

A study to assess the impact of covid-19 on selected activities of daily living among staff nurses working in selected hospitals, Jaipur, Rajasthan

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Abstract

Context: In late December 2019, Chinese health authorities reported an outbreak of pneumonia of unknown origin in Wuhan, Hubei Province. A few days later, the genome of a novel corona virus was released and the disease named as COVID -19. On January 30, 2020 the World Health Organization (WHO) declared the outbreak as a Public Health Emergency of International Concern. WHO declared the COVID-19 outbreak a pandemic on 11 march 2020. Since its discovery, the virus has spread globally, causing millions of deaths and having an enormous impact on our health systems and economies. Hence the investigator has taken up this study with the objective of assessing the impact of COVID-19 on Staff Nurses.

Aim: This study is intended to assess the impact of COVID-19 on selected Activities of Daily Livings among staff nurses working in selected hospitals, Jaipur, Rajasthan.

Methods: A quantitative research approach and descriptive survey research design were used and the setting was selected hospitals, Jaipur, Rajasthan. A total of 100 Staff Nurses of 25-60 years age group were selected by total enumeration sampling technique. The checklist was used to assess the impact of COVID-19 on selected ADLs among Staff Nurses. The results were described by using descriptive and inferential statistics through Kuder- Ridhardson formula 20 (KR-20) and chi-square test.

Results: The findings showed Majority of Staff Nurses 84 (84%) have profound impact, 13 (13%) have

moderate impact and 3 (3%) of them had mild impact on ADLs due to COVID-19. The mean score of participants is 19.15, median 20, mode 20, and mean percentage of 79.79, was obtained for impact of COVID-19 among Staff Nurses' ADLs. This indicates that COVID-19 had average impact on Staff Nurses' ADLs and indicates that the data are homogenous in nature.

Conclusions: The study revealed significant impact on Activity of Daily Livings (ADLs) of staff nurses.

Keywords: COVID-19, Impact, SARS, ADLs, staff nurses.

Introduction

The World Health Organization (WHO) declared Corona virus Disease 2019 (COVID-19) to be a pandemic when it became clear that the illness was severe and that it was spreading quickly over a wide area. COVID-19 pandemic has rapidly disrupted our everyday lives. We do not need to get sick to be rocked by a radical change in reality. Uncertainty about the future, fear for ourselves and our loved ones, and stressful difficulties, unstable finances, feelings of isolation, and loss, are all around nurses. As frontline health care professionals, nurses are the true heroes who risk everything to care for patients. They are an important part of health systems, as they handle this crisis and do the right thing, even in the face of fear.

The COVID-19 pandemic has impacted on our day-to-day living and this has brought challenges to nurse's lifestyle, health and wellbeing. We should consider the risk of transmission outside hospital settings. After work, nurses have contact with other people and they have the same infection risk as the general population. Health care workers may potentially be infected because of their exposure to COVID-19 patients during work shifts and daily routine activities so their ADLs

(Activities of Daily Livings) affected tremendously. This study assesses the impact on the ADLs due to COVID-19.

Need of study

The investigator in his own life experience has witnessed and experienced that there is such a great level of change in activities of daily living among nurses during COVID-19 at their working place and home. These changes affected their life tremendously. The investigator, during his duty in COVID-19 survey in mid of 2020, felt that his hygiene pattern, diet pattern, sleep pattern, routine exercise, communication, shopping has affected. Hence the investigator has taken up this study with the objective of assessing the impact of COVID-19 on selected activities of daily living among staff nurses and also to seek its association with background variables. So due to novelty of the problem, intensity of the problem and investigator's own life experiences, the study is essential.

Review of literature

A cross sectional study was conducted in March 2020 regarding COVID-19 and insomnia in nurses in Wuhan, china among 1794 nurses from tertiary level hospitals. The prevalence of insomnia was 52.8 percent. Insomnia was predicted by gender, working experience, the degree of fear of COVID19, fatigue and perceived stress. Nurses sleep quality, which will enhance the physical and mental conditions of nurses and promote the quality of patient care.¹⁵

