.7

Table-2: Missed nursing care domains.

Missed Nursing Care Domains	Never Missed		Occasionally Missed		Always Missed	
	N	%	N	%	N	%
Patient Assessment (5 items)						
Vital signs assessed as ordered	138	59.5	62	26.7	32	13.8
Monitoring fluids intake- out put	122	52.6	52	22.4	58	25.0
Monitoring e glucose level as ordered	186	80.2	35	15.1	11	4.7
Patient assessments performed each shift	74	31.9	95	40.9	63	27.2
Focussed reassessment according to patient condition	59	25.4	73	31.5	100	43.1
Medication Administration (4 Items)						
Medication administered within 30 min before and after scheduled time	195	84.1	32	13.8	5	2.2
IV/central line care and assessments according to hospital policy	143	61.6	62	26.7	27	11.6
Medication request acted on within 15 min	86	37.1	102	44.0	44	19.0
Assess effectiveness of medication	75	32.3	75	32.3	82	35.3
Patient Education (3 Items)						
Health education to patient family	99	42.7	93	40.1	40	17.2
Patient discharge teaching	79	34.1	99	42.7	54	23.3
Patient teaching about illness, tests and diagnostic studies	77	33.2	72	31.0	83	35.8
Feeding (2 items)						
Meals setup for those patients who feed by oral/Ryle tube	135	58.2	67	28.9	30	12.9
Feeding patient when the food is still warm	58	25.0	95	40.9	79	34.1
Hygiene (4 Items)						
Patient bathing	29	12.5	76	32.8	127	54.7
Skin care/wound care	77	33.2	115	49.6	40	17.2
Patient Mouth care	83	35.8	63	27.2	86	37.1
Hand washing for nurses	160	69.0	52	22.4	20	8.6
Patient Mobilization (2 Items)						
Ambulation three time per day or as ordered	67	28.9	118	50.9	47	20.3
Turned patient every 2 hours	46	19.8	100	43.1	86	37.1
Response To Patient Needs (2 Items)						
Response to call light/patient's call is provided within 5 min	115	49.6	104	44.8	13	5.6
Assist with toileting needs within 5 min of request	52	22.4	87	37.5	93	40.1
Attend Inter Disciplinary Conference						
Attend inter disciplinary care conference when ever held	43	18.5	81	34.9	108	46.6
Documentation of All Necessary Data (1 Item)						
Documentation for all necessary data	186	80.2	39	16.8	7	3.0

IV: Intravenous.

to patient need (r=0.223, p=0.001) domains. Similarly, material resources were associated with assessment (r=0.155, p=0.018), health education (r=0.173, p=0.008), feeding (r=0.142, p=0.031), hygiene care (r=0.146, p=0.027), and mobilisation (r=0.275, p=0.001) (Table 3).

The majority of CHK nurses 89(76.7%) reported high MNC level compared to 27(23.3%) DUH nurses. Further,

Table 3: Correlation between the nurses' scores on the factors of missed nursing care and the total number of missed care domains.

Missed nursing care domains	Missed factors score					
	Communication		Material resource		Labour resource	
	r	P	r	P	r	P
Patient assessment	.055	.402	.155*	.018*	.274	.000**
Health Education Patient	.053	.419	.173**	.008**	.103	.118
Medication Administration	.067	.313	.051	.439	.081	.219
Feeding	.046	.482	.142*	.031*	.281	.000**
Hygiene Care	.077	.245	.146*	.027*	.314	.000**
Mobilization	.096	.146	.275	.000**	.247	.000**
Response to Patient Needs	.019	.773	.136*	.039*	.223	.001**
Attended Conferences	.074	.261	.035	.601	.055	.400
Documentation	.227*	.000**	.057	.386	.040*	.546

(*) statistically significant at p value <0.05
(**) highly statistically significant at p value ≤ 0.001

Table-4: Categorisation of missed nursing care levels and factors.

1.Level of missed nursing care	Dow University hospital		Dr. Ruth KM Pfau civil hospital Karachi	
	N	%	N	%
a Low Missed Nursing Care	66	56.9	50	43.1
b.High Missed Nursing Care	27	23.3	89	76.7

2.Categories of factors responsible for Missed Nursing care	Labour		Material		Communication factors	
	N	%	N	%	N	%
a. Effective	152	65.5	141	60.8	84	36.2
b. Non-effective	80	34.5	91	39.2	148	63.8

66(56.9%) DUH nurses reported low MNC compared to 50(43.1%) CHK nurses.

