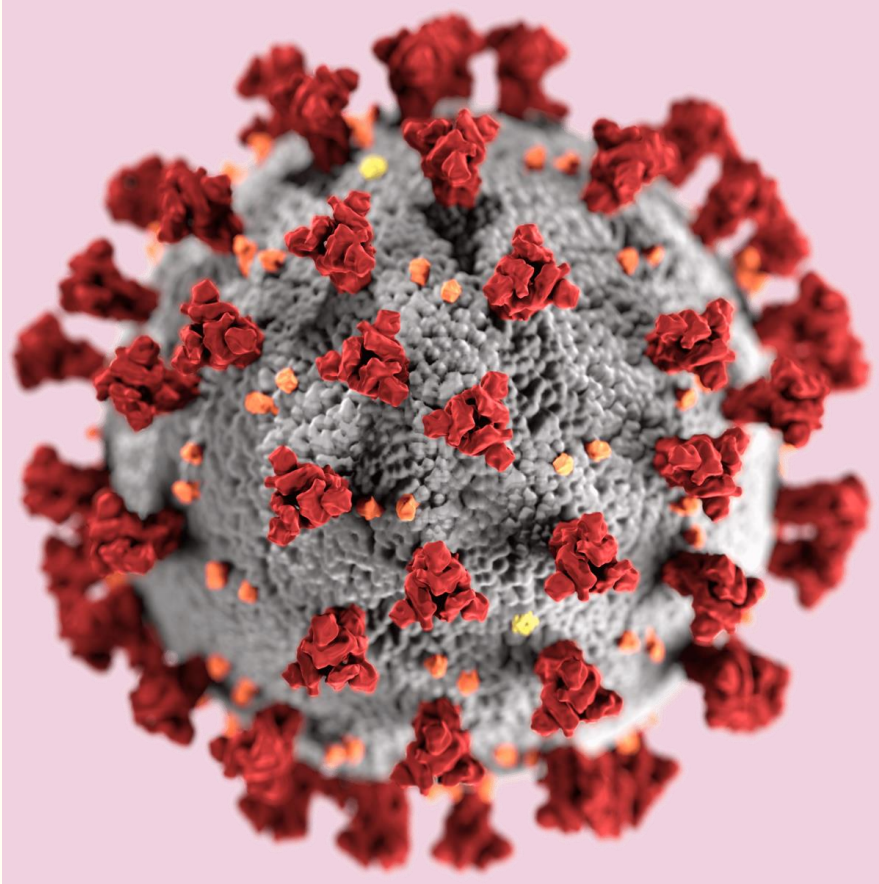
Psychological impact of COVID-19 pandemic on nursing staff in India.
(PART-1)



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Introduction

- The SARS-Cov-2 infection is a newly come upon infection which has new ribonucleic acid coronavirus secluded and diagnosed in patients initiated with mysterious pneumonia in Wuhan, China in December 2019.[1] Prior to its naming via International Committee of Viral Classification as COVID -19 (Coronavirus disease, 2019) in February 2020, it was termed as 2019-nCoV. SARS-CoV-2 (The Severe acute respiratory syndrome coronavirus 2) most commonly causing respiratory and lung infection symptoms.[2]

- Every physician, nurse, frontline worker and ambulance worker are most foreseeable to be infected as compared to any other population group. Concurrently, they are also under heavy loads of providing clinical care, preventive treatments in the arena of major expectations, with short time durations and amid unavailability of requisite measurements; thus, leading to occupational stress which further results in anxiety and post-traumatic stress disabilities. [4,5]

Introduction Cont.…

- This study majorly emphasizes on the nursing staff and the impact of COVID-19 Pandemic on their psychology. Earlier studies conducted had also disseminated that being and sustaining as nurse is extremely exhaustive and nerve-racking. At the time of SARS outbreak, nursing population were suffering from anxiety disorders, stressed and couldn’t sleep properly. Nevertheless, efficient SARS anticipation program made these aspects better. Under such circumstances of infectious pandemic calamities, medical international and national organizational institutions should construct a comprehensive integrated program to aid coping stressful environment for medical professionals, especially nurses. [6,7]

Introduction Cont.…

- Many past studies had mentioned that when nurses are in proximate accessible distance with patients during their contagious disease period like; MERS, SARS, H_1N_1 virus, Ebola then they are more likely to get symptoms of anxiety, fear of infection, sleep disorders, work stress, feeling of enervation and other associated psychological concern. Previous data from similar studies shows that incidence of post-traumatic stress, depression and insomnia in nurses concerned in the treatment of SARS patients was 33%,38.5% and 37% respectively.[13]

- Nursing staff are most prevalent to infection under any pandemic and epidemic outbreaks, substantially when the disease-causing agents are infectious in nature with its cause being entirely unclear. Extra workload and over working hours also lead to losing of sense of control to the life, listless feeling, causes insomnia, appetite loss and various associated physical issues;[14]

Literature Analysis

- With literature review the inference was made that the sudden onset of COVID-19 with high contagiousness pose a severe threat on physical and mental health of the healthcare professionals. In current COVID-19 scenario, it brings out many positive- negative emotions of frontline workers and especially nurses. Initially negative thoughts and emotions played a major impact but with time, coping mechanism is developed by the professionals and nurses to confront this crisis. It was also recognized; more stressful and fearful situation leads to better emotional and problem focused coping.

- Further, the issue needs to be addressed by national, international governments for serious assisting in overcoming this psychological issue.

Rationale

- This research study focuses on the psychological challenges and concerns confronted by nurses in India. It observes the psychological impact on nurses amidst this pandemic crisis and what unfamiliar strains it has put on different aspects of nurse's life. No previous study has been done in India to earnestly explain the psychological impact of COVID-19 on nurses. Also, previous studies emphasize on overall healthcare worker's psychological concerns in large and not nursing staff. The major proportion of the past studies prioritized key mental-health concerns of the healthcare professionals in general and that too in earlier epidemic outbreaks where COVID-19 was not a primitive interest.
- It appears, in general that nursing staff is always neglected. Therefore, this study is being conducted with its key focus on nurse's psychological consequences due to COVID-19.
- In view of intensified circumstances of COVID-19, it is imperative to understand and recognize the psychological concerns of our nurses, who are in constant deliberate pressure to perform.

RQ: *"What is the Psychological impact of COVID-19 pandemic on Nursing staff in India"*

- Objectives:

➢ **General Objective:** The aim of this study is to observe the psychological impact of COVID-19 among nursing staff in India. It discerns some key aspects of nurse's health, workplace environment, work-life balance and consequences of work-demand.

➢ **Specific Objectives:**

To identify the workplace environment: In terms of overall impact of COVID-19 Pandemic on incidents of bickering, presence of harmony among colleagues and whether doctor's temperament agitates nurses during COVID-19 crisis or not.

To determine work-life balance: In terms of satisfaction with current work-life balance, visit to families, increased workload and fulfillment of basic human necessities.

To determine work-life balance: By determining how frequently nurses get time for fulfillment of their basic health amenities; water & pee breaks, had faced trouble sleeping at night and had experienced loss of appetite due to COVID-19.

To study frequency of two incidents resulting due to work demand of COVID-19 Pandemic: By determine what majority of nurse's report on frequency of two incidents; bearing negative sentiments of patients as well as their attendants and maintaining other work units.

Methodology

- **Type of Study:** Cross- Sectional Observation Study.
- **Participants:** The study was conducted in the month of May 2020 after four months of the outbreak of the pandemic. The inclusion criteria of the participants were as follows; -

  - Registered nurse, serving patients in COVID-19 pandemic.
  - Working in any branch of Columbia Asia Hospitals, India.

- Exclusion criteria were as follows; -

  - Nursing students
  - Other medical professionals.

- **Tool for Study:** The study is a cross-sectional observational study, which was conducted through online self-administered questionnaire in various branches of Columbia Asia Hospital, across India. The questionnaire consisted questions on four main aspects; Conflicts at workplace due to pandemic crisis, Work-Life balance, impact on health due to COVID-19 pandemic and consequences of work demand.

Methodology Cont.…

- The questionnaire was made using NIOSH (National institute for occupational safety and health), COPSOQ (Copenhagen Psychosocial Questionnaire) and NOSS (Nurses' Occupational Stressor Scale) as base questionnaires. The general information included the questions of nurse's professional and descriptive characteristics like; gender, age and unit of work.

- **Data Collection:** The data for the study was collected through online questionnaire by making google form of it and dividing the four dimensions into four sections followed by the questions inside each section. This google form was then disseminated to nurses through email, the responses were retrieved from the google account at the time of analysis. Quantitative approach was used for data collection by using Likert Scale and Yes/No attributes for the questions under each section.

- **Analysis: "Pearson correlation coefficient"** was used under certain question variables in order to measure their association and their significance level. Here, the value of **'r'** was compared with **r=0.5/-0.5, the value away from r=0.5 and closer to r=1/-1 will denote strong direct/inverse correlation while, value closer to r= 0.5/-0.5 and away from r=1/-1 will denote weak direct/ inverse correlation.**The analysis of the retrieved data was done as per objectives through MS. Excel. **'Data analysis toolkit'** from add-ins in excel was used for data analysis. ***Pearson*** correlation and descriptive statistics were used for analysis and making inferences for certain question variables.

Results

- A total of 148 nurse respondents were studied. Baseline characteristics and four-dimensions of psychological variables of the subjects are tabulated in the tables below. In the study, 29 males and 119 females participated. Their age was between 21yrs and 54yrs with an average age of 28yrs ± 6.16 SD, average working experience was 5.18yrs ± 4.92 SD. Most of the nurses were from ICU, Emergency and Medical ward. Significant psychological instances of nurses providing care to the patients of COVID-19 were explored.

