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COVID-19 Pandemic- A stress test for Nurses and Paramedic staff

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Abstract
Background: - COVID-19 pandemic has created a pressing concern worldwide for health care system and people working in health care. Increasing demand and importance of nurses and paramedic staff also called as front line messengers as key to this research. This paper provides comprehensive exploration of different types of stressors and estimates the adversely and seriousness such stressors on nurses and paramedic staff.
Method:-A cross sectional survey of 150 nurses and paramedic staff across 5 hospitals was conducted in kutch region during pandemic situation COVID-19. The stress was measured using Structured Questionnaire by "The Counseling Team International" (www.thecounselingteam.com) stress scale on five different stressors. The stress factors in the questionnaire were Physical, sleep, emotional, behavioral and personal. Factor analysis technique was performed to reduce the large number of variables into fewer numbers of factors to check the impact of observed and unobserved factor list form the questionnaire.
Results: - In total 120 nurses (80% response rate) participated in the survey during COVID-19 pandemic situation. The results revealed that physical and behavioral stressor was almost reaching danger zone. Factor analysis revealed that the five stressors identified can be expressed into majorly three stressors. The paramedic staff especially female's experienced chronic fatigue, stress, heavy work over load, exhaustion and burnout.
Conclusion: This study has provided good estimates for predicting the rate of stressors, work overload, fatigue, chronic illness, fear, psychological stress, behavioral stress, and safety and security among nurses in Kutch region. It gives insight to management and policy makers to provide nurses and paramedic staff with conducive work environment and second, effective measures to improve nurses training, and management support to face such unforeseen challenges.

Key Words: Nurses, paramedic Staff, Stress, Stressors, COVID-19 Pandemic

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I. INTRODUCTION

With the recent growing outbreaks of Novel corona virus disease 2019 COVID-19brought this potential to realization of global transmission infectious disease affecting large number of people COVID-19 - a pandemic scenario has created enormous implications on health care systems.Particularly on nurses and pandemic staff (Ives et.all, Scale et all , 2009). Nurses and pandemic staff as the largest health group professional are at the front line of the health care system response to pandemic Covid 19. Early reports related to COVID-19indicate that the rate of infection among health care professionals with this virus was extensive in early 2020. (Huang, L., Lin, G., Tang, L., Yu, L., Zhou, Z., 2020). Despite having a professional commitment towards care for community and society nurses and pandemic staff has been relentlessly working day and night during pandemic Covid 19. (Johnstone, M.J., Turale, S., 2014)

The notion of perceived stress to health professional has been explored in the literature. The kind of stressors the health workers are facing such as physical stress, sleep stress, emotional, behavioral and personal.According to [O' Connor et.all 2018], nurses and pandemic staff reports higher emotional and behavioral stress than doctors as they are the front line professionals directly connected to patients.

With the excessive stress streaming from long working hours, interaction with patients, over extended period of negative working environment, longer shifts have created a great impact on employee wellbeing and stress levels. [Edward and Burnard 2003]

Stress can be understood as "rate of the wear and tear of an organism". [Bruno 1991]

The early studies of stress define a state or position of mind wherein a person is unable to cope up with the work environment, organizational tasks, mental tiredness and fatigue. (Smith, K.V., Godfrey, N.S., 2002)

Nurses have been reported to experience more stress associated with psychosocial work environment also known as work place stresses.Psychosocial work environment encompasses organization culture, attitude, work load practices that are carried out daily at work place (Martin, S.D., Brown, L.M., Reid, W.M., 2013)

II. OBJECTIVES OF THE PROJECT

This study conducted/predetermined the investigation stress test nurses and amongst pandemic staff in Gujarat region. Further it aimed to analyze the type of stress which a nurse is more curb to during this pandemic COVID-19scenario. The results of the study would be helpful to policy makers to understand the type and nature of stress nurses are facing and accordingly appropriate measures can be taken to suppress them and make environment a happy and healthy place to work.

The main objective of the study are-

1. To measure the proximity of stress and type of stressors respondents are facing
2. To study the impact on demographics on stress levels
3. To provide comprehensive exploration and exposure of stressors in nurses and pandemic staff.

