

Emerging Resilience and Level of Compassion of Pediatric Emergency Nurses during the COVID-19 Pandemic

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ABSTRACT

Several studies had explored compassion and resilience, however, most of these studies focused on the relationship between resilience and compassionate fatigue, or resilience and self-compassion.

This study aimed to determine the level of emerging resilience and level of compassion of pediatric emergency nurses while caring for COVID 19 pediatric patients and the correlation between Compassion level and Emerging Resilience of nurses.

Participants were 190 emergency nurses conducted in Pediatric Emergency Center COVID-19 facility. The study data were collected utilizing the questionnaire comprised of demographics, Compassionate Scale and Brief Resilience Scale.

Statistically significant difference was found between the age variable of the nurses and “common humanity” sub-scale as well as years in service and sub-scale “Indifference items”. There was a significant difference between the education level of the nurses and their status of showing kindness to the patients ($p < .05$). When the subscales were added together, there was no significant difference between the Compassionate Scale total score and the baseline characteristics of the nurses. In terms of Brief Resilience Scale, a mean score of 3.18 (± 0.47) was found that showed the resilience level of the nurses as normal. Significant difference between educational status and brief resilience scale ($p < .05$) was found.

The level of compassion of the nurses was “moderate” and the Resilience was “normal resilient coping.” Nurses’ baseline data negatively predicted the level of compassion and the emerging resilience of Pediatric Emergency Nurses. There was no correlation between the Nurses’ Level of compassion with the Nurses’ level of resilience.

KEY WORDS: Compassion, Resilience, Compassion Fatigue, Child, Self-compassion, Covid-19

INTRODUCTION

In every country, regardless of their socio-economic development, nursing is considered to be the top first line dedicated profession in the prevention from diseases and alleviation of suffering during and after a treatment of any disease, including the COVID-19.^[1] The ramifications of this rapidly moving global pandemic are clear that the need for nurses has never been greater. When COVID-19 started and picked up exponential speed, nurses were touted as heroes.^[2] Historically, nurses have always played a vital role in infection prevention, infection control, isolation, containment, and public health, as initially advocated by Florence Nightingale rendering the care with capricious time.^[3,4] In response to this dire and unprecedented health crisis, nurses are doing what have been educated and prepared them to do.

However, there remains much about this current situation that is new and frightening. For one is the speed of the spread of COVID-19. In the fight against COVID-19, health care workers are working against the clock. The trajectory of this situation is such that in some areas, infection rates are doubling every 24 hours or so, and this is leading to increasing community anxiety manifesting in various ways including panic buying and hoarding of essential supplies.^[5] Despite being actively engaged in this fight against COVID-19, in a way that few other professions are, and despite appearing calm and professional; like everyone else, many nurses are also experiencing fear of the unknown and concern for what lies ahead, for themselves, their patients, colleagues and their own families and friends. In addition to being nurses, they are also parents, siblings, friends, and partners with all the worries and concerns shared by most people—providing for and protecting self and their families, and so in addition to caring for patients, the well-being of their families weighs heavily on nurses at this time.^[5]

The unprecedented COVID-19 pandemic continues to have a profound impact on nursing and healthcare services. The need for compassionate nurses and healthcare workers is critical. Compassion is the foundation of good medical care. It recognizes the concerns, distress and suffering of patients and families and acts to relieve them. It is based on listening, respect, empathy, communication, interpersonal skills, and knowledge and understanding of the patient's life and preferences. At its core, it means treating patients as people, not just illnesses.^[6]

Compassion does not mean sharing the suffering of the other: rather, it is characterized by feelings of warmth, concern, and care for the other, as well as a strong motivation to improve the other's wellbeing. Compassion is feeling for and not feeling with the other. Compassion, on the other hand, is conceived as a feeling of concern for another person's suffering

which is accompanied by the motivation to help. By consequence, it is associated with approach and prosocial motivation.^[7,8]