Characteristics		N (%) or mean ± SD	Median
Gender	Male	29 (20%)	
	Female	119 (80%)	
Age		28 ± 6.16	27
Work Experience		5.18 ± 4.92	3.6

THE WORKPLACE ENVIRONMENT;

RESULTS AND DISCUSSION

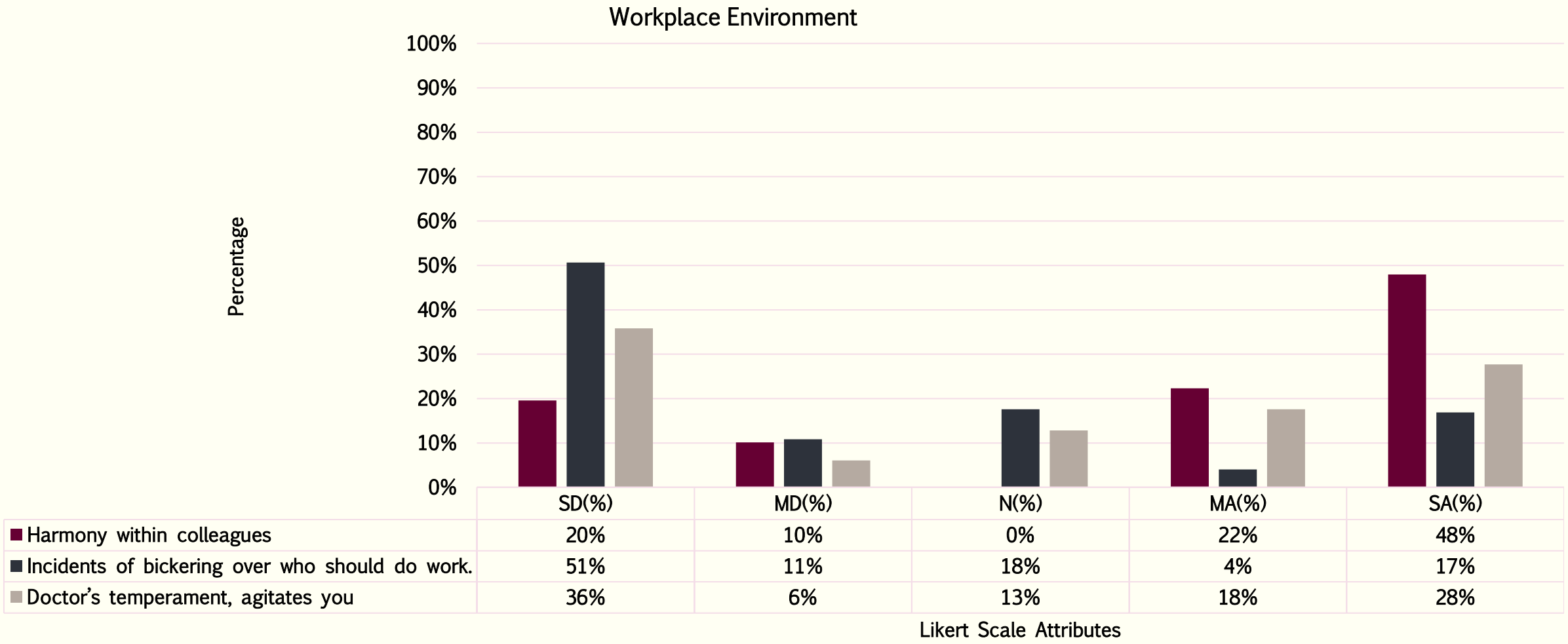
Dimension 1: Studied some aspects of the workplace environment over nurses amidst this pandemic of COVID-19.

Dimension-1, **Workplace environment** Results

Harmony within colleagues		
Mode	**Median**	**SD**
5	**4**	**1.6**
Incidents of bickering over who should do work		
Mode	**Median**	**SD**
1	**1**	**1.52**
Agitation from doctor's temperament		
Mode	**Median**	**SD**
1	**3**	**1.67**

- It was observed that majority of nurses **strongly agreed** to **"the presence of harmonious environment within colleagues at workplace amidst COVID-19 pandemic"**. Also, median being 4 signifies that 50% of the responses were either moderately agreeing or strongly agreeing to the presence of harmony within colleagues at workplace.
- Majority of nurses reported **strongly disagree** to the **"incidents of bickering over who should do work".**
- For the third question variable, majority of nurses **"strongly disagree** on **agitation from doctor's temperament".** But as median being 3 signifies that 50% of the respondents had choses 3 or more than 3 i.e. 4 or 5 as their option (4= moderately agree and 5= strongly agree)**.**

- 48% of the participants strongly agree to the “presence of harmony within colleagues at workplace amid COVID-19 crisis”. Overall, 70% of the subjects responded either strongly agree or moderately agree towards “presence of harmony within colleagues at workplace”. 51% of the nursing respondents strongly disagree to “incidents of bickering over work in this pandemic situation". Overall, 62% of the participants responded either strongly agree or moderately disagree towards “incidents of bickering over who should do work”. Though majority of respondents strongly disagree on “agitation from doctor’s temperament” but 28% of them had strongly agree on agitation from “doctor’s temperament amid COVID-19”. Overall, 42% of respondents responded either strongly disagree or moderately disagree but 46% of the respondents responded either strongly agree or moderately agree towards “agitation from doctor’s temperament”. This minute difference was the cause of median as 3 which was stated below.



	SD(%)	MD(%)	N(%)	MA(%)	SA(%)
Harmony within colleagues	20%	10%	0%	22%	48%
Incidents of bickering over who should do work.	51%	11%	18%	4%	17%
Doctor's temperament, agitates you	36%	6%	13%	18%	28%

- After studying each working condition variable, Pearson correlation coefficients were calculated to assess association of ***'harmony within colleagues'*** with ***'incidents of bickering over who should do work'*** and ***'agitation from doctor's temperament'***.

- The calculated correlation coefficient shown in table 4 shows a statistically negative correlation between ***'harmony within colleagues'*** and ***'incidents of bickering over who should do work'*** which explains an inverse relation between the two variables i.e. **more harmony within colleagues comes with less incidents of bickering over who should work (r= -0.87, p= 0.002).** As, p-value is less than α=0.05, this signifies that the correlation test is statistically significant. Also, the value of r= -0.87 which is less than r= -0.5 **denotes that the correlation is strong.**

	Harmony within colleagues	Incidents of bickering over who should do work.
Harmony within colleagues	**1**	
Incidents of bickering over who should do work.	**-0.87085943**	**1**

- Here, the calculated correlation coefficient shows a statistically negative correlation between ***'harmony within colleagues'*** and ***'agitation from doctor's temperament'*** which again explains an inverse relation between the two variables i.e. **more harmony within colleagues comes with less cases of agitation from doctor's temperament** (r= -0.67, p=0.002). As, p-value is less than α= 0.05, this signifies that the correlation test is statistically significant. Also, the value of r= -0.67 which is less than r= -0.5 **denotes moderate correlation** because the difference between the two is less.

	Harmony within colleagues	Agitation from doctor's temperament
Harmony within colleagues	**1**	
Doctor's temperament, agitates you	**-0.678384557**	**1**

Discussion

- The findings of the study revealed the presence of harmony among nursing colleagues with majority of respondents disagreeing to the incidents of bickering at workplace over who should do the work, presented a complement aspect to other studies results which mainly emphasized on negative trauma, sentiments and largely negative emotions amidst epidemic outbreaks.[21,31]

- The ***Pearson correlation coefficients*** were calculated to assess association of ***'harmony within colleagues'*** with ***'incidents of bickering over who should do work'*** and ***'agitation from doctor's temperament'***.

- For workplace variable ***harmony within colleagues was negatively correlated with incidents of bickering over who should do work and agitation from doctor's temperament,*** which is consistent with the previous studies.[35]

WORK-LIFE BALANCE;
RESULTS AND DISCUSSION

Dimension 2: Studied some aspects of the work-life balance for nurses amidst this pandemic of COVID-19.

Dimension-2, **Work Life Balance** Results

- Majority of nurses responded with **strongly disagree** towards their **"satisfaction level with current work-life balance with the ongoing pandemic situation".** Also, median being 1 signifies that 50% of the subjects had responded **with strongly disagree for "satisfaction with current work-life balance".**

- Majority of nurses responded with **strongly agree** with the **"increased workload due to pandemic".** Also, median being 5 signifies that 50% of the subjects had responded with **strongly agree for "increased workload due to pandemic".**

- For the third question variable, majority of participants responded with **strongly agree** towards **"increased job requirements in order to work very hard under the crisis of pandemic".** Median being 5 also signifies that 50% of the subjects fall in the category of **strongly agree towards "increased job requirements for working harder during COVID-19 pandemic".**

- For the fourth question variable, majority of participants responded with **strongly agree** towards **"difficulty in fulfilling family responsibilities, due to increased work timings in COVID-19 situation".** Also, median being 5 signifies that 50% of the subjects falls in the category of **strongly agree** towards this question variable.

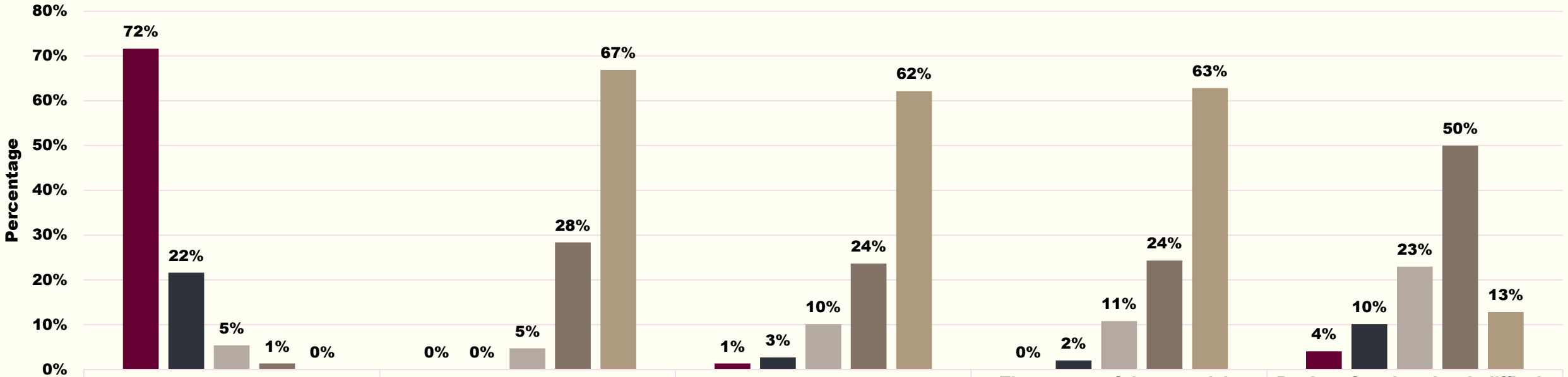
- For the fifth question variable, majority of participants responded with **moderately agree** towards **"difficulty in fulfilling personal chores/hobbies, due to increased work timings in COVID-19 situation".** Also, median being 4 signifies that 50% of the subjects falls in the category of **moderately agree or strongly agree** towards **"facing difficulty in fulfilling their personal chores/hobbies under pandemic situation".**

- Majority of nurses responded with **rarely** for the question asking about "**how often are they allowed to visit their families".**

Satisfied with the work-life balance during this Pandemic		
Mode	Median	SD
1	1	0.65
Increased workload due to Pandemic		
Mode	Median	SD
5	5	0.57
Increased job requirements to work very hard under the crisis of Pandemic		
Mode	Median	SD
5	5	0.88
Difficulty in fulfilling family responsibility, due to increased work timings		
Mode	Median	SD
5	5	0.76
Difficulty in fulfilling personal chores/hobbies, due to increased work timings		
Mode	Median	SD
4	4	0.97
Frequency of visits to family in current pandemic situation		
Mode	Median	SD
1	1	0.59

- 72% of the participants strongly disagree with the criteria of “satisfaction from current work-life balance of COVID-19 pandemic”. Overall, 94% of the respondents had responded either strongly disagree or moderately disagree towards “satisfied with the current work-life balance of pandemic”. 67% of the respondents had responded strongly agree to the increased workload due to COVID-19 pandemic. Also, 0% of the subjects had responded either disagree or strongly disagree to the increased workload, which signifies how prominent the change of this COVID-19 situation is on workload of nurses. Overall, 95% of the respondents had responded either moderately agree or strongly agree for “increased workload due to pandemic”. 62% of the participants responded strongly agree to the “increased job requirements of working very hard amidst COVID-19 crisis”. Overall, 86% of the responses were either moderately agree or strongly agree towards “increased job requirements of working very hard under the crisis of pandemic”. 63% of the respondents had responded strongly agree to the “difficulty they are facing in fulfilling family responsibility due to increased work timings after the outbreak of COVID-19 pandemic”. 0% of subjects had responded strongly disagree towards “difficulty in fulfilling family responsibility”. Overall, 87% of the respondents had responded either moderately agree or strongly agree towards this variable of work-life balance. 50% of the respondents had responded moderately agree for facing “difficulty in fulfilling personal chores/hobbies due to their increased work timings” after COVID-19 outbreak. Overall, only 14% of the total subjects had responded either strongly disagree or moderately disagree for facing “difficulty in fulfilling personal chores/hobbies during COVID-19 pandemic”. Meanwhile, 63% of subjects had responded either moderately agree or strongly agree for the same.