Nurses and paramedic staff that has been assigned the responsibility to remain in clinical practice during pandemic scenario, have been reported to experience stress associated with separation from family, sleep deprivation, emotional exhaustion, heavy workloads (Huang and rong Liu, 2020) and traumatic fear of COVID 19 virus. Being involved in such specialized hospitals, ratifying facility or being seconded to areas outside their usual scope of practice can also be very stressful. (Johnstone and Turale,2014). Understanding such scenarios researcher has identified few indicators of stress. Overcoming and identifying those stressors in particular can help respondents copying from traumatic conditions. Following are the indicators of stress as identified by researcher.

- Physical indicators
- Sleepindicators
- Emotionalindicators
- Behaviouralindicators
- Personalindicators

Let us understand some of the terms

STRESS

Stress is defined as an organism's total response to an environmental condition or stimulus,also known as a stressor. Stress typically describes a negative condition that can have an impact on an organism's mental and physical well-being.Difficulty of managing work and family demands has increased rapidly, and therefore many view family-friendly policies as an important attraction for reducing stress.Stress can be both good as well as bad but here we have considered side effects of stress.

PHYSICAL INDICATORS

Physical indicator means the effects of stress on the physics of a person that is his health i:e he may feel tired or he is comparatively more prone to illness, body pain, head ache thus somewhere hampering his morale and productivity in jobs in terms of turnover intention or absenteeism. Following can be the symptoms' of physical stress indicator Aches and pains, Diarrhea or constipation, Nausea, dizziness, Chest pain, rapid heart rate, Loss of sex drive, Frequent colds or flu.

SLEEP INDICATORS

Sleep indicators means how the stress affect the sleep of an individual, it make be over sleep, or quality of sleep is hampered or a person feeling stressed even after a long sleep.

Sleep is a necessary human function. It is kind of battery which recharges our brains to function well. Sleep is so crucial that even slight sleep deprivation or poor sleep affect memory, and creates mood swings (Dr. Siddique, 2011). In addition sleep stress creates feelings of listlessness; memory loss, health problems, obesity and high blood pressure. This in turn also affects workplace concentration leading to low performance and

BEHAVIOR INDICATORS

Behavior indicators are the effects on behavior of a person that may include getting angry for no reason or nervous without reason, or arriving late at office such an unacceptable behavior may bring in problems in his job as well as in his social life which in turn may decrease his morale to work, or intent to change the job or lowperformance. Few of the behavioral stressors can be described as eating more or less, sleeping too much or too little, withdrawing from others, procrastinating or neglecting responsibilities, using alcohol, cigarettes, or drugs to relax and nervous habits (e.g. nail biting, pacing)

EMOTIONAL INDICATORS

Emotional indicators means how stress effect an individual‟s emotions, these are most sensitive part of a life stress affecting this part of life may lead to reaction to different situation at times they are unexpected and unacceptable this factor can majorly affect the social life of a person. Emotional stress indicators can be like depression or general unhappiness, anxiety and agitation, moodiness, irritability, or anger, feeling overwhelmed, loneliness and isolation, other mental or emotional health problems

PERSONAL INDICATORS

Personal indicators means a person‟s day to day time spending activities doing what he likes or spending his time in his neighborhood and jewelling with people around i:e spending time for hobbies, playing,sportsIt extents to his leave and time inflexibility in organization which leads stress.From the above we can see that there are various parts of life that are affected by stress. And these changes in their behaviour will definitely affect their work life. The most precarious thing about stress is it easily creeps into your life and one gets used to it also very easily. One starts to feel familiarity and even normal many a times. Few of the personal indicators of stress can be underpinned as memory problems, inability of concentrate, poor judgment, constant worrying, seeing things negative and poor judgment over decisions of life.

III. LITERATURE REVIEW

The nursing and paramedics staff faces all sorts of stressors, many of those are common to all Health care staff, such as limited resources, overcrowded wards, impatient family members, lack of support from doctors(Anderson, C., Moxham, L., Broadbent, M., 2018). Historically nurses and paramedic staff has been underrated as compared to doctors in most of the health care units. This has led of more stress full situations especially during Pandemic COVID-19 Scenario.

The researcher Graham Lowe (2002) studied the Implications of work life balance and job stress among nurses and paramedic staff. The survey was conducted on those workers who were either full time employed or partial employed. Telephonic survey was conducted which shows the response rate of 27% .of 615 samples drawn from random sample, 600 appropriately were found for analysis. The main objective was to check the work-life balance and job stress was a major business challenge, to know the job stress effect on quality of life and job performance.