The internal sense of courage discovered within nursing during COVID-19 has given new meaning to the World Health Organization designated 2020 Year of the Nurse and the Midwife. The nursing workforce is likely to experience high rates of burnout, moral suffering, and attrition. In the face of moral adversity, there is a need for continued guidance on how to minimize these negative mental and emotional outcomes for nurses to maintain and enhance well-being, deliver quality patient care, and foster a culture of moral resilience.^[9] Healthcare workers are known for their stamina and emotional resilience in the workplace, however, COVID-19 comes with a new set of standards. The pressure of caring for patients is amplified in the setting of a virus with human-human transmission and no specific lifesaving treatment.^[10] Being able to confront these challenges without abandoning core values, personal commitments, and professional obligations is critical. For many nurses, emotional exhaustion or overload will be unavoidable in the context of COVID-19. Being able to attune to inner mental and emotional experiences in the moment and to respond skillfully to what is in front of the nurses creates the foundation for actions that are consistently informed by integrity. Unless health care organizations invest in systemic programs that enable these skills, the burden of responsibility falls to individuals.^[11]

The problems related to workplace adversity can be negative, stressful, traumatic, resulting in demanding situations or episodes of hardship for nurses. Despite all these challenges, resilience enables nurses to cope with their work environment and to maintain healthy and stable psychological functioning.^[12] Masten and Obradovic stated that resilience could be defined as being related to every type of word which is a positive component of the process for adapting to difficulties. Studies carried out accordingly have tried to define resilience

mostly with dealing with stress, competence, emotional intelligence, optimism, sense of humor, patience, tolerance, belief, and self-esteem. It was also mentioned that cognitive and problem-oriented coping skills are important precursors of resilience.^[13] Resilience is an imperative quality for nurses to possess because of the stressful nature of the profession of nursing.^[14]

Overall, COVID-19 epidemics has placed a huge burden on the health care system, and mainly on nurses who have faced the biggest challenges and concerns in their nursing profession towards the unprecedentedly outbreak of coronavirus worldwide.^[15] In order to cope with these challenges, nurses should have the resilience in the given situation.

The prevalence of COVID-19 is significantly lower in children than adults, but pediatric disease is likely underdiagnosed as a result of the high numbers of asymptomatic or mild cases.^[16] Pediatric Emergency Center (PEC) in Al Sadd of Hamad Medical Corporation, Doha Qatar has been delegated as a COVID-19 facility for the treatment of children at the start of April 2020. It is part of the healthcare sector's comprehensive plan to ensure that COVID-19 pediatric patients are given the best medical care. Al Sadd PEC is a state-of-the-art medical facility and is enabling HMC (Hamad Medical Corporation) to provide high-quality care for young patients with COVID-19 in one single facility.^[17] This pose a great challenge to PEC nurses to provide high quality care. Like any other COVID Facilities, due to personal risk of contracting COVID-19, nurses carefully coordinate care to minimize exposure. Nursing care is being clustered hence patient's contact that is part of being a nurse is taken away. Given the anonymity caused by extensive PPE (Personal Protective Equipment) use, including face shields and masks, preexisting challenges with making ED (Emergency Department) patients aware of individual care-team roles are

exacerbated.^[12] Resilient nurses would learn to overcome these difficulties and develop better coping mechanisms to address stress. Compassion on the other hand and caring are the keys to change, and targeted acts of kindness are a motivating force.^[18]

Peters and Calvo (2014) describe compassion as the act of being sensitive to the suffering of others. The authors further note that compassion represents a form of affiliation that motivates us to help those in need. It is in this way that "compassion triggers positive affect in the face of suffering and therefore contributes to resilience and well-being."^[19]

Resilience has been proposed as important for reducing the likelihood of 'compassion fatigue' which occurs among workers who deal with high trauma patients. Among patients, compassion has the power to increase coping and healing.^[20] In the study of Zessin and colleagues (2015), they concluded that Compassion is related to higher levels of well-being. Another study supports the notion that individuals who are high in self-compassion or compassion for others respond to stress in a healthier way than those who are lower in such constructs.^[17,21]

Several studies had explored compassion and resilience. However, most of these studies focused on the relationship between resilience and compassionate fatigue, or resilience and self-compassion. Moreover, most participants of previous studies are focused on the patients as respondents. This study, on the other hand, dealt more on the relationship of compassion and resilience of nurses during the pandemic that is new to humanity. Therefore, this study aimed to determine the emerging resilience of PEC nurses and the level of compassion while rendering direct patient care to pediatric patients amidst this fierce pandemic and how the emerging resilience of nurses correlate with their level of compassion. Furthermore, the influence of the nurses' demographic data on their compassion level and emerging resilience was examined.