Work Life Balance

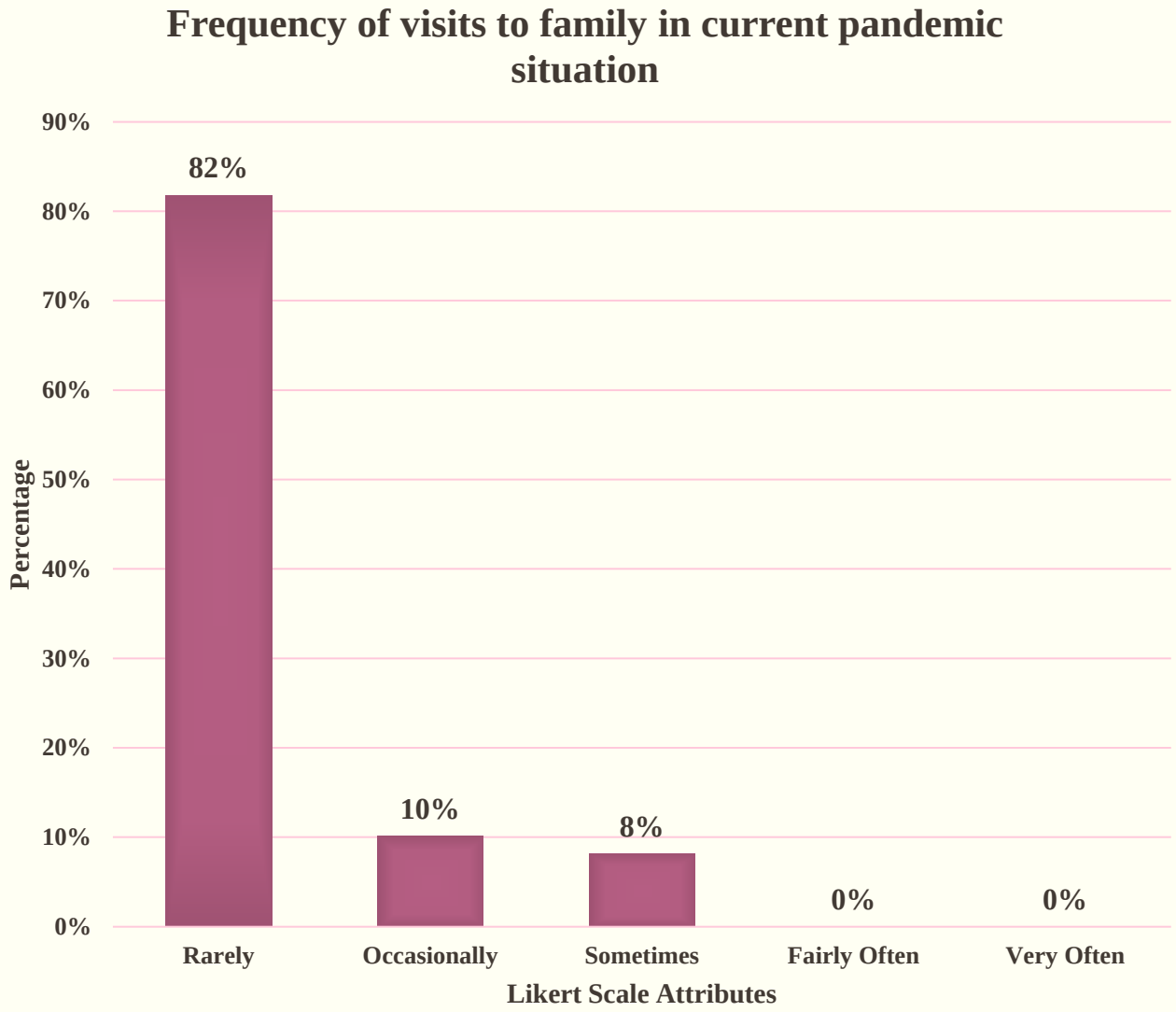


	Satisfied with the work-life balance during this Pandemic.	Pandemic have increased your workload.	Your job requires you to work very hard under this crisis of Pandemic.	The amount of time your job occupies makes it difficult for you to fulfill your family responsibility.	Burden of work makes it difficult for you to undertake any personal chores and/or engage in hobbies.
SD(%)	72%	0%	1%	0%	4%
MD(%)	22%	0%	3%	2%	10%
N(%)	5%	5%	10%	11%	23%
MA(%)	1%	28%	24%	24%	50%
SA(%)	0%	67%	62%	63%	13%

Likert Scale Attributes

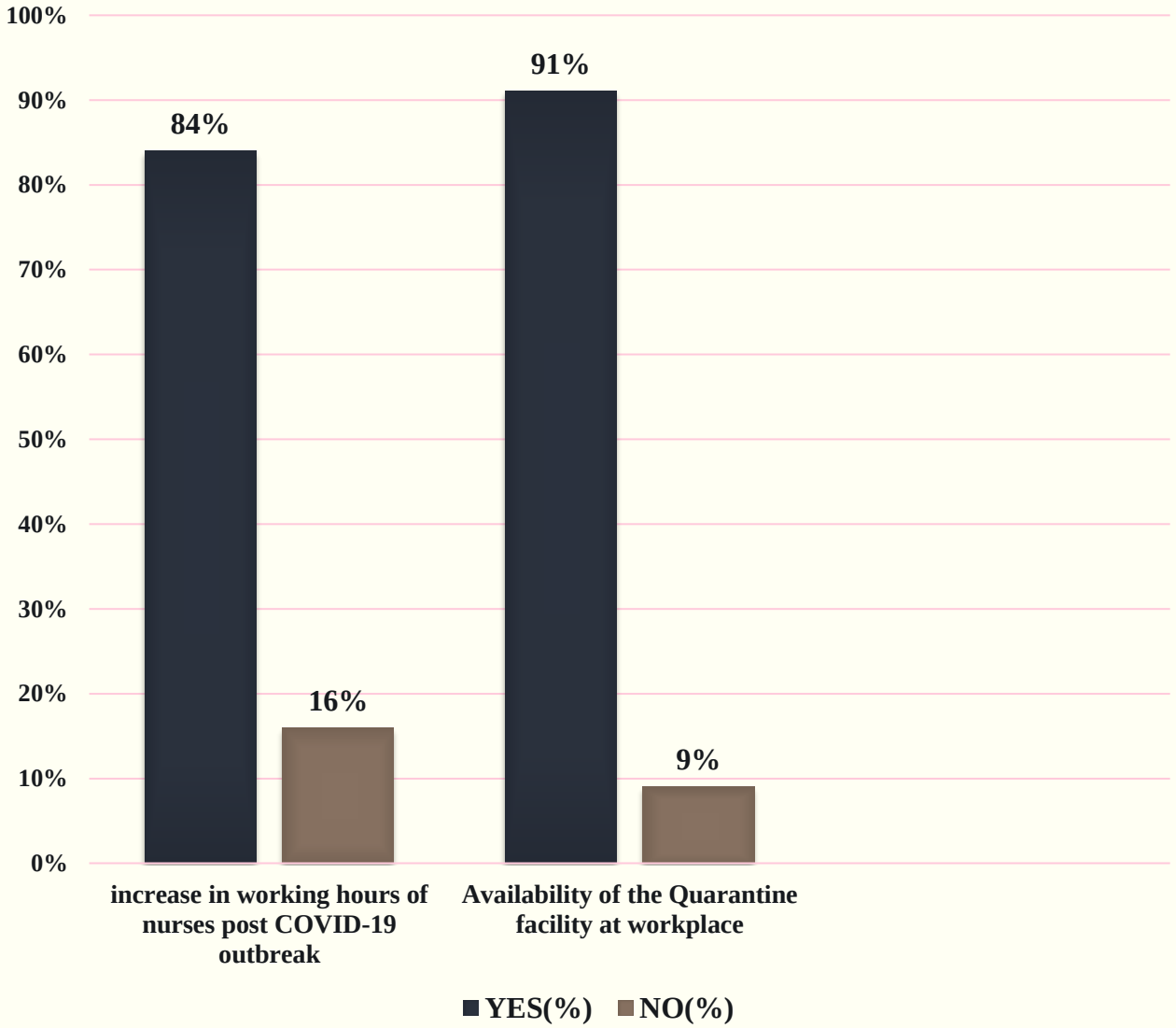
SD(%) MD(%) N(%) MA(%) SA(%)

Frequency of visits to family in current pandemic situation



- 82% of nurses had responded **rarely** when they were asked about **"how often are, they allowed to visit their family in current pandemic situation"**. While 0% respondents had **responded for fairly often and very often attributes.**
- 10% of the nurses had responded for **occasionally attribute** and only 8% had responded **sometimes.**

Yes/No Questions-Work Life Balance



- 84% of the total respondents responded about the **increase in their working hours post COVID-19 outbreak**, while only 16% of the respondents reported **no increase in their working hours post COVID-19 pandemic**.
- 91% of nurses responded **positively for the availability of quarantine facility at their workplace** and only 9% of the total respondents had responded **No for the availability of quarantine facility at workplace.**

- After studying each work-life condition variable, Pearson correlation coefficients was calculated to assess association of ***'Satisfied with the work-life balance during this Pandemic'*** with ***'Increased workload due to Pandemic'***.

- Here, the calculated correlation coefficient shows a statistically negative correlation between ***'Satisfied with the work-life balance during this Pandemic'*** and ***'Increased workload due to Pandemic'*** which explains an inverse relation between the two variables i.e. **more satisfaction with the work-life balance comes with less cases of increased workload due to pandemic** (r= -0.59, p=0.0027). As, p-value is less than α= 0.05, this signifies that the correlation test is statistically significant. Also, the value of r= -0.57 which is less than r= -0.5 **denotes moderate correlation** because the difference between the two is very less.

