Specific stressors relate to nurses' job satisfaction, perceived quality of care, and turnover intention

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Abstract

Aims: To determine which stressor has the highest occurrence and what stressors are related to nurse outcomes, such as job satisfaction, perceived quality of care, and turnover intention.

Background: Numerous stressors have been identified in nursing practice, but it is unclear if specific stressors are related to nurse outcomes.

Design: The study used a cross-sectional and descriptive-correlational research design.

Methods: In July and August 2017, survey data were collected from 427 staff nurses employed in a large tertiary-level private hospital in Metro Manila, Philippines. The Nursing Stress Scale was used to measure stress frequency. Structural equation modelling was used to determine the relationship of stressors and nurse outcomes.

Results: Exploratory and confirmatory factor analyses indicate nine Nursing Stress Scale factors. Workload is the most frequent stressor. Moreover, workload was negatively related to job satisfaction and perceived quality of care. Workload and conflict with nurses were positively related to turnover intention.

Conclusions: The Nursing Stress Scale has a different factor structure based on a survey of nurses in the Philippines. Only workload and conflict with nurses were related to specific nurse outcomes. Nurse managers should identify and mitigate stressors experienced by nurses since these can lead to turnover and poor quality of care.

KEYWORDS
job satisfaction, nursing, stress, turnover, workload
SUMMARY STATEMENT

What is already known about this topic?

• Nursing is one of the most stressful health care occupations.
• Stress is related to job satisfaction, perceived quality of care, and turnover intention.
• The Nursing Stress Scale is a widely used tool to measure stress in nursing practice.

What this paper adds?

• Stress due to too many non-bedside nursing tasks is the highest reported item level stressor.
• Among several stressors, only workload was related to job satisfaction, perceived quality of care, and turnover intention.
• Instead of the original seven-factor model, results of factor analyses suggest that the Nursing Stress Scale fits a nine-factor model.

The implications of this paper:

• Nurse managers should mitigate stressors experienced by nurses to improve job satisfaction.
• One way to reduce nurse turnover could be to reduce nurses' workload.
• The quality of care provided to patients by nurses may improve by reducing workload.

1 INTRODUCTION

Nursing is one of the most stressful occupations (Healy & McKay, 2000). A recent survey found that it is the second most stressful job in the United Kingdom (Herbert, 2017). According to Gray-Toft and Anderson (1981a, 1981b), there are several stressors in the workplace that induce stress to nurses. They include witnessing a patient's suffering and death, conflict with colleagues, inadequate preparation and support, uncertainty towards patient treatment, and heavy workload. In general, most of these stressors can be in part linked to poor decisions made by the hospital's management. For instance, stress due to workload often arises from staffing decisions by nurse managers (Kerfoot, 2015), and conflicts with colleagues may be partly due to poor communication among staff nurses and superiors (Wagner, Bezuidenhout, & Roos, 2015).

Scholars have shown that stress in nursing practice can lead to poor nurse outcomes. One of these outcomes include nurses’ job satisfaction—the most frequently examined outcome in organizational research (Lu, While, & Barriball, 2005). Previous work shows that stress has a negative relationship with job satisfaction (Gray-Toft & Anderson, 1981a, 1981b; Hayes, Douglas, & Bonner, 2015; Healy & McKay, 2000). A meta-analysis by Blegen (1993) shows that stress has the highest mean correlation to job satisfaction among other variables.

Aside from job satisfaction, some researchers have examined the relationship of stress to perceived quality of care. Examining nurses' self-reported quality of care is valid since it serves as a proxy to actual quality of care (Laschinger, Shamian, & Thomson, 2001). Previous works demonstrate how certain stressors negatively affect perceived quality of care. For instance, Van Bogaert, Kowalski, Weeks, and Clarke (2013) found that heavy workload has a negative effect on nurse-assessed quality of care. Interestingly, they also found that nurse management at the unit level was positively related to nurse-assessed quality of care. Placed in the context of stress, their findings suggest that stress due to lack of support from nursing management can have negative implications for perceived quality of care. Similarly, recent studies found that increased workload is related to poor quality of care (Ball, Murrells, Rafferty, Morrow, & Griffiths, 2014; Stalpers, Van Der Linden, Kaljouw, & Schuurmans, 2017).

More important for nurse managers, studies indicate that stress is related to turnover intention. Turnover is a concern for all nurse managers since nurses leaving work causes unnecessary expenditure for rehiring staff and work disruptions among remaining staff (Stokowski, 2014). A high-turnover intention among nurses is as a precursor to actual turnover (Mobley, Horner, & Hollingsworth, 1978). Previous works show that stress is positively related to turnover intention among nurses in Iran (Mosadeghrad, 2013), Korea (Yoon & Kim, 2010), and in the Philippines (Labrague, Gloe, McEnroe-Petitte, Tsaras, & Colet, 2018).