The American Nurses Association (ANA; 2020) conducted a survey in March–April 2020 of 32,000 nurses and found that 87% feared going to work, 36% have cared for an infectious patient without having adequate PPE, and only 11% believed they were well-prepared to care for patients with COVID-19. With

approximately 600 health care workers' deaths in the United States (Farley, 2020), and working directly with infected patients (and not always protected by PPE) putting them at risk for infection, they fear for their health, the health of family members, and other patients. As a result, some nurses have been fired for refusing to work under certain conditions, such as scarcity of PPE, and others have made the decision to leave the profession (ANA, 2020).¹⁶

During the COVID-19 pandemic, frontline nurses have faced extraordinary personal and professional challenges. A cross-sectional survey was conducted at COVID-19 hospital in Shanghai, China at the peak of the pandemic, i.e. about 2 months after the onset of the outbreak from February to April 2020. Findings revealed burnout in 6.85% of nurses. Of 336 respondents, 87

(25.89%) had a high level of emotional exhaustion, 61 (18.15%) had a high level of depersonalization, and 100 (29.76%) had a low level of personal accomplishment.¹⁷

Materials and Methods

The research approach adopted for this study was quantitative research approach. The research design used in this study was Descriptive survey research design is used to assess the impact of COVID-19 on selected Activities of Daily Living among Staff Nurses working in selected hospitals, Jaipur, Rajasthan.

The target population was staff nurses and a sample size of 100 staff nurses was selected using a total enumeration sampling technique.

Two tools were used:

- Structured questionnaire
- Checklist

Interpretation of Impact of COVID-19 on ADLs

The scoring was categorized in 3 levels as follows:

Table 1: Distribution of Impact score of COVID-19 on ADLs

Maximum score-24

Sn.	Impact of COVID-19 on ADLs	Score	Percentage
1	Profound	17-24	≥ 71%
2	Moderate	13-16	51-70%
3	Mild	0-12	0-50%

The tools were validated by 7 experts from nursing including 1 Statistician and a pilot study with 10 staff nurses confirmed feasibility. A pilot study sample was taken for computing reliability through the Kuder and Richardson Formula 20 (KR20). The reliability of the test was found to be 'r'=0.82 for the impact checklist. The time is given for completing the structured questionnaire and Checklist ranged from 40-45 minutes. Inferential statistics; chi-square test used to find out association between the impact of COVID-19 on selected Activities of Daily Livings during COVID-19 and selected demographic variables among Staff Nurses.

Table 2: Frequency and percentage distribution of socio demographical variables for staff nurses, N=100

Demographical variables		Frequency {f}	Percentage {% }
Age (years)	25-35	43	43
	36-45	30	30

	46-55	21	21
	56 years and above	6	6
Gender	Male	67	67
	Female	33	33
Type of family	Joint	37	37
	Nuclear	63	63
Experience in years in nursing services	Up to 5	12	12
	6-10	34	34
	11-15	24	24
	16 years and above	30	30
Professional qualification	GNM	81	81
	B. Sc. Nursing	19	19
	M. Sc. Nursing	0	0
	M. Phil/ Ph. D.	0	0
Area of working during COVID-19	COVID-19 ward	69	69
	COVID-19 OPD	13	13
	COVID-19 ICU	18	18

As shown in table 2, that the majority of Staff Nurses 43 (43%) have found between 25-35 years age group whereas 30 (30%) Staff Nurses are in the age group of between 36 to 45years, 21 (21%) were found in the age group of between 46 to 55 years and 6 (6%) Staff Nurses belonged to the age group of 56 years and above category. The majority of Staff Nurses 67 (67%) were male respectively 33 (33%) were female.

The maximum Staff Nurses 63 (63%) belongs to single family respectively 37 (37%) belongs to joint family. The maximum number of 34 (34%) have 6-10 years of experience in nursing services, 30 (30%) respondents have 16 years and above experience in nursing services, 24 (24%) respondents have 11-15 years of experience in nursing services and least of the respondents 12 (12%) have up to 5 years of experience in nursing services.

The majority of Staff Nurses i.e. 81 (81%) were found with qualification GNM and 19 (19%) Staff Nurses were found in B.Sc. Nursing Group. Whereas no one Nurse belonged to M. Sc. Nursing and M.Phil. / Ph.D. group in both categories. The majority of Staff Nurses 69 (69%) did their duty in COVID-19 ward, 18 (18%) Staff Nurses had performed their duty in COVID-19 ICU and least of the respondents 13 (13%) have did their duty in COVID-19 OPD.