	Satisfied with the work-life balance during this Pandemic	Increased workload due to Pandemic
Satisfied with the work-life balance during this Pandemic	**1**	
Increased workload due to Pandemic	**-0.590599002**	**1**

Cross-Tabulation 1

Count of RESPONDENT	The amount of time your job occupies makes it difficult for you to fulfil your family responsibility.				
Pandemic have increased your workload.	MD	N	MA	SA	Grand Total
N		2		5	7
MA		5	13	24	42
SA	3	9	23	64	99
Grand Total	3	16	36	93	148

- **Cross-Tabulation** was done between **'Difficulty in fulfilling family responsibility'** and **'Increased workload due to COVID-19 pandemic'.** The Results are tabulated below, from this tabulation we can infer that **2 respondents** who had responded neutral for **'increased workload'** responded **neutral for 'difficulty in fulfilling family responsibility'** too but, **5 had responded neutral for 'increased workload' still strongly agrees towards 'difficulty in fulfilling family responsibilities' after COVID-19 outbreak. 42 respondents, who were moderately agreeing for 'increased workload' 24 strongly agreed to the 'difficulty in fulfilling family responsibilities' after the emergence of COVID-19 crisis, 5 out of 42 chose neutral and 13 selected moderately agree for 'difficulty in fulfilling family responsibility' in COVID-19 pandemic. 99 respondents out of 148 had selected strongly agree for 'increased workload' out of which 64 had chosen strongly agree for 'difficulty in fulfilling family responsibility' too.**

Cross-Tabulation 2

Count of RESPONDENT	Burden of work makes it difficult for you to undertake any personal chores and/or engage in hobbies.					
Pandemic have increased your workload.	SD	MD	N	MA	SA	Grand Total
N			3	3	1	7
MA	1	2	8	27	4	42
SA	5	13	23	44	14	99
Grand Total	6	15	34	74	19	148

- **Cross-Tabulation** was done between **'Difficulty in fulfilling personal chores/hobbies'** and **'Increased workload due to COVID-19 pandemic'.** The Results are tabulated below, from this tabulation we can infer that **only 6 respondents had responded strongly disagree for 'Difficulty in fulfilling personal chores/hobbies amidst COVID-19 pandemic'.** Further, **7 respondents** who had responded neutral for **'increased workload'** 3 out of them had responded **neutral for 'difficulty in fulfilling personal chores/hobbies'** too but, **4 had responded either strongly agree of moderately agree for 'difficulty in fulfilling personal chores/hobbies'. 42 respondents, who were moderately agreeing for 'increased workload' 31 out of them either strongly agreed or moderately agreed to 'difficulty in fulfilling personal chores/hobbies' after the emergence of COVID-19 crisis, 8 out of 42 chose neutral and only 3 had selected either moderately disagree or strongly disagree for 'difficulty in fulfilling personal chores/hobbies' in COVID-19 pandemic. 99 respondents out of 148 had selected strongly agree for 'increased workload' out of which 58 had chosen either strongly agree or moderately agree for 'difficulty in fulfilling personal chores/hobbies' post COVID-19 outbreak.**

Discussion

- Due to COVID-19 pandemic outbreak, nurses had responded increase in their workload and working hours and many had experienced fewer breaks for their basic health amenities like; water and pee breaks and most of the respondents are not allowed to visit their family amid COVID-19 circumstances. Also, previous studies had shown that professionals with fewer breaks and more workload along with increased working hours leads to higher level of stress. Earlier findings have also suggested that prolonged working hours and increased workloads and work-demands are predictors of stress.[7,36]

HEALTH IMPACTS;
RESULTS AND DISCUSSION

Dimension 3: Studied some aspects of the health impacts on nurses amidst this pandemic of COVID-19.

Dimension-3, **Health Impacts** Results

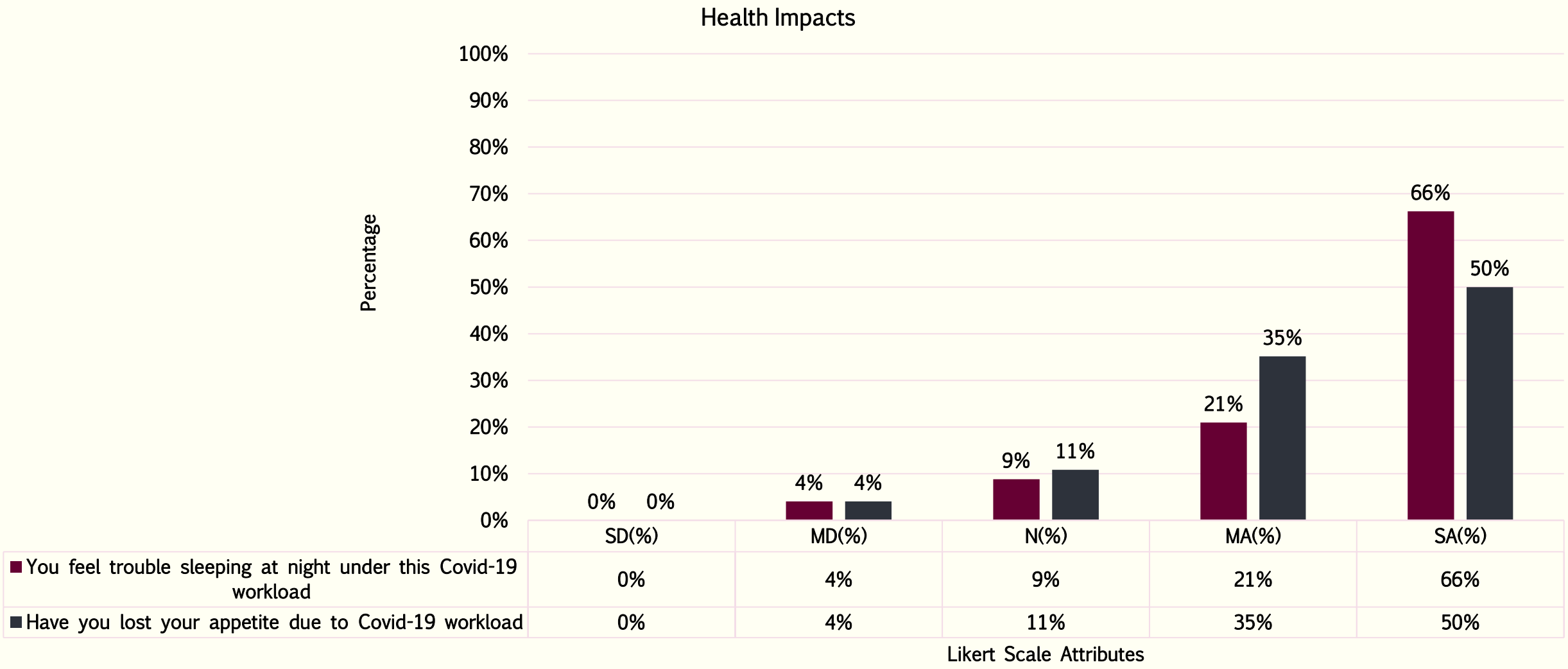
- Majority of nurses responded with **strongly agree** towards their **"trouble sleeping at night due to COVID-19 workload".** Also, median being 5 signifies that 50% of the subjects had responded **with strongly agree for "Trouble sleeping at night due to COVID-19 workload".**

- Majority of nurses responded with **strongly agree** with the **"loss of appetite due to COVID-19 workload".** Also, median being 4.5 signifies that 50% of the subjects had responded with either **strongly agree or moderately agree for "increased workload due to pandemic".**

- For the third question variable, majority of participants responded with **sometimes** towards **"How often there is no time to fulfill basic health amenities (e.g. water and pee breaks)".** Median being 3 signifies that 50% of the subjects had responded either 3 or above i.e. 4 or 5 (4= fairly often and 5= very often). on either side of the median. the category of **strongly agree towards "increased job requirements for working harder during COVID-19 pandemic".**

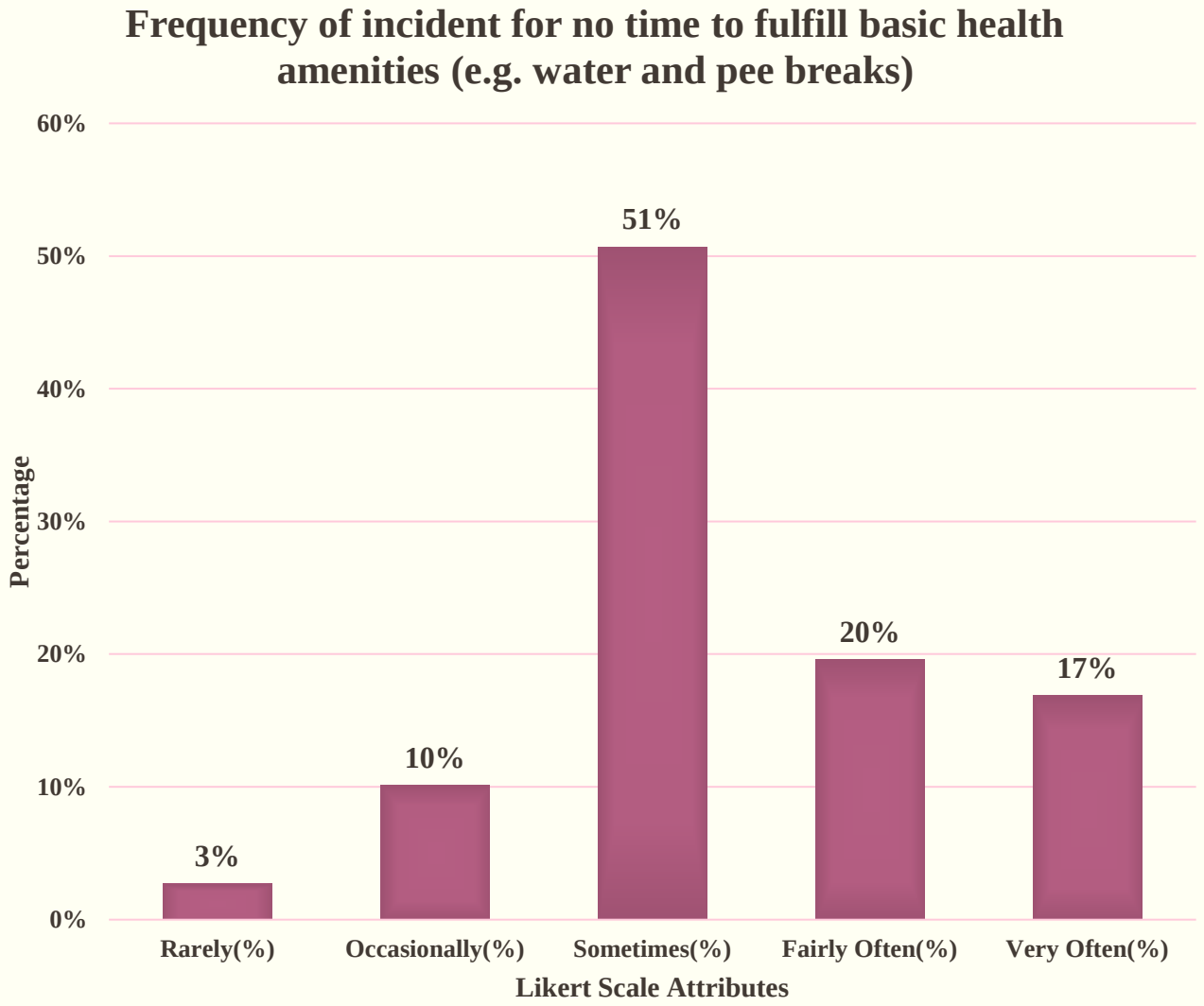
Trouble sleeping at night due to COVID-19 workload		
Mode	Median	SD
5	5	0.82
Loss of appetite due to COVID-19 workload		
Mode	Median	SD
5	4.5	0.82
Frequency of incident for no time to fulfill basic health amenities (e.g. water and pee breaks)		
Mode	Median	SD
3	3	0.97

- 66% of the total respondents had responded strongly agree with “trouble sleeping at night due to COVID-19 workload”. 0% of the total respondents had opted for strongly disagree in this question variable, while only 4% had responded with moderately disagree with “trouble sleeping at night due to COVID-19 workload”. Overall, 87% of subjects had responded either moderately agree or strongly agree with “sleeping trouble variable due to COVID-19 pandemic”. 50% of the total respondents had responded strongly agree with “loss of appetite due to COVID-19 workload”. 0% of the total respondents had opted for strongly disagree in this question variable, while only 4% had responded with moderately disagree with “loss of appetite due to COVID-19 workload”. Overall, 85% of subjects had responded either moderately agree or strongly agree with “appetite loss variable due to COVID-19 pandemic”.