Although previous works have demonstrated that stress can lead to poor nursing outcomes (eg Gray-Toft & Anderson, 1981a; Hayes et al., 2015; Labrague et al., 2018; Stalpers et al., 2017), it is unclear which stressors tend to affect such outcomes among nurses in the Philippines. Besides, several studies only used bivariate analysis to determine the relationship between stress and nursing outcomes (eg Hayes et al., 2015; Healy & McKay, 2000; Mosadeghrad, 2013). Findings from bivariate analysis are limited since they do not account for the effects of other variables for an outcome. Moreover, studies about nurses’ stress conducted in the Philippines tend to have few respondents (<250), which reduces the generalizability of the findings (eg Labrague et al., 2018; Lu, 2008).

Considering these research gaps, this study aims to contribute to the literature by performing multivariate analysis to identify stressors in nurses’ work and examine their relationship to nurse outcomes such as job satisfaction, perceived quality of care, and turnover intention among nurses in the Philippines. The Philippines is an ideal context for this study considering that hospitals there constantly need to mitigate nurse turnover brought about by increasing job stress (Labrague et al., 2018) and opportunities for higher salary abroad (Castro-Palaganas et al., 2017).

This study aimed to identify the occurrence of stressors in the work of nurses and its relationship with job satisfaction, perceived quality of care, and turnover intention. The study was guided by the following research questions (RQs):

RQ1. Which stressor on nurses has the highest occurrence?
RQ2. Which stressors are related to job satisfaction, perceived quality of care, and turnover intention?
2 | METHOD

2.1 | Design

This study used a cross-sectional and descriptive-correlational design.

2.2 | Respondents’ profiles, data collection, and ethical review

The target respondents of this study included staff nurses employed in a large (522 bed), privately owned, tertiary-level general hospital in Metro Manila, Philippines. At June 2017, the hospital had 595 staff nurses working in shifts, and they formed at least 85% of the hospital’s total nursing workforce. Only those employed full time for at least 6 months at the time of data collection were eligible to take the survey.

After obtaining ethical approval from the Institutional Review Board of The Medical City (approval code: GSC NSO 2017-043), we sent invitations to all nurses to answer the survey. Data collection was conducted in July and August 2017 at the hospital’s nursing training room, where several computers-on-wheels were set up. The web survey started with an informed consent page, where respondents need to click the agree button to indicate their consent to participate in the study.

Overall, responses from 427 staff nurses were collected, and this translates to a response rate of 72%. Table 1 shows a summary of the respondents’ profile. In general, most were female (71.9%) and in their 20s (78.2%). A majority holds a bachelor’s degree in nursing (96.7%), and more than half (52.9%) had a work experience of 1 to 2.99 years. About 52.7% were assigned in specialty areas (ie, emergency department, intensive care unit, and operating room) and 47.8% in clinical areas (ie, general wards, medical, and surgical units). The majority were assigned to an 8-hour shift (76.8%) while the remainder were assigned to a 12-hour shift (23.2%).

2.3 | Instruments

The questionnaire in this study had two parts. The first part asked about the respondents’ demographic information (ie, gender, age, and highest educational attainment) and work background (ie, years of clinical experience, area, and shift). The second part included questions regarding nurses’ stress, job satisfaction, perceived quality of care, and turnover intention. All items in the questionnaire were written in English since it is the language of nursing education in the Philippines (Kinderman, 2006). Prior to administration, the items were inspected for face and content validity by the hospital’s chief nursing officer and members of the hospital’s Institutional Review Board as part of the technical review.

2.3.1 | Nursing stress

To measure nursing stress, we used the 34-item Nursing Stress Scale (NSS; Gray-Toft & Anderson, 1981b). This scale has seven factors that reflect specific stressors: (a) death and dying, (b) conflict with physicians, (c) inadequate preparation to deal with the emotional needs of patients and their families, (d) lack of support, (e) conflict with other nurses, (f) workload, and (g) uncertainty concerning treatment. The items were slightly modified to fit the context of the study. For instance, the item “Floating to other units that are short staffed” was modified to “Pull-out to other units that are understaffed.” Respondents were asked to indicate their response using a 4-point Likert scale ranging from “0” (never) to “3” (very frequently).

Although previous works show that this is a reliable scale (Hayes et al., 2015; Sharma, Dhar, & Tyagi, 2016), some scholars suggest that the NSS may produce a different factor count, or some NSS items may not load in their intended factors (eg Garcia-Izquierdo & Rios-Ríquez, 2012; Lee, Holzemer, & Faucett, 2007). These indicate that there is a need to identify the factor structure of the NSS based on this sample. To empirically test its factor structure, both exploratory and confirmatory factor analyses were performed. Exploratory factor analysis (EFA) was performed in IBM SPSS Statistics 25 while confirmatory factor analysis (CFA) was performed using Mplus 7.