Factors responsible for MNC were manpower resources identified by 152(65.5%) nurses, material resources by 141(60.8%), and communication factors identified by 84(36.2%) (Table 4).

Discussion

The current study showed that majority of the participants were aged 30-39 years. Consistent findings were observed in studies conducted in Egypt[14] and the United States.[16] However, a study in Italy[17] reported contradictory findings.

The current study revealed that more than half of the participants were male. This is in contrast with previous studies conducted in Sweden[18] and Australia.[19] Furthermore, the study reported that the highest number of participants had working experience >10 years. This is in concordance with the findings of studies done in Iceland[20] and Pakistan.[12]

The study found similar MNC trends in both hospital settings. Missed elements included patient bathing, missed conferences, inadequate focussed reassessment, and assistance with patient toilet needs. These results are consistent with some other studies also.[12,14] Furthermore, components of nursing care that were least missed in the current study were medication administration, glucose monitoring and data documentation. Similar findings were reported by studies conducted in Spain[21] and Indonesia.[22]

In the current study, communication was not reported as major reason for MNC by the nurses. This is supported by a European study[23], while the study in Egypt reported contrasting results.[14] Concerning the material resources, the present study reported significant and positive relationship between all MNC domains except medication administration, conference participation and documentation. This result is a mirror image of an Egyptian study.[14] Contrary results have been reported by another Egyptian study.[24]

Moreover, the manpower factor showed significant and positive relationship with most of MNC domains. The result is supported by studies done in Egypt[14], Australia [19] and China.[25]

The current study has limitations of uneven sample distribution between CHK and DUH. Additionally, the use of Miss care instrument, which covers basic nursing care components and reasons for missed care, may not fully represent all aspects of nursing care. Qualitative and interventional studies need to be conducted for a better understanding of MNCs with the aim of finding a way to eliminate them completely.

Conclusion

Basic nursing care components were missed in both tertiary care hospitals. MNC was less frequent at DUH compared to CHK. Regarding the factors behind MNC, staff shortage was identified as the most significant reason in both hospitals, followed by unavailability of material resources, and communication factors.

Disclaimer: None.

Conflict of Interest: None.

Source of Funding: None.