	SD(%)	MD(%)	N(%)	MA(%)	SA(%)
You feel trouble sleeping at night under this Covid-19 workload	0%	4%	9%	21%	66%
Have you lost your appetite due to Covid-19 workload	0%	4%	11%	35%	50%

Frequency of incident for no time to fulfill basic health amenities (e.g. water and pee breaks)

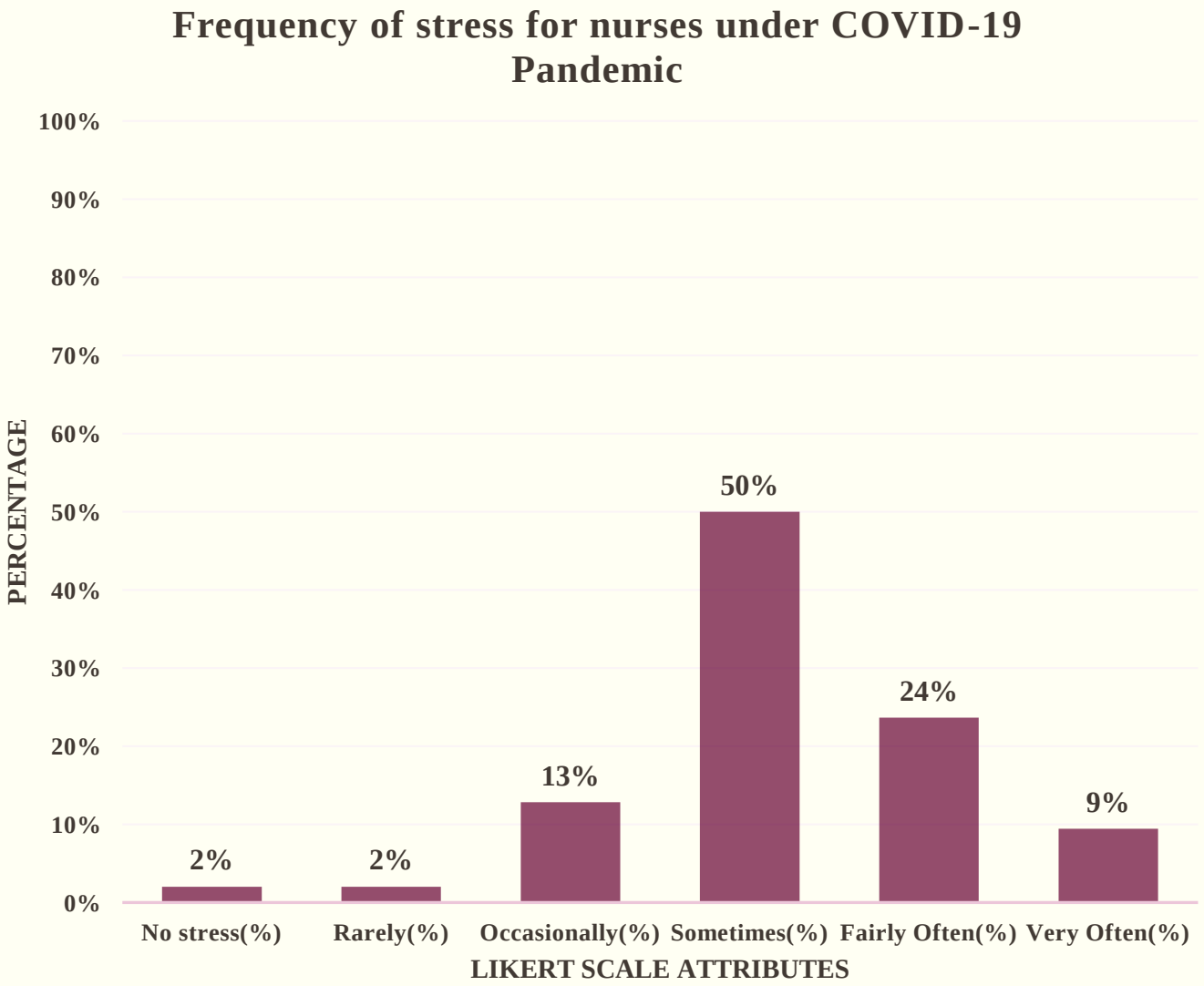


- 51% of the participants had responded **sometimes** when they were asked about **"how often there is no time to fulfill basic health amenities (e.g. water and pee breaks)"**. While only 3% had reported **rarely** in this question variable of health dimension.
- Overall, 37% respondents cumulatively had responded for **fairly often and very often** attributes, when their **"basic health amenities are not fulfilled during this pandemic situation"**. Meanwhile, only 13% respondents cumulatively had responded **rarely and occasionally** for this health dimension's variable.

Frequency of stress for nurses under COVID-19 Pandemic

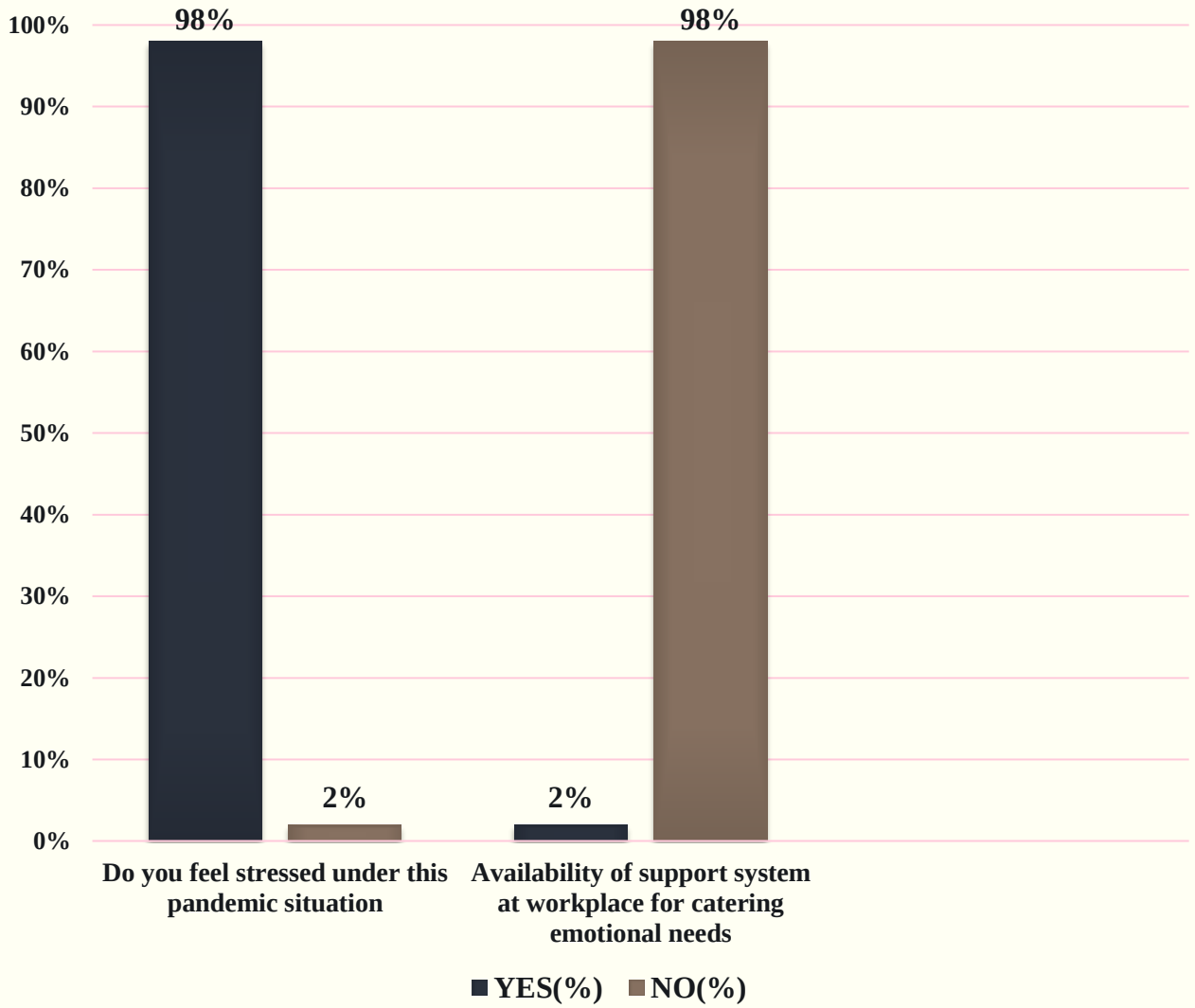
- Majority of respondents had responded **sometimes** when they were asked about "**how often do, they felt stressed".** Also, median being 3 signifies that 50% of the respondents had responded either 3 or more than 3 i.e. 4 or 5 (4= fairly often and 5= very often).

Frequency of stress for nurses under COVID-19 Pandemic		
Mode	**Median**	**SD**
3	**3**	**0.95**



- Only 2% of the total respondents had responded **no stress** under COVID-19 pandemic but, rest 98% of the respondents **had felt stressed at some point of time during this COVID-19 situation**.
- **50% of the participants had responded sometimes as their attribute when they had felt stressed under this pandemic outbreak. 24% had selected the attribute of fairly often and 9% had felt stressed very often under COVID-19 pandemic.**

