

Relationship Between Nursing Burnout And Second Victim Phenomenon Among Clinical Nurses: A Cross-Sectional Study

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Abstract

Background: Nursing burnout and second victim phenomenon (SVP) are crucial health issues that have a negative impact on nurses' psychological state, job performance, and patient safety. The clinical environment is frequently under high pressure, overloaded with work, and at risk of unfavorable patient situation. **Objective:** To explore the relationship between nursing burnout and the second victim phenomenon among clinical nurses serving in clinical teams offered by hospitals in Karachi, Pakistan. **Methods:** The cross-sectional correlational study was conducted at selected public & private hospitals of Karachi, Pakistan. The sample consisted of 80 nurses, selected by convenience sampling technique. The Maslach Burnout Inventory (MBI) and Second Victim Experience and Support Tool (SVEST) were used to collect all the data. The SPSS version 26 was used to analyze data. **Results:** The participants experienced moderate-to-high nursing

burnout, particularly emotional exhaustion, with moderate second-victim experiences. Nursing burnout was significantly positively associated with the second-victim phenomenon ($r = .62$, $p < .001$) and explained 46% of its variance. Higher burnout was significantly observed among female and younger nurses compared with their counterparts ($p < .05$). **Conclusion:** Clinical nurses who had higher occupational stressors associated with burnout were noted to be more susceptible to psychological distress after negative clinical events.

Introduction

The largest professional group in health systems is the nurses who play a crucial role in delivering safe, continuous and patient-centered care. Nonetheless, the dynamic and stressful healthcare delivery system, increased expectations of nurses, shortage of nurses, and demanding emotionally patient care, are playing an important role in the stress and psychological burnout among nurses (Ali Y et al., 2025). The situation is particularly dangerous because nurses can be literally exposed to severely ill individuals, suffering and even death, ethical problems, and the revolting and depressing encounters with patients and their families that are compulsory to the job of a nurse. These stressors

to nursing burnout and may result in the solution to become a major nursing occupational health problem everywhere in the world .

Nursing burnout is often referred as a mental syndrome brought about by the persistent high level of stress in the workplace and it is characterized by three symptoms namely, emotional burnout, depersonalization and lessening personal accomplishment (Maslach and Jackson, 1981). The emotional exhaustion is the depletion of emotional resources of stress after passing through long-term stress, and the depersonalization is negative and detached attitudes towards patients and professional duties. Less personal accomplishment is less personal sense of competency and effectiveness at the work place. Previously burnout was considered to have solely been a mental issue to the individual but the present-day studies are indicating that it is currently becoming a top health issue under the healthcare sector that includes workload, organizational environment, personnel, management support and provisions.

Nurses all over the world still report one of the highest incidences of burnout. Among nurses in the acute care environment, the recent systematic reviews have indicated that moderate to high levels of burnout in parts of high workload, inefficient staffing, and unrelenting emotional demands are common (Dall'Ora et al., 2020; Ali Y et al., 2025; Jun et al., 2021). The impact of healthcare worker burnout is far-reaching, affecting not only the healthcare worker, but the healthcare organization as well, including a decrease in job satisfaction, increase in absenteeism, intention to leave the organization, lower clinical performance, and poorer patient safety. Moreover, the signs that burnout correlates with a higher risk of medication errors, lack of communication skills and reduced quality of patient care, have been noted (Hall et al., 2016).

The low and middle-income countries (LMIC) have experienced more nursing burnout because of the constraints in the medical system in terms of resources. Most healthcare environments in LMICs are faced with problems related to low ratios of nurses to patients, inadequate professional support systems, insufficient mental health support opportunities, excessive workload etc compared to the high-income countries. These structural issues can add to the stressors the experience of working as a nurse, and can diminish the nurse's capacity to go back to their personal space and recuperate from emotionally demanding clinical experiences. Hence, the concept of burnout needs to be investigated in LMIC settings, too, since the findings of HCWorkers in countries with higher economic power might not be generalizable to the countries with a lower one.

All these health complications with healthcare are common in Pakistan, a third world country in south Asia. Chronic nursing staff shortage, lack of balance between health care professionals, large influx of patients and the lack of institutional psychological health support programmes are all diseases common to the health care system in Pakistan. In tertiary hospitals, nurses frequently have to deal with patients who are in very severe conditions and they are exposed to operate in a limited resources environment besides facing professional responsibility, emotional needs as well as organization needs. It has been identified that there is a considerable amount of occupational stress and burnout with particular focus on those nurses working in emergency department, intensive care unit and other acute care clinics according to the previous studies based on Pakistani Nurses. But almost all the previous studies conducted in Pakistan have been restricted to the prevalence of burnout, job satisfaction and family/workplace environment associated with the above, without delving deep into psychological implications after encountering negative clinical experiences.