MATERIALS AND METHODS

This is a descriptive correlational study where the emerging resilience of nurses were identified as well as their compassion level while caring for pediatric COVID 19 patients. The correlation of emerging resilience of pediatric nurses with the level of compassion while rendering care to pediatric COVID 19 patients during the COVID 19 pandemic will be further determined.

There were 190 nurse who voluntarily participated in the study. Using purposive sampling with inclusion criteria of being a Pediatric Emergency Nurses and the participant should have experience of providing care to suspected or confirmed COVID 19 pediatric patients. The total number of eligible nurses are 190 and they are all included in the sampling taking into consideration those that are non-responsive which is perceived to be about 20-25 percent of the total.

In determining the nurses' level of compassion, the "Compassionate Scale" self-report questionnaire was utilized. This tool had been validated [22,23] and is available online for research and studies, following updated recommendations from authors with proper citations. This scale, which was developed by Pommier (2011) and of which Turkish validity and reliability test was conducted by Akdeniz and Deniz (2016), is a 5-point Likert-type scale (1 = Never, 2 = Rarely, 3 = Occasional, 4 = Frequent, 5 = Always) and consisted of 4 sub-dimensions such as kindness, Common Humanity, mindfulness, and indifference with 16 items in total. The indifference sub-dimension of the scale was measured by reversion method. After this measurement, the mean of the total score was calculated. As the total score obtained from the scale increased, the compassion level also increased.[24]

Moreover, in determining the level of resilience of the nurses, this study utilized Brief Resilience Scale by Smith and colleagues (2008), also a validated tool. [25,26] It is one of the three highly reliable

and valid measures of resilience identified by Windle et al., (2011) in their review of 19 resilience scales. This scale was used to assess an individual's ability to bounce back or recover from stress and consisted of six items, three were positively worded items, while the other three were negatively worded items. BRS score of 1.00-2.99 was interpreted as low resilience, 3.00-4.30 Normal resilience and 4.31-5.00 as high resilience. All these six items measure the individual capacity to come back from the adversity of life.

This study was conducted between November 1, 2020 and December 31, 2020 in Pediatric Emergency Center- Al Sadd COVID-19 facility of Hamad Medical Corporation, Doha Qatar. Data were gathered through an online survey questionnaire sent to all participants. After the purpose of the study was explained by the researchers to the nurses who were in direct care with COVID-19 patients through a telephone conversation, voluntary participation of the nurses was asked. A link to the survey questions was then provided and participants were asked to respond to the survey. If participants chose to complete the questionnaire, then completion was considered approval of participation. It was ensured that the duration of the research would not affect the working hours of the nurses and preferably done during their break time. The time to fill in the survey was calculated as approximately 10-15 min. This was a descriptive study conducted in Pediatric Emergency Center- Al Sadd COVID-19 facility of Hamad Medical Corporation, Doha Qatar, after gaining approval from Hamad Medical Corporation Institutional Review Board (MRC-01-20-802).

STATISTICAL METHODS

Descriptive statistics was used to summarize and determine the sample characteristics and distribution of various considered parameters related to demographic characteristics. Quantitative mean/median scores were analyzed using unpaired t test

or Mann Whitney U test as appropriate. Quantitative scores measured across three independent groups were compared using one-way analysis of variance (ANOVA) or Kruskal–Wallis test as appropriate. Associations between two or more qualitative data and outcome variables (demographic characteristics vs categorized resilience and compassion scores: (low, normal, and high) were assessed using Chi-square (χ^2) test or Fisher Exact test as appropriate. Pearson correlation coefficient was used in determining the linear relationship between the nurses emerging resilience their level of compassion during the pandemic as well as nurses' demographic and other related features. Linear regression was applied to evaluate and assess the effects of predictor variables such as nurses' demographic and other related features (age, years in service in nursing profession, educational degree, designation) on mean resilience and compassion scores. All P values presented were two tailed, and P values <0.05 were considered as statistically significant. All Statistical analyses were done using statistical packages using statistical packages SPSS version 27.0 (Armonk, NY: IBM Corp) and Epi-info (Center for Disease Control and Prevention, Atlanta, GA) software.