Yes/No Questions-Health Impacts



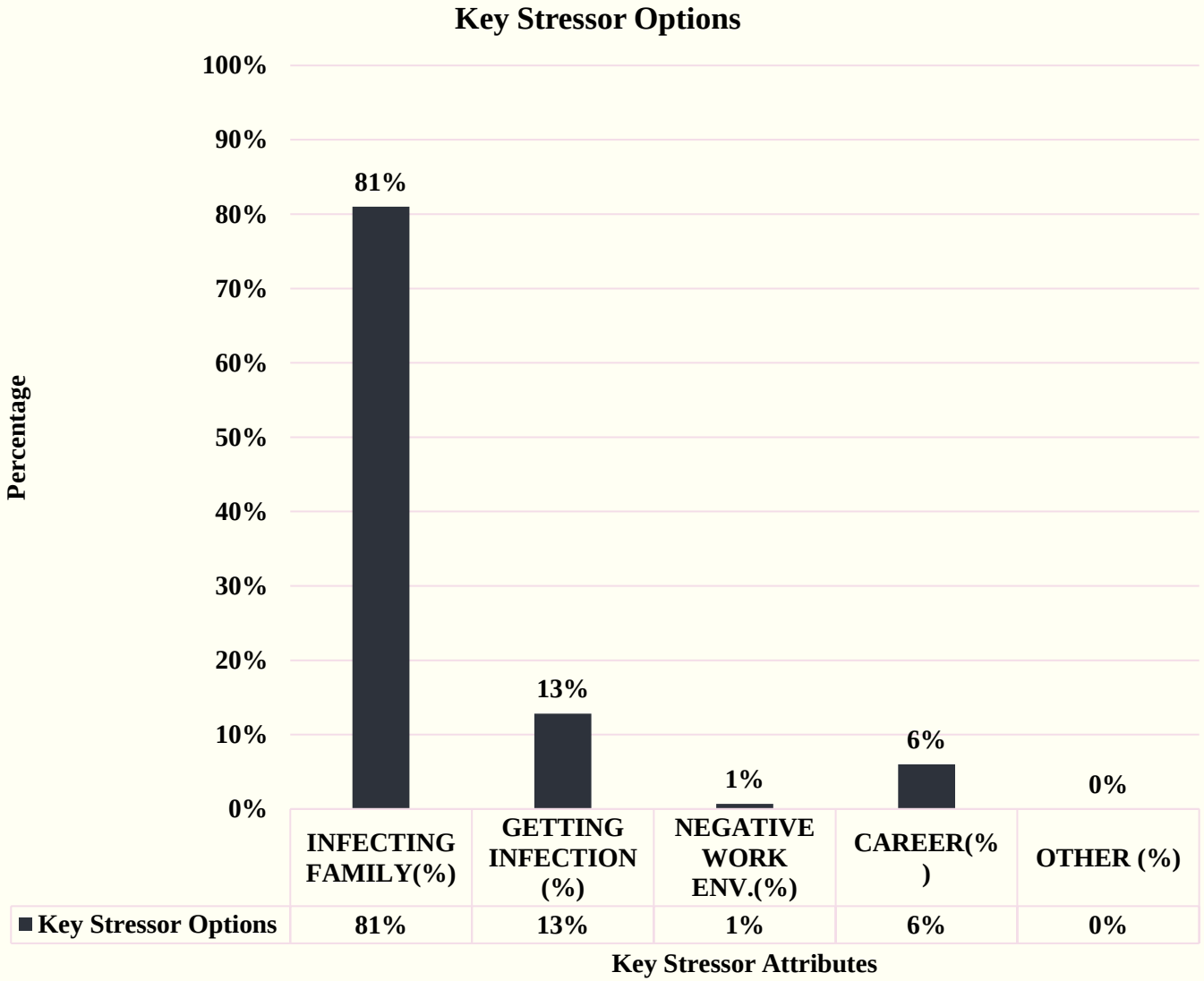
- 98% of the total respondents **responded about the feeling of stress under this pandemic situation**, while only 2% of the respondents **reported no stress feeling under COVID-19 pandemic situation**.
- 98% of nurses responded **unavailability of support system facility at their workplace** and only 2% of the total respondents had **responded Yes for the availability of support system facility at workplace for catering their emotional needs.**

For the Key Stressor question, 5- Attributes were given as options, the responses are as follows:

- Also, 145 responses were considered valid because 3 respondents had selected ‘No’ for stress in the previous question

Key Stressor Attributes	No. of Responses	Percentage
Infecting Family	117	81%
Getting Infection	19	13%
Negative work Environment	1	1%
Career	8	6%
Other (Please Specify)	0	0%

Key Stressor



- Only 2% of the 148 respondents had felt **no stressed** under pandemic crises while rest 98% had **experienced stress at some point of time during this COVID-19 pandemic.**
- 79% of the total respondents had responded for **"fear of infecting family"** as their key stressor amidst COVID-19 pandemic situation followed by **"fear of getting infection".** Only 1% of the total participants had felt the **"fear of negative work environment"** in this COVID-19 situation while 5% had felt the **"fear of career".**
- **Thus, "Fear of infecting the family members" has found to be the major cause of stress among all other attributes.**

Cross-Tabulation

Count of RESPONDENT	Have you lost your appetite due to current COVID-19 workload.				
You feel trouble sleeping at night under this Covid-19 workload.	MD	N	MA	SA	Grand Total
MD		3	1	2	6
N	1	2	3	7	13
MA	2	3	12	14	31
SA	3	8	36	51	98
Grand Total	6	16	52	74	148

- **Cross-Tabulation** was done between **'loss of appetite'** and **'sleep trouble' during COVID-19 crisis.** The Results are tabulated below, from this tabulation we can infer that **6 respondents** who had responded moderately disagree for **'sleep trouble'** 3 out of them had responded **neutral for 'appetite loss'** and **3 had responded either strongly agree or moderately agree for 'appetite loss' after COVID-19 outbreak. 31 respondents, who were moderately agreeing for 'sleep trouble' 14 strongly agreed to the 'appetite loss' after the emergence of COVID-19 crisis, 12 out of 31 chose moderately agree and 3 selected neutral for 'appetite loss' in COVID-19 pandemic. 98 respondents out of 148 had selected strongly agree for 'sleep trouble' out of which 51 had chosen strongly agree for 'appetite loss' too. Also, cumulatively 87 respondents had selected either strongly agree or moderately agree for 'appetite loss' out of these 98 strongly agree respondents of 'sleep trouble'.**

Discussion

- Majority of nurses were found to be stressed under COVID-19 pandemic due to its contagious property. There has always been instances of increased stress and anxiety among nurses when there is an emergence of foreign infectious agent whose infectious nature is entirely unknown. Thus, COVID-19 possessed high probability of causing panic among nurses about them and their family members, subsequently making them more prone to negative psychological impact due to COVID-19 pandemic.

- Past researches had revealed that positive emotions have vital significance in the healing and ailment psychological stress and staying optimized provides a protective effect on stress under disastrous conditions which can promote the improvised conditions post stress trauma of epidemic and pandemic outbreaks. Thus, adequate support system facility should be provided to the nurses in order to cater their requisite emotional needs.[32,33]

FREQUENCY OF TWO INCIDENTS RESULTING DUE TO WORK DEMAND OF COVID-19 PANDEMIC;

RESULTS AND DISCUSSION

Dimension 4: Studied two incidents due to work-demand of COVID-19 Pandemic.

Dimension-3, **Frequency of two incidents resulting due to work demand of COVID-19 Pandemic**

Results

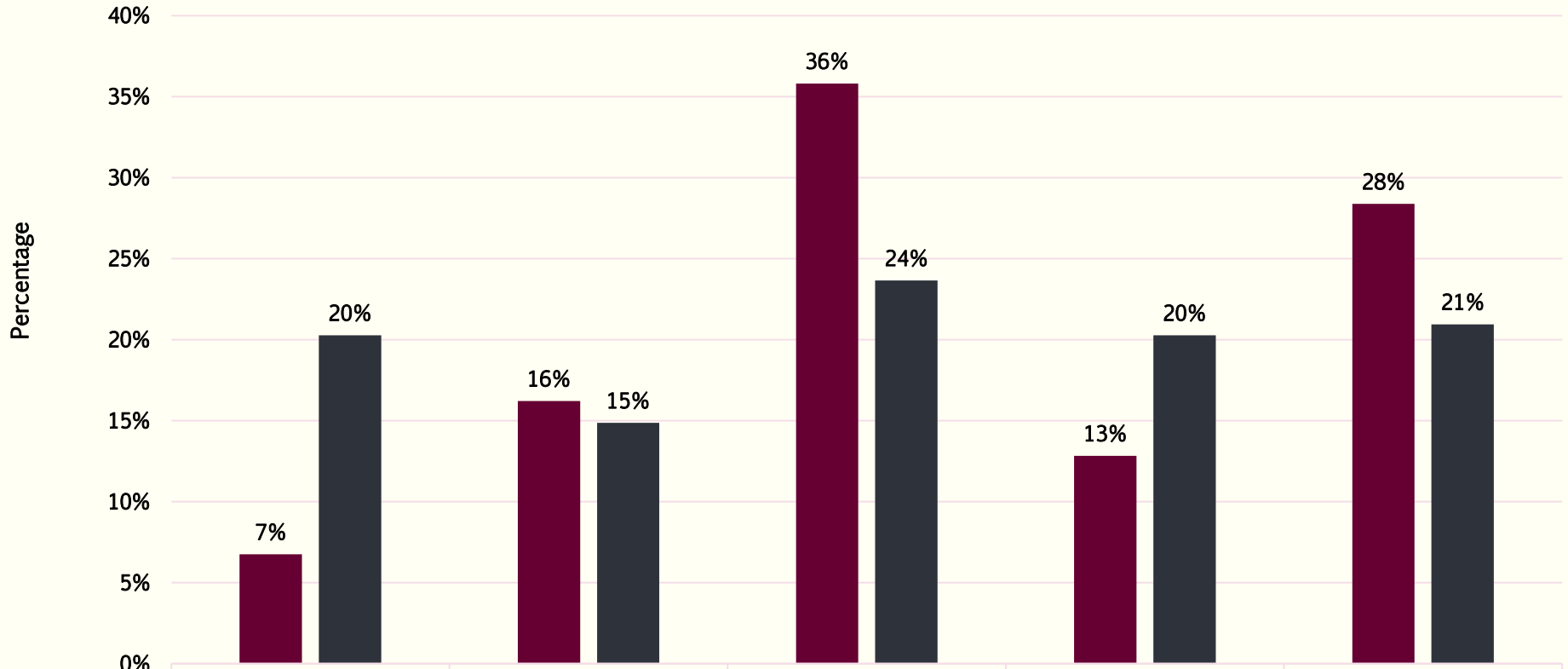
- Majority of the participants had responded **sometimes** when they were asked about **"how often they had to bear the negative sentiments of patients and/or their attendants/relatives"**. While median being 3 signifies that 50% of the participants had responded **3 or more than 3 i.e. 4 or 5 (4= fairly often and 5= very often).**

- Majority of nurses responded with **sometimes** when they were asked about **"how often they had to maintain working unit of other nurses due to workload of COVID-19 pandemic".** Also, median being 3 signifies that 50% of the subjects had responded **3 or more than 3 i.e. 4 or 5 (4= fairly often and 5= very often).**

Bearing negative sentiments of patients and/or their attendants/relatives		
Mode	**Median**	**SD**
3	**3**	**1.24**
Maintaining working unit of other nurses due to COVID-19 workload		
Mode	**Median**	**SD**
3	**3**	**1.41**

- 36% of the participants had responded sometimes when they were asked about “how often they had to bear the negative sentiments of patients and/or their attendants/relatives” While 28% had reported very often in this question variable of consequences dimension. Overall, 41% respondents cumulatively had responded for fairly often and very often attributes, when “they had to bear negative sentiments of patients and/or their attendants/relatives due to COVID-19 situation”. Meanwhile, 23% respondents cumulatively had responded rarely and occasionally for this work-demand consequence dimension’s variable. 24% of the participants had responded sometimes when they were asked about “how often they had to maintain working unit of other nurses due to workload of COVID-19 pandemic”. While 21% had reported very often in this question variable of consequences dimension. Overall, 41% respondents cumulatively had responded for fairly often and very often attributes, when they “had to maintain working unit of other nurses due to workload of COVID-19 pandemic”. Meanwhile, 35% respondents cumulatively had responded rarely and occasionally for this work-demand consequence dimension’s variable.

Frequency of two Incidents due to COVID-19 Workload



	Rarely(%)	Occasionally(%)	Sometimes(%)	Fairly Often(%)	Very Often(%)
Incident 1: Bearing of negative sentiments of patients and/or their attendants/relatives	7%	16%	36%	13%	28%
Incident 2: Maintaining working unit of other nurses	20%	15%	24%	20%	21%

Likert Scale Attributes

Discussion

- Also, there had been responses of rapid frequency in the cases where nursing staff had to bear negative sentiments of patients and/or their relatives/attendants in this COVID-19 catastrophe along with incidents of maintaining working units of other nurses. Past studies had reported that voluntarily serving other working units causes less stress as compared to those who are purposely appointed.[37]

- **Limitations:** The study was conducted with only 148 respondents and taking only different Columbia Asia nursing staff members. Secondly, the cross-sectional nature of the study restrains from making conclusions regarding causing factor of psychological stress. Finally, the source of information was only self-administered questionnaire resulting in insufficiency of adequate objective source in data collection.