Sarooj Noor and NaziaMaad in Nov 2008, underpinned the relationship between stress and work life conflict with turnover intentions among paramedic staff working in private hospitals was examined. The research data was collected from 248 paramedic staff working in different hospitals across Pakistan. The framework conducted was Questionnaire of 22 items were prepared and the questions were related to Age, gender native language and qualification to around 300 out of which 248 were returned. Variables considered here a (S.Noor, 2008)re Stress, work life balance and turnover intentions and the results were that of work life conflict and stress have a significant positive relationship with turnover intentions. To reduce work life balance conflicts they are advised to take care of their employees work and family balance which could be achieved bytraining.

Madhavi&Vimala (2011) tried to examine the impact of work family issue over the role stress dimensions. The study was conducted among 500 women software professional at Chennai. The paper was undertaken to find out the relationship between work family issue and the role stress dimensions. The main reason found for the conflict is the dual career, Husbands may feel that it is against their masculinity to perform home making. Mothers fell guilty when they are unable to take care of their family responsibilities. The survey says that there is association only between age, relaxation methods, marital status, and number of family members of the employees and the work-family issues experienced by employees.

KhurramShahzad, UmerRehman, Ikramullah Shad, Asma Gul, Muhammad Amanullah Khan (2013) examined the relationship of the organizational work life policies and job stressors to the turnover intentions of nurses working in Pakistan. Data was collected from 118 nurses working in both government and trust hospitals. 20 item questionnaire was distributed to check the relationship between work life policies, stress and turnover intentions of nurses with respect to gender, qualification, marital status, experience and category of hospital Results of the study showed negative relationship of turnover intention with work life policies and positive relationship with job stress positive relationship was also found between work life conflict, stress and turnover intentions.

The most recent estimates from Ball et al. (2015), based on Royal Hospital of Nurses survey data, shows a substantial increase in the proportion of Intensive Care Unit (ICU) nurses working 12-hour shifts; 31% in 2005 compared with 52% in 2009. The survey based on nurse where only 14% of acute nurses were working 12 or more hours per shift (Griffiths et al., 2014). And rests were not able to cope with the shift working system due to family pressures. Factors taken for the study were to balance work-life are Manageable work load,

Flexible timings, Job satisfaction in terms of career development, encouragement of innovation, and listening to and acting on ideas.

An analysis of the European RN4CAST survey, a multi-country cross sectional nurse workforce study, shows that working 12-hour shifts is associated with higher odds of poor quality of care, greater risk of necessary nurse care left undone and higher odds of reporting being dissatisfied with their jobs (Griffiths et al., 2014).

According to O'Connor et al. (2018), the nurses and paramedic health workforce reports higher emotional exhaustion, than emergency nurses and equal burnout to pandemic situation. The described stressors can explain, at least partially, the difficulties in recruiting and retaining mental health workforce.

IV. RESEARCH METHODOLOGY

Research Design

The study measured the stress level of nurses and pandemic staff working I hospitals in kutch region. Due to the on going situation of COVID-19novel pandemic, the respondents were under too much work pressure with fear of infection too. (Martin, S.D., Brown, W.M., 2013.Stress test questionnaire developed by counseling team was used for analysis. The Counseling Team International 1881 Business Center Drive, Suite 11 San Bernardino, CA www.thecounselingteam.com was administered for the study. The questionnaire shows the effect of stress that affects your daily routine on typical 5 day week working. The questionnaire is divided into 5 sections, physical, sleep, emotional, behavioral and personal. Each section has set of questions related to tension overload, chronic headaches and so on. The respondents have to answer them 5 point likert scale ranging from 5(almost always)….to….1(never).

Summation of each stress indication is taken overall value of stress indicator is used for analysis.

Table 1 Stress Indicators Score Values

Indicators	Equivalent Score				
	Very Low	Medium	High	Very High	Danger
Physical (PS)	22	30	38	48	54+
Sleep (SS)	5	8	10	12	14+
Behaviour (BS)	18	27	36	45	50+
Emotional (ES)	21	29	37	46	55+
Personal Habit(PER S)	9	15	20	25	30+

The detailed understating of the Table 1 has been described below:

Very High and Danger (Red Zone) areas reflect too much of stress level the person is experiencing. It is an acute urgency on the part of management to take care of such conditions else it may result into fatigue, job dissatisfaction, turnover, burnout issues. A very low and Medium (Green Zone) area of stress indicator reflects early signs of stress being faced by people in the organization. The management has to show positivity and motivation to its employees and have distributed work load so that people do not cross this green zone to the yellow one. Here in this test Medium (Yellow Zone) is considered as midpoint of stress level which indicates warning signal or vigilance is required as a part of management that people do not cress this yellow zone.