Table 3: Frequency and percentage distribution of impact of covid-19 on selected ADLS among staff nurses, (n=100)

Sn.	Impact of COVID-19 on ADLs	Frequency	Percentage
1	Profound ($\geq 71\%$)	84	84%
2	Moderate (50%-70%)	13	13%
3	Mild ($\leq 50\%$)	3	3%

Table 3 shows the impact on ADLs of Staff Nurses due to COVID-19 in selected hospitals Jaipur. In which Majority of Staff Nurses 84 (84%) have profound impact, 13 (13%) have moderate impact and 3 (3%) of them had mild impact on ADLs due to COVID-19.

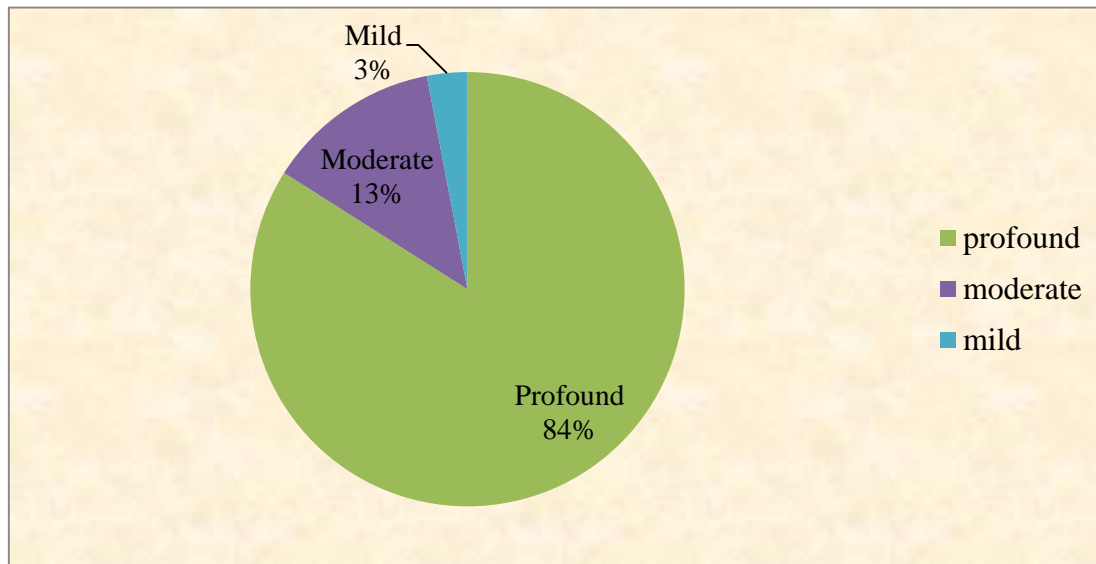


Figure 1: The pie diagram showing distribution of Impact of COVID-19 on selected ADLs among staff Nurses (N=100)

Table 4: Percentage of staff nurses' ADLS impacted due to covid-19, (N=100)

Sn.	Selected ADLs	Total score	Obtained score	% of Staff Nurses' ADLS impacted
1	Bathing frequency increase	100	82	82
2	Hand wash frequency increase at duty	100	97	97
3	Hand wash frequency increase at home	100	94	94
4	Stopping hand shake with colleagues	100	85	85
5	Start cleaning and disinfecting surfaces and shared equipment	100	94	94
6	Wearing mask when go outside from home	100	97	97
7	Washing duty uniform frequency increase	100	94	94
8	Night Sleep period time decrease	100	36	36
9	Sleep onset latency period increase	100	52	52
10	Bed time schedule disturbance	100	39	39
11	Avoidance for trips, picnics	100	94	94
12	Daily habit of purchasing food items/vegetables decreased	100	85	85

13	Starting sanitization of shopping items	100	91	91
14	Maintaining of 6 feet distance from other shoppers	100	91	91
15	Increase budget of food and grocery than luxury items	100	72	72
16	Payment method for shopping change (cash to digital payment)	100	75	75
17	Exercises/morning walk schedule affected	100	60	60
18	Exercise site shifted (gym/public park to home)	100	60	60
19	Habit of sitting with friends/neighbour decreased	100	91	91
20	Visiting frequency of friend's houses decreased	100	94	94
21	Communication pattern changed (more mobile calls in spite of face to face communication)	100	91	91
22	Feeling isolation due to lack of face to face communication	100	66	66
23	Avoiding food from hotels/restaurants	100	93	93
24	Starting concern about vitamins, minerals, dietary fibers, protein and antioxidants	100	82	82