Conclusion

- With the sudden outburst and strong morbific of COVID-19 presents a great challenge in the medical prevention and cure of the pandemic. The results of the study pose that the COVID-19 pandemic outbreak in India has psychological impact on nursing staff of several branches of Columbia Asia hospitals to certain extent. Appropriate psychological intervening is essential and adequate effective, yet efficient measures should be taken, which should include provision of support system at workplace for catering emotional and psychological needs of nurses, reducing the number of working hours and ensuring adequate time for fulfilling basic health amenities. Moreover, prominent attention should be given to nurses who are staying with their families. The study was conducted at the increasing verge of COVID-19 outbreak in India, when information of the pandemic was limited and was rapidly changing.

- Further, qualitative and quantitative aspects are necessary to infer better understanding about psychological impact on nursing staff of India due to COVID-19 pandemic.

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Essentials of Global Health (PART-2)

Introduction

- The overall course addressed five primary questions: What is it that people get ill, injured and die of; Why they are suffering from these conditions; Which people are affected the most; Why should we concern ourselves with these questions; What can be done to overcome main health problems, At least ideally cost, as quickly as possible and in a sustainable manner. The course's viewpoint was to address global health including, relative to and with a main emphasis on low- and middle-income countries, poor health status and health inequalities.

Key Objectives

- Articulation of main Global Health-related public health issues.
- Analyzing main Public Health issues from various viewpoints.
- To research disease burdens in various regions of the world; how this varies by age, gender and location; main risk factors for this burden; and How to reduce the pressure in a cost-effective way.
- Assessing inequalities in health in particular, as it relates to low-income and disadvantaged people's health problems in low- and middle-income countries.
- Specification of key public health players and organizations and the way How they work to tackle critical public health problems.
- Examination of key global health issues expected to emerge in the near future.

Key Learnings

- **Overall, good news:**

42%| Increase in Global life expectancy from 1960 to 2013

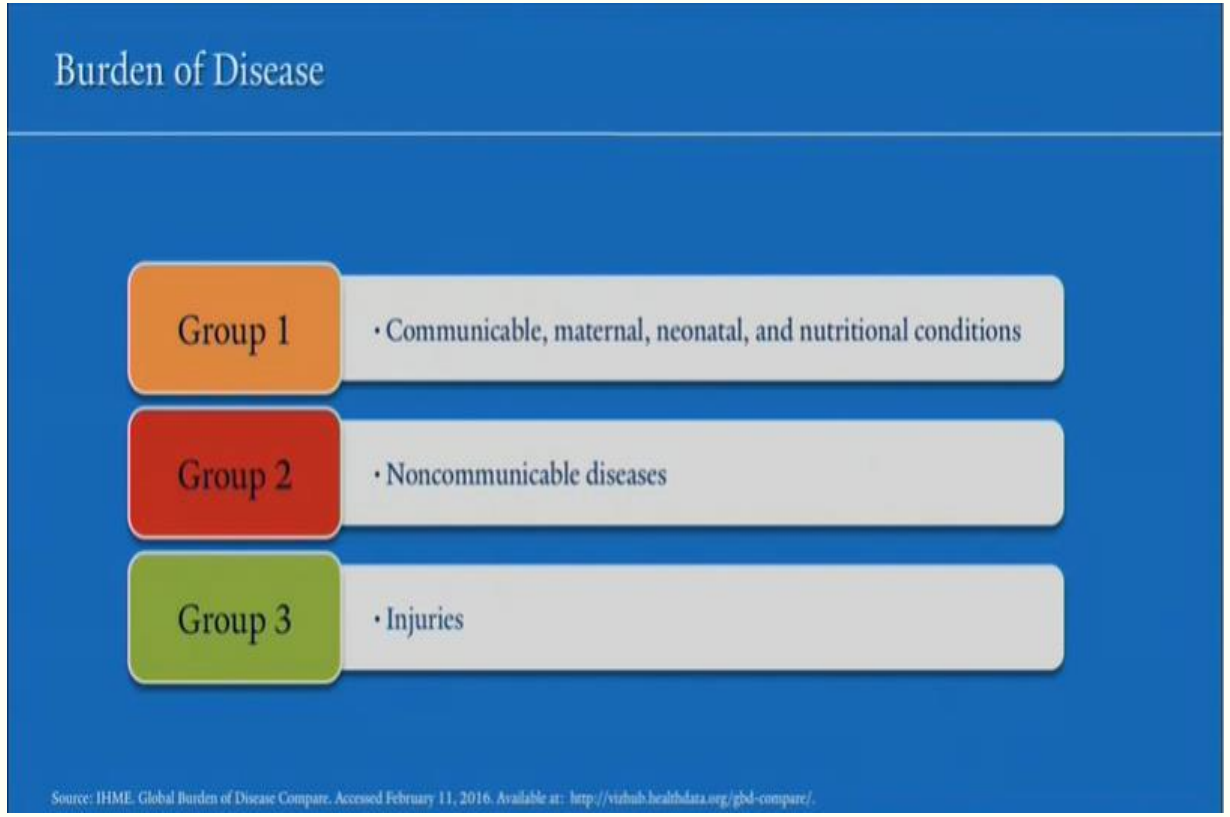
53% Decline in mortality rates for malaria among children under 5 since 2000

44%| fewer maternal deaths in 2015 than in 1990

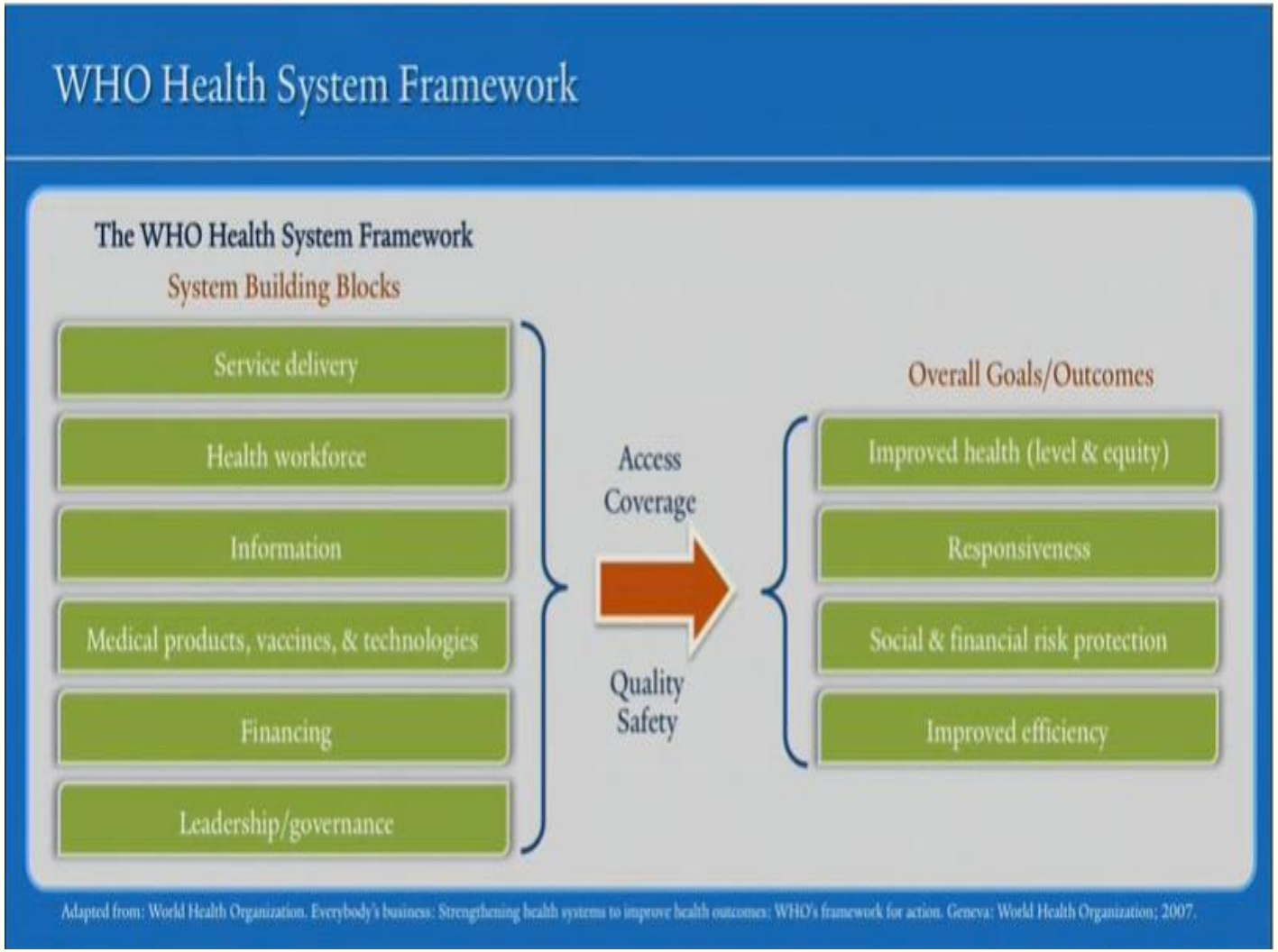
Since 1988, 2.5 billion children have vaccinated against polio, with just 100 cases in 2015

1.2 million|fewer HIV cases each year than in the mid-to late-1990's

- **Topic 1: Burden of Disease**



- The major burden of Global disease falls under these three categories. In low and middle- income countries, the predominant cause of death and DALY is **Non-communicable disease burden.**