The above table is prepared considering the stress questionnaire prepared by the counselling team of US

Respondents were asked to rate their level of stress from the range of 1-5, wherein 1 indicates very low level of stress. If an individual has rated all the questions in particular section as 1 , it shows he/she is undergoing very low level of stress. And if the rating moves to 5 points it denotes Danger level. The medium, high and very high have been divided proportionately accordingly to Table 1 explained above

To achieve the second objective analysis has been done on stress indicators of each individual. The average of all the stressors has been taken and compared with the table above. For the third objective factor analysis is performed to check whether the statements reflect the same indicator or not. Also factor analysis was performed to categorize the statements of stress in physical, sleep, mental, behavioral or personal.

Analysis

The mean scores for items in stress questionnaire were calculated for each of the stressors identified from very low to danger categories. Stressors such as tiredness, fatigue, work overload, shift timings behaviors of doctors and patients were the key ingredients of analysis for the stress test. High scores were found on offensive behavior, high exhaustion, chronic, acute fatigue were few of the stressors which had early signs that novel pandemic had created for them. The current workplace had become incompatible and unsustainable for the nurses continued well health and being. In the stress questionnaire by counseling team US, prevalence of each stressor for each of the category was used to compare like physical, sleep, behavioral, emotional and

personal factors. All these stress indicators has interfered with their ability to work. Two kind of test were conducted firstly the average value of stressors were calculated with response to their set parameters values like very high stress to Danger zone i.e. respondent would feel burnout, fatigue, physical and emotional stress. Secondly Factor Analysis was performed with the help of SPSS software, mainly to understand the five indicators that have been identified genuinely fall under the same category or even more factors have evolved from the analysis. All statistical tests were two-sided and p less than .05 was considered statistically significant.

A total of 150 questionnaires were distributed among the respondents. Out of which 120 complete questionnaires were used for analysis while rest 30 questionnaire were incomplete in one or the other parameters so were ignored. Response rate of 80% was observed. For the analysis purpose stress test was taken from the previous studies of "the Counselling Team" from San Bernardino (1981). The cronbac alpha was 0.79 for the study. Majority of nurses were in their age of 40s and were mostly married. Almost all belonged to southern part of India and had come here for job requirements. The proportion of male nurses was generally found in paramedic section and females as proper nurse categories. There was a significant number of male staff in paramedic section which made upto 65% of the smple size. Female nurses reported which was 35% was loaded with lot of social and family responsibilities. Further there was higher prevalence of work pressure, family responsibilities, fatigue, hyper tension etc.

Table 2: Overall Average Stress Level

	PS	**SS**	**ES**	**BS**	**PER S**
Average	51	8.5	27.7	44.4	21

Table 3: Female Average Stress Score

	PS	**SS**	**ES**	**BS**	**PER S**
Average	48.7	8.2	44	35.5	14.9

Table 4: Male Average Stress Score

	PS	**SS**	**ES**	**BS**	**PER S**
Average	52	12.6	28.3	27.7	17.2

Inference:

The highest negative psychosocial work environment stressors were Physical indicators and Behavioral indicator at work pace, followed by quantitative demands, stress, and burnout during this pandemic situation. As expected of higher dependency on nurses and paramedic staff from doctors, there was moderate to high attainment of professional development through skill discretion (Corley, A., Hammond, N.E., Fraser, J.F., 2010), meaning of work, commitment to workplace (Mulembakani, P., Rubin, E., Wolfe, N., 2017), predictability, and role overload. However, management and doctors were also under pressure of government to follow specific set of norms and criteria for treating COVID-19patients. Table 2 reflects the overall average stress level of respondents. Which shows that Physical stress and behavioral stress has taken over with very high mean scores as compared to rest three sleep, emotional and personal stress indicators. Table 3 and 4 reflect the demographic differences of Male and Female average scores of stress indicators. Due to the ongoing situation of novel pandemic the means scores of physical stress for both male and female are very high, almost reaching to danger zone or red zone. Physical stress had questions related to headaches, feeling relaxed, stomach quivers, tension, physical exhaustion and so on (Pandey Rakesh and TripathiSeema, 2001). For sleep indicators the results reveal high values whereas males were able to work during night shifts and longer working hours. So the mean values are high on sleep stress indicators and medium for male paramedic staff. Emotion stress indicators mean value is 44 for females interpreting that females have been much impacted with emotional stress and trauma with the pandemic situation. Few of the questions in the survey were related to worrying atmosphere across the globe, precautions to be taken while back to home from work. Females having elderly parents or young children at home (S.-C., Kohler, D., Lo, Lim, M.-K., Guomay, Y.L., 2007) was a very bit emotional stress among female nurses and paramedic staff (Shiao, J.S.-C., Koh, D., Lo, L.-H., Lim, M.-K., Guo, Y.L., 2007). For males the mean scores of emotional stress were medium as they were hardly had time to perform duties at home so the average mean score of male emotional stress indicator as 12.6 (Madhav, N., Oppenheim, B., Gallivan, M., Mulembakani, P., Rubin, E., Wolfe, N., 2017). Furthermore,acute fatigue among nurses and

paramedic staff was also significantly higher and had reached the yellow zone that is high level of stress among respondents. It was 35.5 and 27.7 for females and male respectively. Due to dual career responsibility and equal amount of work load at work place caused a dramatic difference amongst male and female respondents (Ilhan, M.N., Durukan, E., Aras, E., Turkcuoglu, S., Aygun, R., 2006).

For the third objective factor analysis was performed

One of the major factors that influenced nursing and paramedic staff was ability to cope with the demanding workload during the pandemic situation and staffing shortages (Lam and Hung, 2013, Kang et al, 2018, Corley et al., 2010). Another such factor was Occupational and organizational preparedness to deal with the pandemic impacted considerably on frontline staff (Holroyd and McNaught, 2008, Wong et al., 2011, Shih et al., 2007, Corley et al., 2010). Such pressure on the workforce meant nurses and paramedic staff to adapt to changes quickly, often in adverse conditions, with high patient turnover and limited isolation rooms (Holroyd and McNaught, 2008, Wong et al., 2011, Liu and Liehr, 2009). A lack of staff skill mix for managing such acute patients also was a very big challenge to support those (Corley et al., 2010).

Table: 5 KMO Test Table

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.695
Bartlett's Test of Sphericity	Approx. Chi-Square	981.597
	Df	300
	Sig.	.000

Table 5 shows values from KMO and Bartlett‟s test According to Kaiser-Meyer-Olkin measure the result for interpreting the adequacy of data for factor analysis should be higher than 0.6 and p value should be less than 0.005. The results reveal that the values are appropriate for performing analysis.

Table: 6 CommunalitiesTable

	Initial	Extraction
[I try to work while eating lunch]	1.000	.654
[I get severe headache and body ache]	1.000	.725
[I feel very angry from inside]	1.000	.512
[Because of my busy schedule I miss atleast 2 meals during the week]	1.000	.739
[I am pressured to work for long hours]	1.000	.664
[I feel short of breath after mild exercise like climbing stairs]	1.000	.739
[I Do not prefer to share my emotions with my family]	1.000	.685
[I have trouble remembering things]	1.000	.401

[When people criticize me, even friendly, I feel offended]	1.000	.473
[I have nightmares or repeated bad dreams]	1.000	.720
[No matter how much sleep , I feel tired when I get up]	1.000	.501
[My behavior changes unpredictably and without any reason]	1.000	.720
[I get annoyed while talking to colleagues at work]	1.000	.706
[My body feels tense throughout the year]	1.000	.681
[I take pills to go to sleep]	1.000	.703
[I face work life conflicts due to stress]	1.000	.545
[I spend less than 3o minutes talking casually to neighbor of mine]	1.000	.756
[After dinner I spend more time alone on watching TV rather than talking with my family or friends]	1.000	.703
[I tend to stumble when walking or have more accidents than other people]	1.000	.671
[I cannot adjust time schedule of work for family issues]	1.000	.548
[I spend less than 3 hours a week working on hobby time]	1.000	.822
[I arrive late at work]	1.000	.679
[I feel difficult to take leave from organization]	1.000	.560
[I bring work home]	1.000	.580
[Atleast once in a week I have disagreement with a coworker or supervisor]	1.000	.799

Extraction Method: Principal Component Analysis.