A significant psychological impact of any negative health care experiences is the second victim phenomenon (SVP). Wu (2000) was the first to coin the term, second victim, in 1990, when he was referring to the healthcare worker experiencing emotional and psychological mood imbalances following a suddenly undesirable event or medical error. The problem of a patient, most commonly, is a healthcare incident, even though the individual(s) who committed the incident during health care are often the one impacted by guilt or shame, anxiety or fear, perceived professional impact, loss of

professional trust or emotional stress. In particular, nurses, who have continuous contact with patient bedsides, might be more susceptible to SVP as they often deal with medication administration, watching for deterioration, reacting to emergencies, and involving in end-of-life care.

According to previous studies, adverse health events like medication errors, a patient's deterioration, and unexpected death can involve second victim experiences in healthcare professionals (Seys et al., 2013; Scott et al., 2010). SVP can have a detrimental impact on professional confidence, clinical decision-making, psychological health and future work if not dealt with by appropriate organization support. While some international recognition has been gained, few healthcare systems have supporting resources like non-punitive reporting systems, peer-support programs, counselling and other structured resources to assist healthcare workers in their recovery process following adverse events.

Notably, among these two occupational turmoil concerns, nursing burnout and SVP may be co-occurring as a co-morbidity of psychic experiences. The fatigue effect on individuals might lead to increased vulnerability towards SVP because of reduced emotional deficiencies, concentration, capacity to cope and professional self-confidence. On the other hand, the feeling of SVP following a negative triggering event could heighten emotional burnout, add to feelings of inadequacy in their careers and cause additional psychological distress and negativity. The connection can be considered a vicious circle wherein job-related stress can cause burnout, which reduces and coping resources, which reduces adverse clinical events, which in turn raises SVP, which raises the psychological strain, etc.

Two possible theories which may explain the association between burnout and SVP are the Conservation of Resources (COR) Theory and the Job Demands-Resources (JD-R) Model. The COR theory describes individuals as experiencing psychological stress due to a perceived loss of or a threat to valuable psychological resources such as emotional, psychological and interpersonal needs (Hobfoll, 1989). Workload demands, negative clinical experience and the many demands of the nursing practice are also repeated causes of gradual erosion of psychological resources, which results in work burn out and work distress experiences. Likewise, it is predicted that the combination of high job demands and low organizational resources are related to a higher risk of experiencing psychological exhaustion and burnout (Bakker & Demerouti, 2007).

Although enough studies have been conducted to investigate burnout and SVP in the country and internationally, there are still other gaps in this knowledge. In the first, most previous studies have investigated burnout and SVP separately, instead of accepting them as an interrelationship between nurses. Second, the available evidence is predominantly based on the high-income country settings, and less evidence is available on the LMICs health care settings. Third, there are very few studies on the phenomenon of second victimization among Pakistanis nurses. In addition, no correlational study has been found which has looked at the correlation between SVP and nursing burnout among clinical nurses in both public and private hospital in Pakistan.

This gap is important because it can be used to develop specific interventions to lessen nurse burnout, improve patient safety and a supportive clinical culture in which the nurse will be able to operate at the point of care. The article and the data mined out of the healthcare system in Pakistan can assist the nursing leaders, educators, decision makers and administrative teams at hospitals to devise such strategies as peer support, psychological support programs, resilience training and safe reporting cultures.

This current research, therefore, aimed to examine the relationship between burnout of clinical nurse and the second victim in both Karachi public and private tertiary care hospitals in Pakistan. This paper has covered the interplay of the two negatively in relation to jobs in order to provide justification to tackle the problem of psychological wellbeing of the nurses and patient safety concerns in a low resource setting.

METHODS

The research was a correlational quantitative study with cross sectional design to investigate the correlation of nursing burnout and the second victim phenomenon (SVP) in the tertiary care setting clinical nurses. Correlational approach was employed since the key question that needed to be answered related to how strong and in which directions the relationship between nursing burnout and the second victim experiences of the nurse was. The study was carried out in public and private Tertiary care Centre of Karachi Sindh Pakistan. The sampling was done at the Medical, Surgical, Emergency, Intensive Care Unit (ICU), Coronary Care Unit (CCU) wards, Pediatric ward and Obstetrics and Gynecology wards where the nurse is regularly involved in the clinical needs of the work and adverse events with patients. Three months of November, 2025 to January, 2026 were spent on data collection process. The survey questionnaires were distributed during the patient care activity without disturbing the same and approval by respective nursing administration during working hours. The study setting was chosen based on the public/ private tertiary care hospitals where the target population was identified as the direct services provider through their registered nurse in charge of patient care.