RESULT

The study sample consisted of 190 nurses from Pediatric Emergency Center Covid Facility. The baseline characteristics of participants is presented in Table 1 to include age, years of experience in nursing profession, degree in nursing and designation. In terms of age, the highest number of participants belonged to 31-35 years age group that is, 42.6 %. Thirty-eight (38) or 20% were between 36-40 years of age, 49 or 15.3 % belonged to both 41-45 and 46-50-years age group, 6.8 %, or only 13 participants belonging to 25-30 years age group. In terms of years of service in the nursing profession, most of the participants had 11-15 years of service that comprised 67 or 35.3 % of the total participants, 62 or 32.6 % had 6-10 years of service and 50 or 26.3 % had 16-20 years of service, with 11 or only 5.8 %. participants having 1-5 years of service in the nursing profession. Most of the participants, 82.1 % or 156 graduated with bachelor's degree in Nursing, 31 or 16.3 % graduated with a Diploma in Nursing and 3 or 1.6% had master's degree in Nursing. As for the frequency distribution of the participants based on their designation, the largest number were staff nurses, with 170 participants or 89.5% participants and only 20 or 10.5 % had a designation of Charge Nurse.

Table 1: Baseline Characteristics of Pediatric Emergency Nurses (n=190)

	Frequency	Percent (%)
Age group (in years)		
25-30	13	6.8
31-35	81	42.6
36-40	38	20.0
41-45	29	15.3
46-50	29	15.3
Nursing Profession experience (in years)		
1-5	11	5.8
6-10	62	32.6
11-15	67	35.3
16-20	50	26.3
Degree (in Nursing)		
Diploma	31	16.3
Bachelor's Degree	156	82.1
Master's Degree	3	1.6
Designation		
Staff Nurse	170	89.5
Charge Nurse	20	10.5

Table 2: Mean Score of the Compassion Subscale and Compassion Scale Total Score of Pediatric Emergency Nurses (n=190)

	Mean	S.D.	Median	Min	Max
Kindness	17.15	2.19	17.00	11.00	20.00
Common Humanity	15.09	2.97	15.00	4.00	20.00
Mindfulness	17.23	2.03	18.00	9.00	20.00
*Indifference items	14.25	3.04	14.00	7.00	20.00
Compassion Total Score	63.74	6.03	64.00	45.00	75.0
Resilience	3.18	0.47	3.2	1.67	4.50

* Reverse coded when mean was calculated

Regarding the descriptive statistics of other key study variables, Table 2 shows the mean size of each of the subscales which comprised of 4 questions each. "Kindness Subscale" had a mean of 17.15 (± 2.19), and the mean of the "Common Humanity Subscale" was 15.09 (± 2.97), as for "Mindfulness Subscale" mean, it was 17.23 (± 2.03). "Indifference Subscale" was

reversely coded that had a mean of 14.25 (± 3.04). Accordingly, the highest mean score of the Compassionate subscale is mindfulness and the lowest is indifference items. The mean of Compassion Scale when the subscales were added together was 63.74 (± 6.03). As for the Brief Resilience Scale mean score of 3.18 (± 0.47) was found.

Table 3: Mean scores of the total and sub-scales of Compassionate Scale in relation to the baseline characteristics of Pediatric Emergency nurses