Table: 7 Rotation Component Matrix

Rotated Component Matrix[a]

	Component					
	1	2	3	4	5	6
[I try to work while eating lunch]		.635				
[I get severe headache and body ache]	.505	.555				
[I feel very angry from inside]	.612					.825
[Because of my busy schedule I miss atleast2 meals during theweek]					.446	
[I am pressured to work for long hours]						
[I feel short of breath after mild exercise like climbing stairs]		.681				
[I Do not prefer to share my emotions with my family]		.707				
[I have trouble remembering things]	.466		.616			
[When people criticize me, even friendly, I feel offended]		.427				
[I have nightmares or repeated bad dreams]		.450				
[No matter how much sleep , I feel tired when I get up]		.495				

[My behavior changes unpredictably and without any reason]	.778						
[I get annoyed while talking to colleagues at work]	.719						
[My body feels tense throughout the year]	.548						
[I take pills to go to sleep]							
[I face work life conflicts due to stress]	.540						
[I spend less than 3o minutes talking casually to neighbor of mine]							
[After dinner I spend more time alone on watching TV rather than talking with my family or friends]	.593						
[I tend to stumble when walking or have more accidents than other people]							
[I cannot adjust time schedule of work for family issues]							
[I spend less than 3 hours a week working on hobby time]	.426						
[I feel difficult to take leave from organization]		.621					
[I bring work home]	.524						
[Atleast once in a week I have disagreement with a coworker or supervisor]							

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 9 iterations

As we have seen above that the stress indicator survey done in U.S we saw at there are 5 factors of stress but according to SPSS, factor analysis we see that there are 6 factors that are affected by stress According to the factor analysis we see that we have 6 factors and the statements are bifurcated accordingly.

Table: 8 Reliability Statistics

Factors	Cronbach's Alpha	No. of Items
Factor 1	0.852	8
Factor 2	0.836	7
Factor 3	0.751	4
Factor 4	0.547	2
Factor 5	0.631	3

Inference

Form the rotation method there has been six factor principal component analysis which are, extracted from nine iterations our initial survey talked about five stressors physical, sleep, emotional, behavioral and personal, when technical analysis through SPSS was done the extraction is of six factors.

This requires further understanding of how the software has bifurcated stressors into six different factors.

Reliability analysis was alone to see the list of items or variables which fall under each category. KMO Bartlett's analysis is done the interpreting adequacy or the values considered for analysis i.e measure of sampling adequacy should be higher than 0.6 and correspondingp value should be less than 0.5 as per table 5.

Table 8 reflects the reliability statistics value and its corresponding value of each factor that is extracted from KMO Bartlett's rotation component analysis.

Factor 1 from the analysis has extracted items and its Alpha value is 0.852 which is higher than set value 0.6, so the factor so extracted by KMO SPSS method can considered for interpretation purpose. This factor takes into consideration following sub variables like angry form inside, feeling lonely, forgetting things, work life conflict stress, tiredness, fatigue short term memory loss work family conflict and so on.

The second factor has the cronbach Alpha values as 0.836, covering 7 sub variables from the analysis. This factor includes stressors such as self realization, independency, leaves from job, interrupted working physical stress, headache, emotionally drained etc. As the Alpha value is more than 0.6 it is also accepted as one of the important factor for analysis of stressors among nurses.

The third factor that has extracted contains only four items with cronbach Alpha value as 0.75, which is quiet near to 0.6 value considered for interpretation. This factor has only four sub variables such as day dreaming, lack of attention, more accidents, sudden short term memory loss and so on. As the value extracted is higher than the one that set, this factor is also considered for analysis.

Fourth factor that has come after extraction has only 2 items and its cronbach alpha value is 0.547 which is less than suggested KMO value 0.6. The sub variables considered for analysis were late coming and argument with supervisor. For this factor to further understand its impact on whole scale further reliability analysis was done by removing the scale mean from the texting (refer table 8). The correlation among the two items was found negative due to negative average covariance among items was extracted. This violates the reliability model assumption by KMO.

Further fifth factor comprised personal time and development, interpersonal relations, social interactions and long working hours. Here also the time extracted items are to an acceptable limit of more than 0.6.