Sample Size Calculation

The obtained value was the calculation of the required amount of sampled by the use of GPower software 3.1.9.7, Pearson correlation analyzed.

The following assumptions were used:

Statistical test: Bivariate Pearson correlation.

Effects size (r) to be expected: 0.30 (medium effect).

Alpha level (α): 0.05

Statistical power ($1-\beta$): 0.80

Two-tailed test

G*Power decided that the necessary number was 82. After considering at the planning stage the feasibility of getting participants to participate in the study, and the availability of registered nurses that could be recruited during the period of data collection, the final sample consisted of 80 RNs which allowed for a calculation of adequate statistical power to detect a moderate association between nursing burnout and the second victim phenomenon.

Sample Size = 80 nurses

Sampling Technique

The participants were recruited using convenience sampling since it was a non-probability method of sampling. All nurses who fulfilled the eligibility criteria to qualify as participants and were within reach during the data collection period were contacted. The nurse population was limited to the ones who fulfilled the following criteria:

The study included registered nurses registered with Pakistan Nursing and Midwifery Council (PNMC) working in tertiary-care public or private hospitals in Karachi, with at least one year of clinical experience and direct patient contact. Eligible nurses worked in medical-surgical, ICU, CCU, emergency, pediatric, or obstetric departments, could understand English, and provided informed consent. Nursing students, administrative staff, and nurse managers/supervisors without direct patient contact, nurses with less than one year of experience, those on leave, and those unwilling to participate or submitting incomplete questionnaires were excluded.

Ethical Considerations

The Institutional Research Ethics Committee (IREC) of Ikhlas College of Nursing and allied health sciences, Peshawar, Pakistan gave ethical clearance before conducting the study.

Statistical Analysis

Data were analyzed using IBM SPSS Statistics version 26.0, with questionnaires screened for completeness, consistency, missing data, and entry errors. Normality, homogeneity, and multicollinearity assumptions were assessed using appropriate statistical tests, while internal consistency was confirmed using Cronbach's alpha (MBI = 0.89; SVEST = 0.91). Descriptive statistics, independent-samples t-test, one-way ANOVA with Tukey HSD, and effect sizes were used to compare study variables across participant characteristics. Pearson's correlation assessed the relationship between burnout and the second-victim phenomenon, while multiple linear regression identified independent predictors of second-victim experiences. Statistical significance was set at $p < 0.05$, with results reported using 95% confidence intervals and APA 7th edition guidelines.

RESULTS

Participant Characteristics

There were 80 registered nurses in the study. The median age of the respondents was 33.4 years $\pm$ 7.8 years, mostly female nurses (68.7%). Forty-five (45.0%) had the 1–5-year experience in clinical practice and fifty-seven and a quarter (57.5%) of them were working in public sector hospitals. Most of the respondents had indicated high demand clinical area which included medical, surgical, emergency and intensive care.

Table 1

Descriptive Statistics and Reliability Analysis of Study Variables (N = 80)

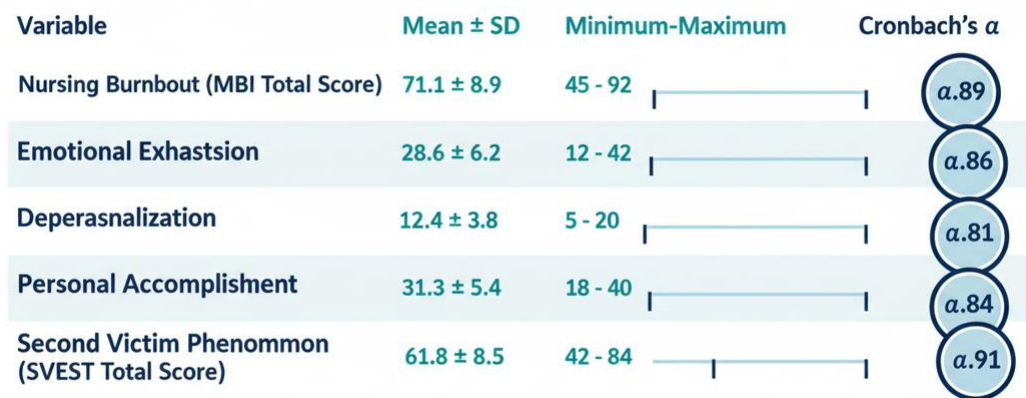
Variable	Mean SD	$\pm$ Minimum– Maximum	Cronbach's α
Nursing Burnout (MBI Total Score)	71.1 $\pm$ 8.9	45–92	.89
Emotional Exhaustion	28.6 $\pm$ 6.2	12–42	.86
Depersonalization	12.4 $\pm$ 3.8	5–20	.81
Personal Accomplishment	31.3 $\pm$ 5.4	18–40	.84
Second Victim Phenomenon (SVEST Total Score)	61.8 $\pm$ 8.5	42–84	.91