Table 4 shows the % of Staff Nurses' ADLs impacted due to COVID-19 in selected hospitals, Jaipur. The present study shows that bathing frequency increase in 82 % Staff Nurses, Hand wash frequency at duty increase in 97%, Hand wash frequency at home increase in 94%, Stopped hand shaking with colleagues by 85% Nurses, 94% Started cleaning and disinfecting surfaces and shared equipment, 97% Nurses start to wearing mask when go outside from home, frequency of washing duty uniform increase in 94%, Night sleep period time decreased in 36%, Sleep onset latency period increased in 52 %, Bed time schedule disturbed in 39%, Avoided trips, picnics by 94%, Daily habit of purchasing food items/vegetables decreased in 85%, Started sanitization of shopping items 91%, Maintained 6 feet distance from other shopper by 72%, Increased budget of food and grocery than luxury items in 72%, Payment method for shopping changed (cash to digital payment) in 75%, Exercises/morning walk schedule affected of 60 %, Exercise site shifted (gym/public park to home) in 60%, Habit of sitting with friends/neighbour decreased in 91%, Visiting frequency of friend's houses decreased in 94%, Communication pattern have changed (more mobile calls in spite of face to face communication) in

91%, 66% Felt isolated due to lack of face to face communication, Avoided food from hotels/restaurants by 93% and 82% Nurses Started concern about vitamins, minerals, dietary fibers, protein and antioxidants due to COVID-19.

Table 5: Mean, median, mode and mean percentage of impact of covid-19 on ADLS among staff nurses, (N=100)

Sn.	Maximum score	Mean	Median	Mode	Mean percentage
1.	24	19.15	20	20	79.79

Table 5 represents mean, median, mode, and mean %, aspects of impact of COVID-19 among Staff Nurses' selected ADLs. The present study shows that the mean score of participants is 19.15, median 20, mode 20 and mean percentage of 79.79, was obtained for impact of COVID-19 among staff Nurses' ADLs. This indicates that COVID-19 had average impact on Staff Nurses' ADLs and indicates that the data are homogenous in nature.

Table 6: Association between the impact of covid-19 on selected ADLS during covid-19 with their demographic variables among staff nurses, (N=100)

Sn.	Socio Demographic variables	Categories	Level of impact pattern			Df	Chi square	Tabulated value (at 0.05 level)	Inference
			Mild impact (<50%)	Moderate impact (51-75%)	Profound impact (>75%)				
1	Age	25-35	0	4	39	6	13.22	12.59	S
		36-45	3	3	24				
		46-55	0	6	15				
		56 years and above	0	0	6				
2	Gender	Male	3	10	54	2	2.33	5.99	NS
		Female	0	3	30				
3	Type of family	Nuclear	0	4	33	2	2.16	5.99	NS
		Joint	3	9	51				
4	Experience (in years) in nursing services	Up to 5	0	0	12	6	9.10	12.59	NS
		6-10	3	4	27				
		11-15	0	3	21				
		16 years and above	0	6	24				
5	Professional qualification	GNM	3	6	72	6	12.17	12.59	NS
		B. Sc. Nursing	0	7	12				

		M. Sc. Nursing	0	0	0				
		M. Phil/ Ph. D.	0	0	0				
6.	Area of working during COVID-19	COVID-19 ward	3	3	63	4	15.62	9.49	S
		COVID-19 OPD	0	4	9				
		COVID-19 ICU	0	6	12				

- S – Significant
- N.S. – Not Significant
- Df – Degree of freedom
(Significant at level of <0.05)

Major Findings of the Study

Major findings of the study can be summarized as follows:

Section I

Findings related to Socio-Demographic characteristics of the staff nurses-

- Majority of Staff Nurses 43 (43%) has found between 25-35 years age group whereas 30 (30%) Staff Nurses are in the age group of between 36 to 45years, 21 (21%) were found in the age group of between 46 to 55 years and 6 (6%) staff nurses belonged to the age group of 56 years and above.
- According to gender who have participated in the study, the majority of Staff Nurses 67 (67%) were male respectively 33 (33%) were female.
- According to their type of family who has participated in the study, the maximum Staff Nurses 63 (63%) belongs to single family respectively 37 (37%) belongs to joint family.
- According to their year of experience in nursing services, the maximum number of 34 (34%) have 6-

10 years of experience in nursing services, 30 (30%) respondents have 16 years and above experience in nursing services, 24 (24%) respondents have 11-15 years of experience in nursing services and least of the respondents 12 (12%) have up to 5 years of experience in nursing services.