References

1. Astier-Peña MP, Bianchi VM, Casalengua MLT, Blanco SA, Ortiz JMB, García MF. [The Global Patient Safety Action Plan 2021-2030: Identifying actions for safer primary health care]. Aten Primaria. 2021; 53:102224. doi: 10.1016/j.aprim.2021.102224.
2. Longhini J, Papastavrou E, Efstathiou G, Andreou P, Stemmer R, Ströhm C, et al. Strategies to prevent missed nursing care: An international qualitative study based upon a positive deviance approach. J Nurs Manag. 2021; 29:572-83. doi: 10.1111/jonm.13176.
3. Imam A, Obiesie S, Gathara D, Aluvaala J, Maina M, English M. Missed nursing care in acute care hospital settings in low-income and middle-income countries: a systematic review. Hum Resour Health. 2023; 21:19. doi: 10.1186/s12960-023-00807-7.
4. Duhalde H, Bjuresäter K, Karlsson I, Bååth C. Missed nursing care in emergency departments: A scoping review. Int Emerg Nurs. 2023; 69:101296. doi: 10.1016/j.ienj.2023.101296.
5. Abere Y, Biresaw H, Misganaw M, Netsere B, Adal O. Missed nursing care and its associated factors in public hospitals of Bahir Dar City, Northwest Ethiopia: a cross-sectional study. BMJ Open. 2024; 14:e081647. doi: 10.1136/bmjopen-2023-081647.
6. Kim S, Chae SM. Missed nursing care and its influencing factors among neonatal intensive care unit nurses in South Korea: a descriptive study. Child Health Nurs Res. 2022; 28:142-53. doi: 10.4094/chnr.2022.28.2.142.
7. Min A, Yoon YS, Hong HC, Kim YM. Association between nurses' breaks, missed nursing care and patient safety in Korean hospitals. J Nurs Manag. 2020; 28:2266-74. doi: 10.1111/jonm.12831.
8. Gurková E, Mikšová Z, Šáteková L. Missed nursing care in hospital environments during the COVID-19 pandemic. Int Nurs Rev. 2022; 69:175-84. doi: 10.1111/inr.12710.
9. Dutra CKDR, Guirardello EB. Nurse work environment and its impact on reasons for missed care, safety climate, and job satisfaction: A cross-sectional study. J Adv Nurs. 2021; 77:2398-406. doi: 10.1111/jan.14764.
10. Janatolmakan M, Khatony A. Explaining the consequences of missed nursing care from the perspective of nurses: a qualitative descriptive study in Iran. BMC Nurs. 2022; 21:59. doi: 10.1186/s12912-022-00839-9.
11. Willis E, Brady C. The impact of "missed nursing care" or "care not done" on adults in health care: A rapid review for the Consensus Development Project. Nurs Open. 2022; 9:862-71. doi: 10.1002/nop2.942.
12. Ali M, Memon KN, Chouhan S, Almas S, Heeralal. Factors Associated with Missed Nursing Care at a Tertiary Level Public Sector Hospital (Nurses' Perspective). J Pharm Res Int. 2021; 33:22-9. DOI: 10.9734/jpri/2021/v33i47B33092
13. Pass N. Power Analysis and Sample Size Software; NCSS LLC: Kaysville, UT, USA, 2021.
14. Abd El-Hamed Diab GM, Ebrahim RMR. "Factors Leading to Missed Nursing Care among Nurses at Selected Hospitals." Am J Nurs Res.2019; 7:136-47. doi: 10.12691/ajnr-7-2-5
15. Kalisch BJ, Williams RA. Development and psychometric testing of a tool to measure missed nursing care. J Nurs Adm. 2009; 39:211-9. doi: 10.1097/NNA.0b013e3181a23cf5.
16. Duffy JR, Culp S, Padrutt T. Description and Factors Associated With Missed Nursing Care in an Acute Care Community Hospital. J Nurs Adm. 2018; 48:361-7. doi: 10.1097/NNA.0000000000000630.
17. Bagnasco A, Catania G, Zanini M, Dasso N, Rossi S, Aleo G, et al. Are data on missed nursing care useful for nursing leaders? The RN4CAST@IT cross-sectional study. J Nurs Manag. 2020; 28:2136-45. doi: 10.1111/jonm.13139.
18. Andersson I, Eklund AJ, Nilsson J, Bååth C. Prevalence, type, and reasons for missed nursing care in municipality health care in Sweden - A cross sectional study. BMC Nurs. 2022; 21:95. doi: 10.1186/s12912-022-00874-6.
19. Blackman I, Palese A, Danielis M, Vryonides S, Henderson J, Willis E, et al. Quali sono le ragioni delle Missed Care? Risultato di uno studio bilaterale. Ragioni delle Missed Care. Ig Sanita Pubbl. 2020; 76:355-69.
20. Bragadóttir H, Kalisch BJ. Comparison of reports of missed nursing care: Registered Nurses vs. practical nurses in hospitals. Scand J Caring Sci. 2018; 32:1227-36. doi: 10.1111/scs.12570.
21. Juvé-Udina ME, González-Samartino M, López-Jiménez MM, Planas-Canals M, Rodríguez-Fernández H, Batuecas Duelt IJ, et al. Acuity, nurse staffing and workforce, missed care and patient outcomes: A cluster-unit-level descriptive comparison. J Nurs Manag. 2020; 28:2216-29. doi: 10.1111/jonm.13040.
22. Utomo MT, Sampurna MTA, Melisa M, Permana PBD, Angelo I, Etika R, et al. Nurse workload, missed nursing care, and the contributing factors in the Neonatal Intensive Care Unit in a limited resource setting: A case from Indonesia.1F1000Research.2022; 11:468. doi.org/10.12688/f1000research.109105.
23. Ausserhofer D, Zander B, Busse R, Schubert M, De Geest S, Rafferty AM, et al. Prevalence, patterns and predictors of nursing care left undone in European hospitals: results from the multicountry cross-sectional RN4CAST study. BMJ Qual Saf. 2014; 23:126-35. doi: 10.1136/bmjqs-2013-002318.
24. Gabr H, El-Shaer A. Factors affecting missed nursing care and its relation to nurses' workflow in general medical and surgical units. IOSR J Nurs Health Sci. 2020; 9:21-33. doi: 10.9790/1959-0903052131.
25. Du H, Yang Y, Wang X, Zang Y. A cross-sectional observational study of missed nursing care in hospitals in China. J Nurs Manag. 2020; 28:1578-88. doi: 10.1111/jonm.13112.

AUTHORS' CONTRIBUTIONS:
TA: Concept, design, drafting, data collection and compilation.
AA: Data interpretation, revision and final approval.
AN: Data acquisition, collection, drafting and literature review.