Note. MBI = Maslach Burnout Inventory; SVEST = Second Victim Experience and Support Tool; α = Cronbach's alpha.

Explanation

The correlation test for the present sample revealed good internal consistency in the reliability analysis with overall results of excellent reliability in both instruments. Results for the Cronbach's alpha for each performance instrument indicated good internal consistency for the MBI with a value of .89 and for the SVST with a value

of .91. The mean scores revealed a moderate level of burnout among the nurses who participated and their level of second victim experiences.



Note. MBI = Maslach Burnout Inventory; SVEST = Second Victim Experience and Support Tool; α = Cronbach's alpha

Figure 1 Descriptive Statistics and Reliability Analysis of study Variable

(N=80)

Table 2 Independent-Samples t-Test Comparing Burnout and SVP Scores by Gender (N = 80)

Outcome Variable	Male (n = 25) Mean $\pm$ SD	Female (n = 55) Mean $\pm$ SD	T (78)	P	Mean Difference	Cohen's d	95% CI
Burnout Score	67.4 $\pm$ 9.3	72.8 $\pm$ 8.4	-2.49	.015	-5.40	0.62	-9.71 to -1.09
SVP Score	58.2 $\pm$ 8.7	63.5 $\pm$ 8.1	-2.55	.013	-5.30	0.64	-9.42 to -1.18

Note. Independent-samples t-test. CI = confidence interval.

Explanation

The mean score for Burnout and Second Victim Phenomenon was found to be significantly higher for female nurses than male nurses. The Cohen's d values were moderate (Cohen's d > 0.50), thus showing meaningful differences between groups. The results indicate that females may suffer more psychologically when experiencing an adverse clinical event and/or occupational stress.

 Outcome Variable	 Male (n = 25) Mean ± SD	 Female (n = 55) Mean ± SD	 t (78)	 p	 Mean Difference	 Cohen's d	 95% CI
 Burnout Score	67.4 ± 9.3	72.8 ± 8.4	-2.49	.015	-5.40	0.62	-9.71 to -1.09
 SVP Score	58.2 ± 8.7	63.5 ± 8.1	-2.55	.013	-5.30	0.64	-9.42 to -1.18

Note. Independent-samples t-test. CI = confidence interval.

Figure 2 Independent-Samples t-Test Comparing Burnout and SVP Scores by Gender (N = 80)

Table 3
One-Way ANOVA Comparing Burnout Scores Across Demographic Groups

Variable	Between Groups SS	df	F	p	η^2
Age Group	710.42	2	4.87	.010	.11
Clinical Experience	781.65	2	5.42	.006	.12
Hospital Type	281.33	1	3.18	.078	.04
Clinical Department	835.21	5	2.91	.027	.10

Post-hoc analysis: Tukey HSD revealed that the nurses ages 21-30 year were significantly higher on burns out scores then the >40 age group (p = .008).

Note. η^2 = eta squared (effect size).

Explanation

Burnout scores significantly varied with age, number of years in clinical practice and clinical department. Nurses who were younger and had fewer years of experience had higher risk of feelings of burnout. There were no statistically significant differences according to hospital type, indicating that some clinical work demands and workload, rather than hospital ownership, may be responsible for burnout.

Variable	Between Groups SS	df	F	p	η^2 (Eta Squared)
 Age Group	710.42	2	4.87	.010	.11
 Clinical Experience	781.65	2	5.42	.006	.12
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Note. η^2 = eta squared (effect size).

Figure 3 One-Way ANOVA Comparing Burnout Scores Across Demographic Groups

Table 4
Pearson Correlation between Nursing Burnout and Second Victim Phenomenon

Variables	Pearson's r	95% CI	p	Strength of Relationship
Burnout and SVP	.62	0.46–0.74	<.001	Strong positive correlation

Note. Pearson product-moment correlation.