	Kindness	Common Humanity	Mindfulness	Indifference items	Compassionate Total Score	Brief Resilience Score
Age						
25 -30 years	16.30 \pm 2.05	15.84 \pm 2.64	17.07 \pm 2.01	14.38 \pm 3.90	63.61 \pm 5.51	3.32 \pm 0.63
31-35 years	16.97 \pm 2.10	14.53 \pm 3.04	17.14 \pm 1.85	14.01 \pm 3.23	62.66 \pm 5.64	3.22 \pm 0.36
36-40 years	17.34 \pm 2.68	14.71 \pm 3.20	17.44 \pm 2.28	14.39 \pm 3.07	63.89 \pm 6.70	3.25 \pm 0.51
41-45 years	17.44 \pm 2.27	15.65 \pm 2.90	17.34 \pm 2.59	14.41 \pm 2.29	64.86 \pm 6.81	3.09 \pm 0.61
46-50 years	17.51 \pm 1.59	16.27 \pm 2.28	17.17 \pm 1.60	14.51 \pm 2.86	65.48 \pm 5.33	3.01 \pm 0.42
	<i>P</i> =.40	<i>P</i> =.03	<i>P</i> =.94	<i>P</i> =.92	<i>P</i> =.19	<i>P</i> =.11
Years of service in Nursing profession						
1-5 years	16.18 \pm 1.94	16.72 \pm 2.93	17.90 \pm 1.51	12.81 \pm 3.48	20.00 \pm 3.31	3.38 \pm 0.52
6-10 years	17.24 \pm 2.02	14.66 \pm 2.81	16.88 \pm 1.90	14.85 \pm 2.94	19.56 \pm 2.56	3.27 \pm 0.43
11-15 years	16.88 \pm 2.44	14.80 \pm 2.94	17.35 \pm 2.12	13.59 \pm 3.25	18.92 \pm 2.58	3.15 \pm 0.43
16-20 years	17.64 \pm 2.00	15.66 \pm 3.10	17.36 \pm 2.14	14.7 \pm 2.54	18.40 \pm 3.21	3.08 \pm 0.55
	<i>P</i> =.12	<i>P</i> =.06	<i>P</i> =.32	<i>P</i> =.027	<i>P</i> =.10	<i>P</i> =.08
Educational Status						
Diploma in Nursing	18.32 \pm 1.93	14.22 \pm 3.30	17.45 \pm 1.62	14.03 \pm 3.06	64.03 \pm 4.90	3.31 \pm 0.48
Bachelors in nursing	16.91 \pm 2.18	15.30 \pm 2.84	17.18 \pm 2.12	14.24 \pm 3.04	63.64 \pm 6.26	3.17 \pm 0.4
Masters in Nursing	18.00 \pm 0.00	13.00 \pm 5.19	17.66 \pm 1.15	17.00 \pm 2.00	65.66 \pm 5.85	2.50 \pm 0.76
	<i>P</i> =.003	<i>P</i> =.08	<i>P</i> =.75	<i>P</i> =.27	<i>P</i> =.81	<i>P</i> =.01
Designation						
Staff Nurse	17.10 \pm 2.18	14.98 \pm 3.03	17.14 \pm 2.03	14.22 \pm 3.06	63.45 \pm 5.91	3.18 \pm 0.46
Charge Nurse	17.60 \pm 2.30	16.05 \pm 2.30	18.05 \pm 1.87	14.45 \pm 2.94	66.15 \pm 6.71	3.14 \pm 0.52
	<i>P</i> =.34	<i>P</i> =.13	<i>P</i> =.05	<i>P</i> =.76	<i>P</i> =.05	<i>P</i> =0.72

The mean scores of the total and sub-scales of Compassionate Scale in relation to the baseline characteristics of Pediatric Emergency nurses are given in Table 3. As for resilience, statistically significant difference between educational status and brief resilience scale total was found

($p < .05$). In terms of resilience frequency distribution, 23.7% of nurses had low resilience, 75.8% had moderate resilience and only 0.5% had High resilience. Pearson's correlation analysis revealed $r = -.069$ at P value 0.345 between nurses' level of compassion and emerging resilience.

Table 4: Influence of nurses' baseline characteristics on nurses' compassion level.

Predictors	B	SE	β	T	P value	CI
(Constant)	59.776	3.016		19.821	0.000	53.827- 65.726
Age (in years)	0.895	0.522	0.179	1.716	0.088	-0.134 - 1.925
Years in Service in Nursing profession	-0.399	0.699	-0.059	-0.571	0.569	-1.778 - 0.980
Degree	0.195	1.183	0.013	0.165	0.869	-2.138- 2.529
Designation	1.933	1.523	0.098	1.270	0.206	-1.071- 4.938

Note: Dependent Variable: Compassion Scale total scores

R Square: .037

Abbreviations: CI, confidence interval; SE, standard error; β , standardized regression coefficient.

Table 5: Influence of nurses' baseline characteristics on nurses' emerging resilience.

Predictors	B	SE	β	T	P value	CI
(Constant)	4.057	0.229		17.717	0.000	3.605- 4.509
Age (in years)	-0.067	0.040	-0.169	-1.678	0.095	-0.145-0.012
Years in Service in Nursing profession	-0.093	0.053	-0.174	-1.757	0.081	-0.198-0.011
Degree	-0.332	0.090	-0.277	-3.697	0.000	-0.509--0.155
Designation	0.181	0.116	0.117	1.562	0.120	-0.047 0.409

Note: Dependent Variable: Resilience Scale scores
r square: 0.108

Abbreviations: CI, confidence interval; SE, standard error; β , standardized regression coefficient.