In the end sixth factor that is extracted has only one variable so reliability test as not possible and thereby could not be extracted.

Nurses as were assigned to emergency wards duty or ICU department faced lots of stressors such as role responsibility, work load, mental presence, and fear of losing job due to COVID-19 pressure. From the extraction matrix it can also be said that this novel pandemic caused nurses to rethink over their job demands, family interference/ work life conflicts, spouse related /issues, family pressure, young children and their priorities and so on.

V. DISCUSSION

This paper resulted in two different categories of analysis 1) to check the stress level of nurses and paramedics staff on set parameters as suggested by the consulting firm 2) to check the reliability of those questions being used as stressors and their impact on nurses and paramedic staff. The findings synthesize what

is known from literature review about the experiences of nurses and paramedic staff working during novel pandemic crisis. Nurses have a high degree of intra-disciplinary association (Padgett, 2013) and have to work with multidisciplinary task teamsfocused on collaborative care, which is considered an important tactic to improve patient recovery (Oandasan, 2006).

Importance of health care systems has always been of importance in hospitals for many years. The care and concern expected from the job, working in teams, multidisciplinary approach, collaboration with doctors and patients is the key success for nurses and paramedic staff Petri (2010). Further petri described how alliance can simply be defined as the act of working together, but that in order for it to be effective, it needs to occur in an atmosphere of mutual trust and respect working together. There are cirtical elements for paramedic staff in this pandemic situation which may result into risking their lives to overcome this COVID-19 pandemic scenario.

The perception of physical, emotional and behavioral stress from the uncertainty of a pandemic led to psychological distress and fear among nurses working towards challenging conditions during a pandemic (Shih et al., 2007, Holroyd and McNaught, 2008, Chung et al., 2005). Front line nurses felt susceptible and worried about the infectious disease and their future health to prioritize resources and patient needs in a time where they had to deny services to some patients (Ives et al., 2009). The sense of helplessnessand fear of losing job was overwhelming for nurses as they were under extreme pressure and often feared that their services towards community was being affected by work demands and community fear generated by the pandemic (Lam and Hung, 2013, Chung et al., 2005). Despite the professional degree and association, the unfamiliarity of the pandemic environment created a sense of seclusion (Kim, 2018) and frustration among nurses.Additionally, families and relatives of patients were seen to be relying their emotions and trust more towards the parademic staff as they were the ones who were in direct connect to patients. (Holroyd and McNaught, 2008, Kim, 2018). Not having control over patient flow also generated both physical and psychological exhaustion (Kang et al., 2018). COVID-19 virus spread amongst some of the hospital further resulted in a more panic situation where pandemic created uncertainty and heightened anxiety and stress (Holroyd and McNaught, 2008, Koh et al., 2012)

At the core of the medical profession, nurses or doctors lies the very existence of patient and service to society (Nagai M, Morikawa Y, Kitaoka K, Nakamura K, Sakurai M, Nishijo 2011). This research found that nurses have a strong sense of duty towards patients, despite the sense of fear and exposure to virus, duty to care for patients becomes their first hand priority (Kumar Shiva and Mohammad, Dr. Siddique 2011). The duty here referred cannot be said as their legar obligation, it is the professional ethics and code of conduct of medical profession that the paramedic staff aspires to work diligently for the cause of pandemic situation. Although paramedic staff and nurses had a deep sense of wanting to continue to provide care as a result of their strong sense of duty and wanting to do the right thing, these qualities did not prohibit them from harbouring fears and concerns about the safety of themselves and their families. Fear of transmission and infectionof corona virus was also a one of the important factor in this study as this pandemic created a lot of dysfunctional roles to be performed by paramedic staff. (Bukhari et al., 2016, Koh et al., 2012, Speroni et al., 2015).

The organizational support and positivity was a key consideration for paramedic staff and nurses across studies in this research.Respondents looked to their respective hospitals to provide them with additional facilities and more motivation as to deal with COVID-19pandemic crisis. Understanding the best practices, more employee engagement, motivation, flexi working hours, trust, emotional strength and above all safety to be initiated by the hospital administrative and overall medical fraternity. (Cohen and Casken, 2011, Huang et al., 2020, Jones et al., 2017, Michaelis et al., 2009, Speroni et al., 2015)

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