Explanation

The correlation between nursing burns out and second victim phenomenon was found to be high nucleus with the value of 0.62 and p value <0.001. A fixed relationship between the variables was suggested by there being a fixed confidence interval. Nurses reporting higher levels of experience of burnout were more likely to report higher rates of second victim experiences.

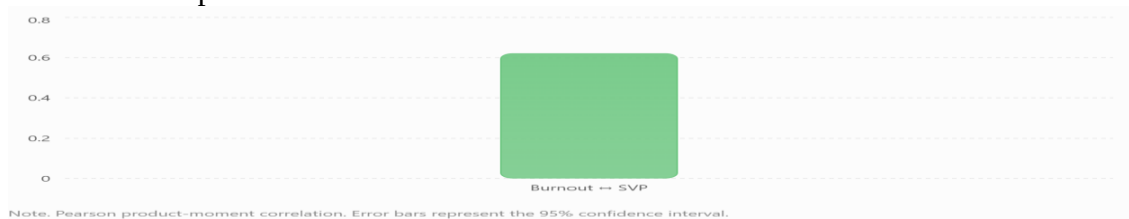


Figure 4 Pearson Correlation Between Nursing Burnout and Second Victim Phenomenon

Table 5
Multiple Linear Regression Predicting Second Victim Phenomenon Scores

Predictor	B	SE	β	t	p	95% CI
Constant	18.46	5.28	—	3.50	.001	7.94–28.98

Predictor	B	SE	β	t	p	95% CI
Burnout Score	0.58	0.09	.55	6.44	<.001	0.40–0.76
Age	-0.19	0.11	-.16	-1.71	.091	-0.41–0.03
Gender	2.13	1.49	.13	1.43	.156	-0.84–5.10
Clinical Experience	-0.24	0.13	-.17	-1.82	.072	-0.51–0.03

Model Summary

R ²	Adjusted R ²	F(df)	p	Durbin–Watson
.46	.43	15.78(4,75)	<.001	1.94

Note. β = standardized regression coefficient; CI = confidence interval.

Explanation

Multiple regression analysis indicated that burn-out independently predicted second victim phenomenon. Model accounted for 46% of the variance in SVP scores. Burnout was statistically significant even when accounted for age, gender and clinical experience, indicating that psychological exhaustion is an important factor in second victim experiences.

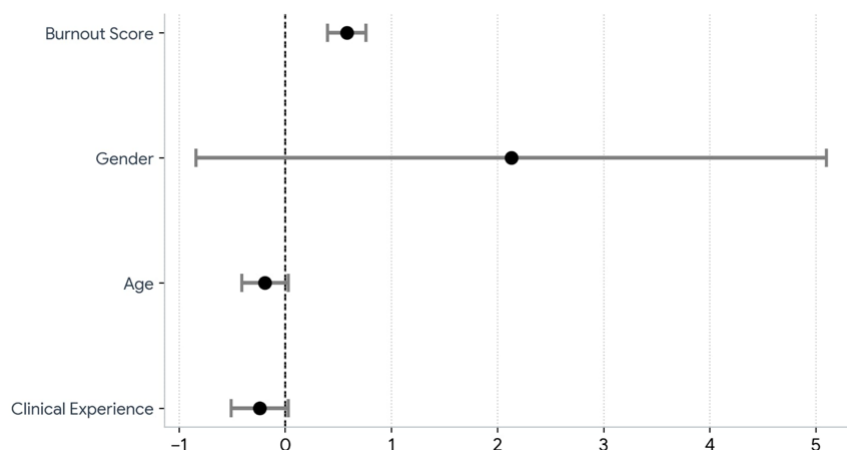


Figure 5 Multiple Linear Regression Predicting Second Victim Phenomenon Scores

Table 6

Statistical Assumption Testing for Parametric Analyses

Assumption	Statistical Test	Result	Interpretation
Normality	Shapiro–Wilk test	$p > .05$	Assumption satisfied
Homogeneity of variance	Levene's test	$p = .211$	Equal variance assumed

Assumption	Statistical Test	Result	Interpretation
Multicollinearity	Variance Factor	Inflation 1.18–2.04	No multicollinearity
Independence of residuals	Durbin–Watson test	1.94	Assumption satisfied

Explanation

Hypotheses were tested after the results indicated that all the assumptions necessary for the parametric statistical analyses were evaluated. Results showed that the data was found to be normally distributed, the variances were homogeneous, there was no multicollinearity among the variables, and the observations were independent. Thus, independent t-test, ANOVA, correlation and regression analyses were deemed appropriate.