- According to their professional qualification majority of Staff Nurses i.e. 81 (81%) were found with qualification GNM and 19 (19%) Staff Nurses were found in B.Sc. Nursing Group. Whereas no one nurse belonged to M. Sc. Nursing and M.Phil. / Ph.D. group in both categories.
- According to their area of working during COVID-19 the majority of Staff Nurses 69 (69%) did their duty in COVID-19 ward, 18 (18%) Staff Nurses had performed their duty in COVID-19 ICU and least of the respondents 13 (13%) have did their duty in COVID-19 OPD.

Section II

Finding related to impact of covid-19 on selected ADLs among staff nurses:

This study shows the impact on ADLs of Staff Nurses due to COVID-19 in selected hospitals Jaipur. In which Majority of Staff Nurses 84 (84%) have profound impact, 13 (13%) have moderate impact and 3 (3%) of them had mild impact on ADLs due to COVID-19.

SECTION III

Findings related to Mean, median, mode, and mean percentage of impact of covid-19 on ADLs among Staff Nurses:

The present study shows that the mean score of participants is 19.15, median 20, mode 20, and mean percentage of 79.79, was obtained for impact of COVID-19 among Staff Nurses' ADLs. This indicates that COVID-19 had average impact on Staff Nurses' ADLs and indicates that the data are homogenous in nature

SECTION IV

Finding related to association between the impact of COVID-19 on selected ADLs during covid-19 among Staff Nurses and their demographic variables:

The chi square results showed that the obtained chi square values (i.e. 13.22 for df 6) for association between the impact of COVID-19 on selected ADLs during COVID-19 among Staff Nurses and their selected socio-demographic variables that is age (in years), is found to be greater than their respective tabulated values i.e. (12.59 for Df 6) at 0.05 level of significance and obtained chi square values (i.e. 15.62 for Df 4) for association between the impact of COVID-19 on selected ADLs during COVID-19 among Staff Nurses and their selected socio-demographic variables that is area of working during COVID-19 duty, is found to be

greater than their respective tabulated values i.e. (9.49 for Df 6) at 0.05 level of significance.

Hence researcher fails to reject null hypothesis that is H_0 for selected socio-demographic variables that is age (in years) and area of working during COVID-19 duty except gender, type of family, professional experience and education. This means that there is association between the impact of COVID-19 on selected ADLs during COVID-19 among staff nurses and their socio-demographic variable i.e. age and area of working during COVID-19 duty and no association between the impact of COVID-19 on selected ADLs during COVID-19 among Staff Nurses and their selected socio-demographic variables that are gender, type of family, professional experience and education.

Conclusion

The study was conducted to assess the impact of COVID-19 on selected activities of daily living among Staff Nurses working in selected hospitals, Jaipur, Rajasthan. In the present study, 100 respondents were selected using a total enumeration sampling technique. In order to fulfill these objectives, a Checklist was administered and analysis of the data was done. The following conclusion were drawn on the basis of the findings of the study-

- Majority of Staff Nurses 84 (84%) have profound impact, 13 (13%) have moderate impact and 3 (3%) of them had mild impact on ADLs due to COVID-19.
- There will be a significant association between the impact of COVID-19 on selected activities of daily living during COVID-19 and selected background variables among Staff Nurses working in selected hospitals, Jaipur, Rajasthan that are age and area of working during COVID-19 duty.

- There will be no significant association between the impact of COVID-19 on selected Activities of Daily Livings during COVID-19 and selected background variables among Staff Nurses working in selected hospitals, Jaipur, Rajasthan that are gender, type of family, professional experience and education.

Recommendations

Keeping in view the findings of the present study, the following recommendations have been made –

1. The study can be replicated in different settings.
2. A similar study can be conducted on large sample.
3. A comparative study can be done on Staff Nurses' ADLs before COVID-19 and during COVID-19.
4. A comparative study can be done between Staff Nurses and nursing college staff.

There is also scope for enhance in service education, CNE'S seminar, workshop, conferences in nursing to increase awareness in nurses regarding epidemic and pandemic diseases.

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