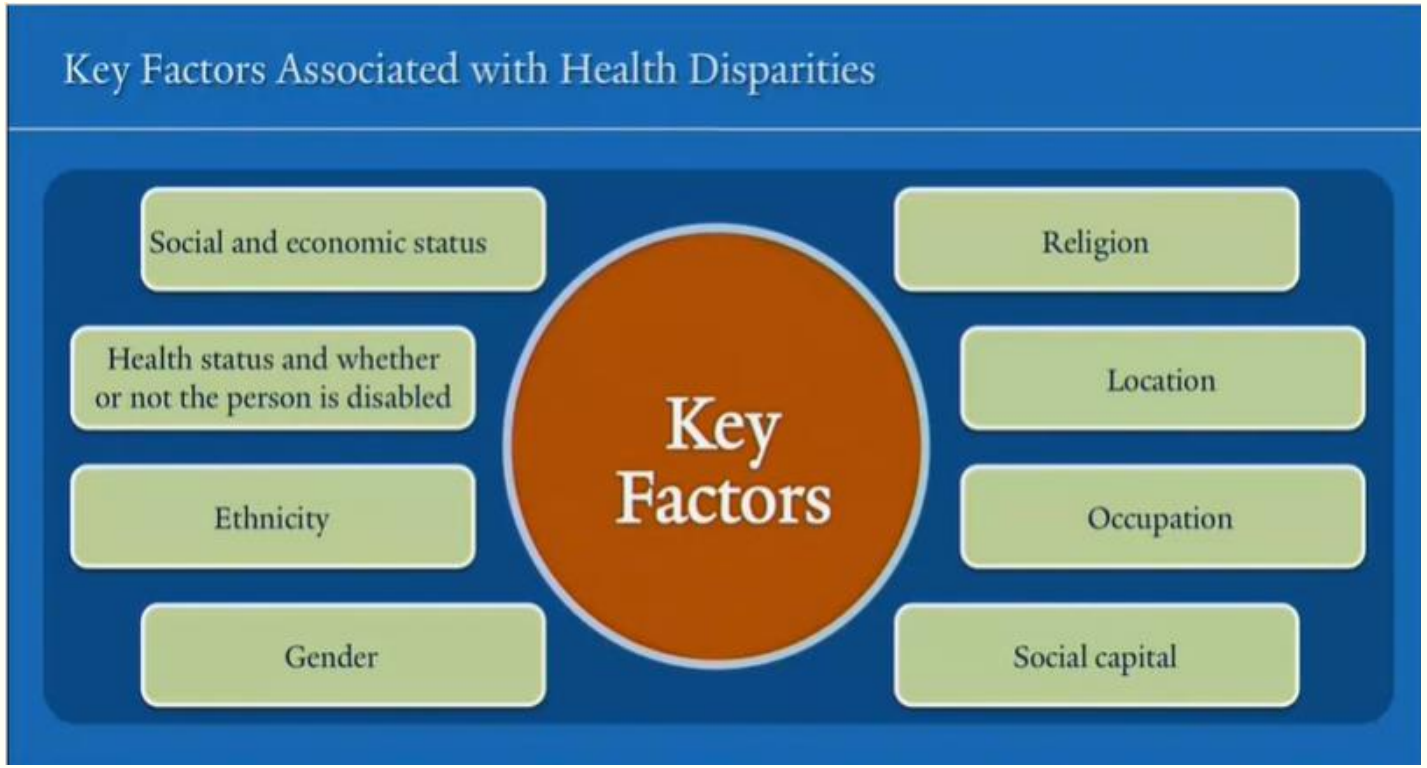


- **Topic 2: Health care services, and health value for money**

Starting with the outcomes we inferred that the major goal to be achieved is the improved health of the person in equitable ways. Now, in order to achieve this the program must be open to people's needs and their social mores, that it has to provide social and financial protection and the work should be carried out in the most efficient and effective ways.

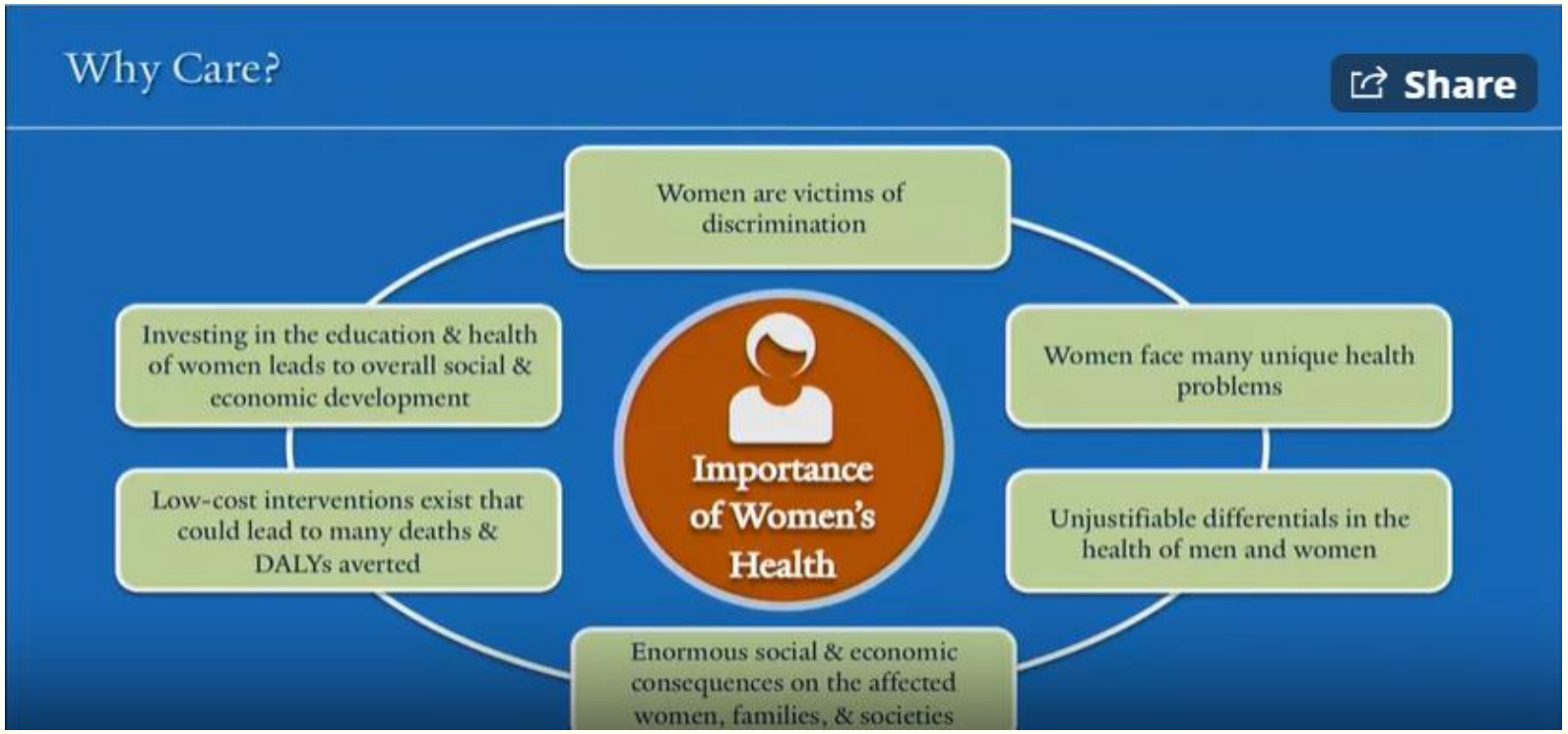
- **Topic 3: Health Disparity**

Disparities in health are totally central to the study of public health and world health. As, it helps us to see the health statuses of different countries through equity lens through analyzing the health status of various people, their connection to health care, the availability of health insurance, the extent to which they are shielded from financial crunches and the equal distribution of health benefits overall.



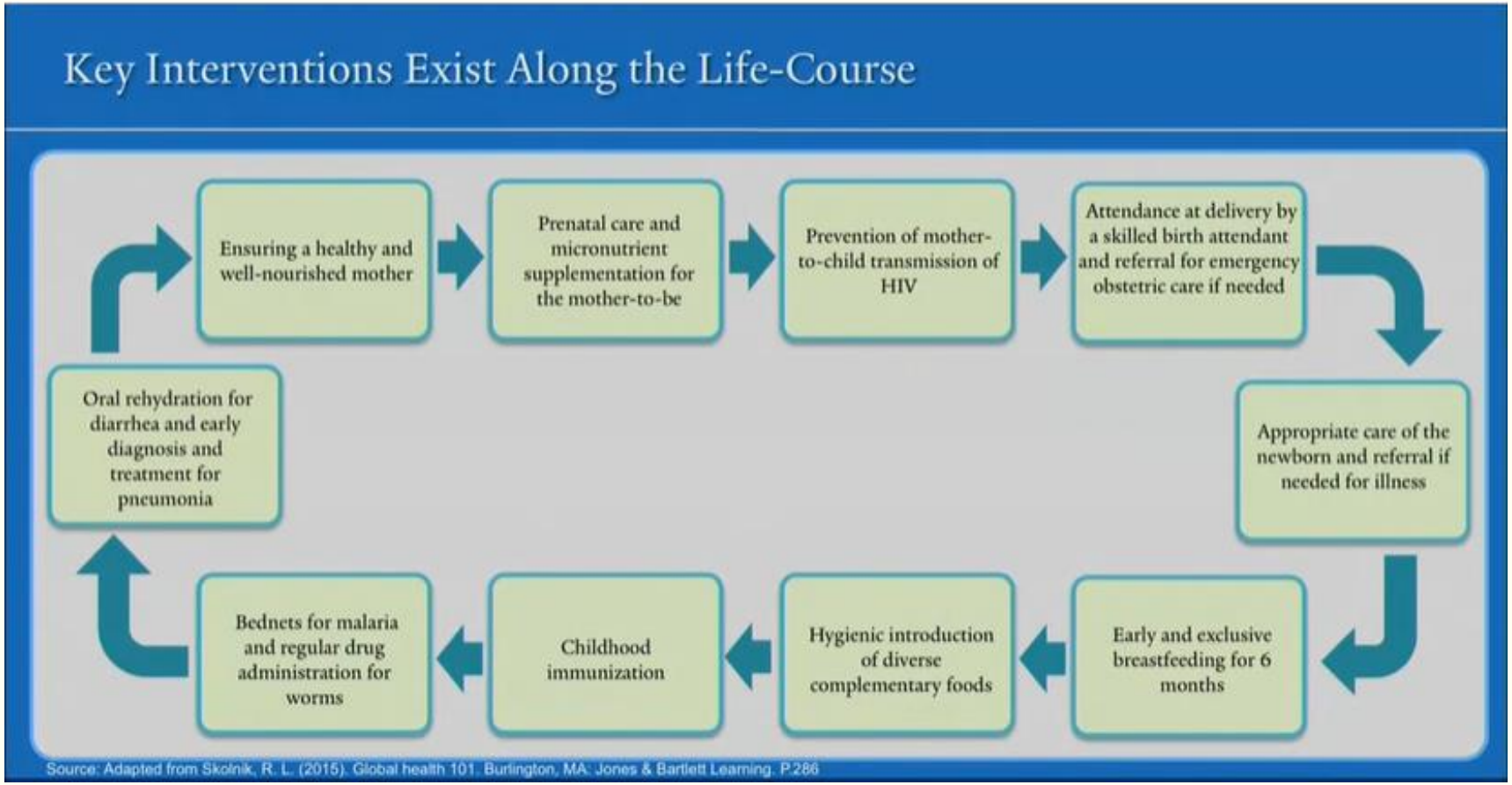
- **Topic 4: Women’s Health**

Compared to men, women mostly have different health problems; one such concern is of childbirth. Also, women play a very significant role in the family, because they often primarily considered responsible for raising the children and managing family. Mother's wellbeing is quite clearly related to the health of a child, so by ensuring that the mother’s health is fine by taking proper care of it we’re also ensuring that the next generation is taken care of.



- **Topic 5: Children's Health**

Core health measures for the child start with the mother and the mother's health and nutritional status. This starts with; sound prenatal care, micronutrient supplements.



- **Topic 6: Looking Forward**

It's going to be very important for people, for communities, and for countries, to invest in addressing some of the top ones environmental and social determinates of health, like the lack of safe water, like poor sanitation, poor hygiene, like measures needed to enhance nourishment status, particularly for youngsters and young mistresses. And especially in the longer run, the importance of ensuring that all girl children everywhere go to schools of sufficient quality and go to those schools long enough that the changes in what they know will be able to enable societies to change for the better and for the healthier and in sustainable ways.


THANK YOU