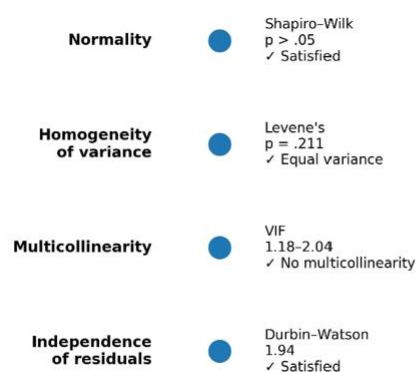


Figure 6 Statistical Assumption Testing for Parametric Analyses

DISCUSSION

The research concentrated on clinical nurses and clinical burnout as it relates to the second victim phenomenon relating to clinical nurses in both public and private hospitals in Karachi, Pakistan. The findings indicated that presence of second victim experiences had a significant and positive relationship with increased rate of psychological distress following adverse events, indicating that there was positive relationship between higher rate of psychological distress and adverse events experienced by the nurses. Such a correlation leads to the presumption that burnout and the 2VP are not two distinct occupational problems, but they are interconnected and are the consequences of stressful healthcare environments that constantly put emotional resources to stress.

However, moderate-to-high level of nurse burnout seen in this study could be attributed to the nature of the Pakistani Healthcare system. Staff nurses in tertiary hospitals often report that their workload is high, they have limited staffing, are exposed to critical illnesses, have emotionally challenging situations and have limited access to psychological support services. According to Conservation of Resources (COR) theory, prolonged experience of stressful conditions will deplete the emotional, psychological and/or social resources and result in more chances of having some psychological distress in the long term (Hobfoll, 1989). Consequently, workload stressors may be deprived, causing nurses to have minimal coping resources by the time of adverse events and they may end up developing signs and symptoms of the second victim.

One key outcome of this study was the fact that emotional exhaustion was the most salient syndrome of burnout. It correlates to various studies in international nursing literature that have resulted in emotional exhaustion being a more widespread manifestation of burnout since nurses are constantly exposed to the suffering of patients,

family issues, ethical issues and accountability to patient results. A systematic review that was conducted by Dall'Ora et al., (2020) has therefore discovered that emotional exhaustion may be particularly common in nurses who must either have a certain degree of emotional engagement when it comes to their work and they have high workload requirements. Also, Jun et al. (2021) determined that having too much work to do and too few resources from the organization were two important factors that contributed to nurses being emotional exhausted globally.

Similar results have been observed in North American's health care delivery systems. Nurse burnout in the U.S has been associated with increased workload, staffing levels of nurses and decreased levels of support offered by the workplace. A study with cross-country purposes, such as the United States and across Europe found a positive correlation between doctor bad nurse work conditions and nurse bad outcomes and care bad practice across countries (Aiken et al., 2014). These findings show that even though there are different economic conditions across healthcare systems, workplace stressors such as workloads and under-resource are quite common.

The present findings are complemented by the evidence of the European countries. Emotional exhaustion has been identified to possess high correlation with work stress and shift demands and the degree of recovery opportunities in the workplace in European studies. These findings can be compared with the findings of the current research and they prove that burnout is not only the problem of health care resources but also the problem of an organization in which a great number of other professionals the representatives of the nursing profession all over the world share.

The findings are consistent with the literature on the Asian healthcare systems especially China and Saudi Arabia. In China, high levels of burnout among nurses working in tertiary hospitals have been reported, in particular those with high patient responsibility and low staffing levels. The sources of emotional exhaustion in Chinese nurses due to the COVID-19 pandemic and the ensuing stresses experienced by nurses on the clinical frontlines have been prolonged clinical stresses, concerns about infection, and psychological tension. Similarly, research in Saudi Arabia has revealed that nurses working in the high-end wards experienced burnouts because of situations of workload pressures, professional guilt and lack of psychological restoration. The above similarities are not only characteristic of nurses in different countries, but indicate that burnout is not only an occupational health problem, but it also creates a challenge to the health care systems that are still being developed.

The other significant finding of this research was that there was a great connection between burn-out and the second victim phenomenon. Nurses who find themselves in cases where they are going through burnouts may have reduced emotional strength, problems in concentration, focus capacity and become less resilient to cope with the negative clinical incidents. For nurses who are emotionally drained to begin with, being entangled in a medication error, an unexpected bad outcome or death of a patient might magnify emotional reactions of guilt, worry and professional doubt. Previous studies on the psychological effects of adverse events on healthcare professionals have revealed these individuals often suffer from emotional distress, loss of confidence or fear of blame as a result of the incident (Scott et al., 2010; Seys et al., 2013).