The correlation between the age variable of the nurses and subscale “common humanity” as well as years in service and sub-scale “Indifference items” in addition to the correlation found between the education level of the nurses and subscale “kindness” and resilience showed further analysis was warranted. In table 4 and Table 5, multiple linear regression was calculated to see how compassion level and emerging resilience were predicted in terms of baseline characteristics of the nurses that were used in the study.

The mean Compassion Scale total was 63.74 (\pm 6.03) that showed the compassion level of Pediatric Emergency Nurses at the height of the first wave of the Covid 19 pandemic when the study was conducted was interpreted as moderate compassion level. Statistically significant difference was found between the age variable of the nurses and “common humanity” sub-scale as well as years in service and sub-scale “Indifference items” ($p < .05$). In addition, there was a statistically significant difference between the education level of the nurses and their status of showing kindness to the patients ($p < .05$). When the subscales were added together, there was no statistically significant difference between the Compassionate Scale total score and the baseline characteristics of the nurses. In terms of Brief Resilience Scale, a mean score of 3.18 (\pm 0.47) was found that showed the resilience level of the nurses as normal. Statistically significant difference between educational status and brief resilience scale ($p < .05$) was found. All requested variables were entered, and it was found that age, length of service in nursing profession, degree and designation negatively predicted the level of compassion (Table 3) and the

emerging resilience (Table 4) of Pediatric Emergency Nurses at $r^2.037$ and $r^2 .099$, respectively. There was no correlation between the nurses’ compassion level and resilience level per Pearson Correlation $r=.069$ at P value 0.345.

DISCUSSION

In this study, the emerging resilience of nurses and the level of compassion while rendering direct patient care to pediatric patients amidst this fierce Covid 19 pandemic were determined and if the nurses’ baseline data such as age, length of service in nursing profession, nursing position and educational attainment influenced resilience and compassion level. Additionally, the study also examined the correlation between emerging resilience and the level of compassion. For these purposes, 190 nurses were studied.

Compassion is the sensitivity shown to understand another person's suffering, combined with a willingness to help and to promote the wellbeing of that person, to find a solution to their situation. Compassion not only allows nurses to communicate therapeutically with the patient, but also provides a high-quality care.^[27] Resilience on the other hand is a "positive adaptation" after a stressful or adverse situation. Resilience enables nurses to positively adapt to stressors and adversity. It is a complex and dynamic process which varies over time and context and embodies both individual attributes and external resources. Sustaining nurse resilience requires action and engagement from both individuals and organizations.^[28]

Overall, the compassion level of nurses was moderate 63.74 (\pm 6.03), and the resilience level was normal resilient coping 3.18

(± 0.47). The compassion subscale mean score were as follows: Kindness 17.15 (± 2.19), Common Humanity 15.09 (± 2.97), Mindfulness 17.23 (± 2.03) and Indifference 14.25 (± 3.04). The highest score of the subscale obtained in this study was mindfulness followed by kindness and common humanity with indifference as the lowest that is in line with the study conducted by (Karakoc et al. 2021).^[29] Kindness was conceptualized in terms of being caring toward oneself and concerned for others, while it reflects the kindness of nurses for patients. Common humanity means being aware that people are not perfect and can make mistakes. Mindfulness reveals that the individual takes a balanced approach towards his negative emotions and indifference was expressed how important these sub-dimensions shown by nurses to patients.^[29] Considering the highest score, it can be said that the compassion level of nurses during the initial outbreak of the Covid 19 pandemic was moderate. This is consistent with the study conducted by Arkan et. al. (2019) where they found that the nurses' mercy levels were moderate.^[7] This could be attributed to the timing the study was conducted as opposed to the high level of compassion found in a study in Spain conducted at dire of the Covid 19 which showed nurses had higher Compassion Satisfaction scores, even higher than those shown by nurses in studies conducted in the same Spanish setting prior to the pandemic. The authors pointed out that some individuals may feel good when working hard and seeing how others benefit from their own efforts. During the COVID-19 crisis, patients and families are experiencing a very high level of suffering due to physical symptoms, but also due to isolation, fear, and uncertainty. The authors further believed that the significant effort that nurses make to care for patients in a close and unconditional way has resulted in them experiencing deep satisfaction for the good they have done to their patients.^[30] Society has reacted to the work of nurses with widespread expressions of genuine

gratitude, which could serve to reinforce compassion in professionals who put their lives at risk to help individuals suffering from COVID-19.^[31] This appreciation somehow contributed to the motivation nurses had to further connect with their patients amidst the new situation they were in.