Second victim phenomenon may also result in a rise in burnout. The psychological effect of a negative experience may be highly traumatizing and may result in more emotions of emotional burnout and subsequent burnout. This suggests there could be a cycle of increased occupational stress accumulation that contributes to the susceptibility of burnout and reduced coping power followed by unfavorable events triggering second victim responses that by the second victim experience the psychological strain would be further enhanced. The model that accounts this is the job Demands-Resources where it has been proposed that high job demands combined with low organizational resource are related to burnout and psychological exhaustion risks (Bakker and Demerouti, 2007).

Interpretation of the results in relation to the increased scores among the younger nurses must be made. Younger nurses might be suffering from higher psychological discomfort due to lack of clinical confidence, professional identity, coping mechanisms and the like. The following challenges can be encountered in the new nurse during the first years of career: challenging clinical cases, absence of independent decision making and apprehension of failure. It agrees with some other results elsewhere in the world that indicated that younger nurses were exposed to greater emotional exhaustion and stress compared to more experienced nurses. But this does not mean that more experienced nurses will be immune to the effects of burnout, it will affect them differently however depending on their own coping mechanism and organizational support, based on whether they experience prolonged exposure to a stressful environment.

The results can be seen to have a glaring application in the case of Pakistan when nurses are usually faced with an environment of anonymity and a heavy patient-to-nurse ratio and in many cases; there may be a lack of sufficient as well as organized psychological care. Several studies in Pakistan carried out in the past, have reported high degree of occupational stress and burnout in nurses, however studies on second victim experiences in Pakistan are limited. A formal program and disclosure system of supporting nurses following an adverse clinical event can be created in high-income healthcare systems, but there are few mechanisms to achieve this in Pakistani healthcare systems. Hence the present study's work is of high significance as it has studied burnout and second victim phenomenon simultaneously in a nursing community of Pakistan.

The results of the study have several important applications to the clinic. To begin with, and possibly, most importantly, a healthcare organization must consider the phenomenon of burnout and second victim experience as a safety concern of a patient, and not as a purely psychological problem. Structured support systems must be developed in hospitals by the establishment of peer support programs, counselling services which are accessible and confidential as well as a no blame approach to reporting. Such interventions can work towards healing nurses after negative events and reduce the negative psychological elements.

Second, they should focus on improving work environment through adequate staffing, enabling leadership, workload and career development provisions to workforce in the nursing industry. According to the JD-R model, negative influences of high challenge environments might be reduced by increased resource levels. Positive working conditions, thus, can assist in reducing the chances of nurse burnout and improve nurse retention.

Third, the added inclusion of psychological resilience training, coping strategies training, and education on the second victim phenomenon in nursing education programs. Training nurses on responding to negative events emotionally can positively impact professional self-confidence of nurses and reduce chances of experiencing persistent emotional stress.

Finally, but not the least, policies should adopt an opinion on the psychological wellbeing of nurses as quality improvement in healthcare. Burnout syndrome treatment, and even treatment of 2nd victim experiences could be used to improve patient safety, reduce turnover, and lead to improved healthcare systems.

Overall, this study shows that the phenomenon of burnout and second victimhood are closely related challenges in clinical nurses' occupation. The results highlight the need for an organizational intervention that will support the nurses emotionally, condition them and achieve safer healthcare environment. But to gain more insight into causal links between burnout and second victim experience longitudinal studies are necessary). How institutional support interventions influence the positive effects of burnout management in healthcare institutions in Pakistan should be evaluated as well.

Limitations

Although this study provides valuable evidence regarding the relationship between nurse burnout and the second-victim phenomenon, several limitations should be considered. The cross-sectional design prevents establishing causality or determining the direction of the relationship, while convenience sampling may introduce selection bias and limit generalizability. As the study was conducted among nurses in selected hospitals in Karachi, the findings may not be generalizable to other regions or healthcare settings in Pakistan. Furthermore, the use of self-administered questionnaires may be subject to recall and social desirability bias. The study also did not examine other potentially relevant factors, such as organizational culture, leadership, resilience, coping strategies, workplace violence, social support, and psychological safety. Future longitudinal and multicenter studies should address these limitations and further explore organizational and individual factors influencing burnout and second-victim experiences.

Conclusion

This study proved that there was a close relationship between nursing burnout and the second victim phenomenon as occupation issues for clinical nurses. All who do experience more advanced burnout rate are more prone to declare greater rates of second victim experiences following unfavorable clinical events, the findings indicate. The importance of this connection is that in the area of nursing, psychological issues among nurses should be recognized as one of the critical healthcare quality indicators and patient safety issues.

Burnout is not merely what one rules out about how an individual copes with stress; indeed, it is an event that has an extension beyond a single individual to include the elements that are directly related to the organization or system, i.e., workload, insufficiency, inadequacy of emotional support and inadequacy of institutional support. In the same way, the second victim phenomenon is a significant psychological impact of adverse clinical events which can negatively impact on nurses' clinical performance, emotional health and professional confidence.

The results corroborate the theoretical framework in which the ongoing demands of work over time practically may result in psychological exhaustion and psychological distress experienced by nurses. The Conservation of Resources would be useful in understanding the negative impact of acute work conditions and neglect of support on burnout and second victim experiences, whereas the Job Demands Resources model would be useful in grasping the damage that may be inflicted by challenging work environments and a lack of support.

Very little psychological support systems or trained staff members are available in Pakistan and its health care delivery systems are already low on manpower and load, so the solution to this problem is of paramount importance in this context. Creating supportive workplaces, bolstering organization resources and creating structured interventions could facilitate nurse well-being and lead to better patient safety.

Recommendations

Clinical Practice

There is a requirement to avail psychological support services to every nurse subsequent to experience of adverse clinical events to reduce long term psychological effects and emotional strain.

Training on the second victim phenomenon should be made more familiar to healthcare professionals about the occupational stress and prompt the professionals to detect signs and symptoms of distress earlier on.

The peer-support systems should be implemented within unit clinical departments such that the established and professional nurses can provide emotional and informational support to their colleagues, after the difficult clinical experience.

The nurses are supposed to be motivated to adopt healthy coping mechanisms like stress management, reflective practice and support networks.
Post-adverse-event communication and discussion must be non-accusatory, have a clinical team involved.

Hospital Administration

Hospital administration should put in place formal second victim support systems such as peers supports teams, counselling and confidential referral systems.
Health care institutions need to enhance their work environment, and correct the mismatch of people and workload, as well as the high demand for overtime work.
Nurse managers should be given the implementation of training of leaders to enhance supportive supervision, communication and psychological needs in nurses to motivate them.
Enhance a non-punitive reporting culture in hospitals where members of the health care community are not scared of encountering unnecessary reproach due to adverse events.
Nurse Burnout ought to be measured on a regular basis as a quality improvement measure in the hospital.

Nursing Education

Nursing education should cover information about the concept of occupational stress, the risk of occupational burnout and ways to prevent it, resilience and the third victim phenomenon.
The requirements of undergraduate and postgraduate programs of nursing education should equip nursing students to respond emotionally in a way that maintains control of emotional reactions after bad events in the clinical setting.
High pressure clinical environments, including the solving methods, communication skills and psychological resistance, must be trained prior to entering clinical environments, part of the clinical educators.
Professional development- The evidence-based methods of stress management in workplace should be further added in the continuing professional development of nurses.

Policy Makers

The health care policy makers are to consider healthcare nurse psychological wellbeing as the part of quality and safety of healthcare delivery.
The issue of occupation burnout must be recognized as an occupational health and safety concern and it must be included in the national nursing policies.
Priority must be provided to the invested areas of the nurse staffing, safety at work as well as access to psychological services.
Second victim experiences management guidelines must be formulated nationwide to deal with such events following adverse healthcare experiences.
The policymakers ought to initiate research work to be focused on the enhancement of the wellbeing of the healthcare workers as a subset of the nursing workforce in Pakistan and other endeavors in the LMICs.

Future Researchers

Longitudinal research should be embraced in future studies to determine the longitudinal relationship between second victim phenomenon and burnout.
Recommend to have a multi-Centre study in various provinces of Pakistan and different health care settings to enhance the generalizability.
Future research needs to investigate variables found as mediators or moderators- such as organizational variables (e.g., leadership support, workplace culture, psychological safety, and resilience).

Qualitative research is suggested to gain in-depth knowledge of nurses' experiences of adverse clinical incidents plus any barriers they face in seeking support. Research on intervention studies should assess the effectiveness of peer-support, counselling, resilience training and organizational intervention in reducing burnout and the experiences of second victim.

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