The compassion level in this study further showed its height at age 46-50 years 65.48 (± 5.33), that is consistent with the study conducted on 490 university students where it was determined that as the age of the students increased, the level of compassion increased.^[32] In addition, nurses with Master's degree 65.66 (± 5.85) and charge nurses 66.15 (± 6.71) had higher compassion level that is supported by previous the studies where it was reported that, the level of education and the level of empathy to the caregiving patient affected the CS total score and that satisfaction with age and profession affects the level of compassion where compassion level of nurses who are postgraduate were found to be higher than other nurses.^[7,33] Hence, level of education and higher position in nursing have a positive effect in the compassion level of nurses that could be associated with the courses and workshops these nurses may have already attended that further strengthened their skills pertaining to compassion.

The moderate level of resilience in this study is in accordance with the international study which identified nurses working in hospitals as having moderate levels of personal resilience.^[34] Contrary to the study conducted by Labrague L.J. et.al. (2020) that showed a moderate level of resilience among front line nurses and suggested that a high level of self-efficacy and education, as well as having a positive coping style and choosing a healthy lifestyle may increase nurses' resilience, this study showed nurses with Master's degree have lower level of resilience with 2.50 level.^[35] This could be attributed to the under-representation of nurses with master's degree who participated in the study.

However, in this study, nurses aged 25-30 years had 3.31(\pm 0.63) resilience level and nurses aged 46-50 had 3.01(\pm 0.63) resilience level as seen in Table 3 as opposed to the study conducted by Ang S.Y. et al (2018) where it was found that younger nurses had more probability to have low resilience, as compared to older nurses. Length of service further showed minimal difference in the resilience level where nurses with 1-5 years' experience had 3.38(\pm 0.52) resilience level while nurses with 16 to 20 years' experience had 3.08(\pm 0.55) level of resilience.^[36] This could be influenced by the younger generation's ability to cope with the sudden outbreak of the coronavirus disease 2019(Covid-19) that resulted to rapidly changing pandemic landscape of which everyone is caught unaware of and the time this study was conducted when the pandemic just started. The current study shows no correlation between the nurses' compassion level with their resilience level as opposed to the study conducted by Unjai, S., et.al. (2022) where Compassion satisfaction and resilience were positively correlated. However, in this study, nurses baseline data negatively predicted their level of compassion and the merging resilience in line with the study of Unjai,S.,et.al. (2022) where relationships between compassion satisfaction and resilience and other correlates (personal factors, psychological factors, and work-related factors) were inconsistently reported.^[37] This could be ascribed to the difference in setting where the study was conducted.

CONCLUSION

In line with the findings obtained in this study, the level of compassion of the nurses was "moderate" and the Resilience was "normal resilient coping." Nurses' baseline data negatively predicted the level of compassion and the emerging resilience of Pediatric Emergency Nurses. There was no correlation between the Nurses' Level of compassion with the Nurses' level of resilience. In this context, to increase the

compassion level of nurses and enhance their resilience, the following steps are recommended.

Continuous in-service training and workshops should be offered by the hospitals pertaining to compassion and resiliency to nurses.

Hospitals must adopt programs that promote compassion and resiliency leading to patient centered care.

Conduct similar study in different hospitals. Share the findings of the study to the hospital management that could be utilized as guide in planning response to any other pandemic in the future.

Include the concept of compassion and resilience in the nursing undergraduate curriculum and teach prospective nurses how to enhance their level of compassion and resilience through simulation activities that could contribute to the promotion of compassion and resilience.

Declaration by Authors

Ethical Approval: Approved

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Authors' Contributions:

Study Conception and design

Nora G. Sendad, Rhenna Gedalanga and Roshini Abraham conceptualized and worked on the design of the study.

Data Collection

Ameena Sheak and Neha Babu completed and facilitated the data collection.

Data Analysis and Interpretation

Nora G. Sendad, Rhenna Gedalanga and Roshini Abraham contributed to literature search, data analysis and finalized data interpretation of the study.

Drafting of the Article

Nora G. Sendad methodically drafted the manuscript.

Critical Revision of the Article

Nora G. Sendad critically reviewed the article. Each of the five authors contributed to manuscript revisions and important intellectual content and approved the final manuscript as submitted.

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