Preliminary results show that the data are appropriate for EFA (KMO = .89, Bartlett’s Test of Sphericity = $P < .001$). Next, EFA results based on maximum likelihood estimation ($\chi^2_{291} = 494.75, P < .001$) with promax rotation indicated nine factors with an eigenvalue of greater than or equal to 1. These factors were able to explain 66.36% of the variance. This suggests that, for the current sample, there are nine factors instead of seven. The names of the nine factors reflect the items that represent them: (a) workload, (b) work
<table>
<thead>
<tr>
<th>Factor 1: Workload (WL)</th>
<th>EFA Loadings</th>
<th>CFA Loadings</th>
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<tbody>
<tr>
<td>WL1—Not enough time to complete all of my nursing tasks</td>
<td>1.49</td>
<td>.89</td>
</tr>
<tr>
<td>WL2—Not enough time to provide emotional support to a patient</td>
<td>1.41</td>
<td>.87</td>
</tr>
<tr>
<td>WL3—Too many non-bedside nursing tasks required, such as paper work (eg, frailty assessment form)</td>
<td>1.95</td>
<td>.89</td>
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<tr>
<td>WL4—Not enough staff to adequately cover the unit</td>
<td>1.86</td>
<td>.99</td>
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<tr>
<td>WL5—Breakdown of computer</td>
<td>1.78</td>
<td>.91</td>
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<tr>
<th>Factor 2: Work uncertainty (WU)</th>
<th>EFA Loadings</th>
<th>CFA Loadings</th>
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<tbody>
<tr>
<td>WU1—A physician not being present in a medical emergency</td>
<td>.84</td>
<td>.83</td>
</tr>
<tr>
<td>WU2—Physician not being present when a patient dies</td>
<td>.82</td>
<td>.90</td>
</tr>
<tr>
<td>WU3—Not knowing what a patient or a patient’s family ought to be told about the patient’s condition and its treatment</td>
<td>.86</td>
<td>.73</td>
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<tr>
<td>WU4—Uncertainty regarding the operation and functioning of specialized equipment (eg, infusion pump, mechanical ventilator, cardiac monitor, or enteral pump)</td>
<td>.80</td>
<td>.72</td>
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<tr>
<th>Factor 3: Inadequate preparation (IP)</th>
<th>EFA Loadings</th>
<th>CFA Loadings</th>
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<tbody>
<tr>
<td>IP1—Feeling inadequately prepared to help with the emotional needs of a patient</td>
<td>1.03</td>
<td>.69</td>
</tr>
<tr>
<td>IP2—Being asked a question by a patient for which I do not have a satisfactory answer</td>
<td>1.01</td>
<td>.62</td>
</tr>
<tr>
<td>IP3—Feeling inadequately prepared to help with the emotional needs of a patient’s family</td>
<td>.99</td>
<td>.66</td>
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<tr>
<th>Factor 4: Conflict with nurses (CN)</th>
<th>EFA Loadings</th>
<th>CFA Loadings</th>
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<tbody>
<tr>
<td>CN1—Criticism by a head nurse, supervisor, and/or manager</td>
<td>.77</td>
<td>.75</td>
</tr>
<tr>
<td>CN2—Conflict with head nurse, supervisor, and/or manager</td>
<td>.52</td>
<td>.73</td>
</tr>
<tr>
<td>CN3—Difficulty in working with a particular nurse (or nurses) within the unit</td>
<td>.92</td>
<td>.78</td>
</tr>
<tr>
<td>CN4—Difficulty in working with a particular nurse (or nurses) outside the unit</td>
<td>.81</td>
<td>.79</td>
</tr>
<tr>
<td>CN5—Unpredictable staffing and scheduling</td>
<td>1.64</td>
<td>.94</td>
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<tr>
<th>Factor 5: Lack of support (LS)</th>
<th>EFA Loadings</th>
<th>CFA Loadings</th>
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<tr>
<td>LS1—Lack of an opportunity to share experiences and feelings with other unit staff on the unit</td>
<td>.97</td>
<td>.75</td>
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<tr>
<td>LS2—Lack of an opportunity to talk openly with other unit staff about problems on the unit</td>
<td>1.06</td>
<td>.79</td>
</tr>
<tr>
<td>LS3—Lack of opportunity to express my negative feelings towards patients to my co-staff</td>
<td>1.03</td>
<td>.80</td>
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<tr>
<th>Factor 6: Patient death</th>
<th>EFA Loadings</th>
<th>CFA Loadings</th>
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<tbody>
<tr>
<td>PD1—The death of a patient</td>
<td>.90</td>
<td>.79</td>
</tr>
<tr>
<td>PD2—The death of a patient with whom you developed a close relationship</td>
<td>.91</td>
<td>.80</td>
</tr>
<tr>
<td>PD3—Listening or talking to a patient about his/her approaching death</td>
<td>1.07</td>
<td>.88</td>
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<tr>
<th>Factor 7: Treatment conflict</th>
<th>EFA Loadings</th>
<th>CFA Loadings</th>
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<tbody>
<tr>
<td>TC1—Making a decision concerning a patient when the physician is unavailable</td>
<td>1.04</td>
<td>.71</td>
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(Continues)
uncertainty, (c) inadequate preparation, (d) conflict with nurses, (e) lack of support, (f) patient death, (g) treatment conflict, (h) conflict with physicians, and (i) patient suffering. Table 2 shows the distribution of the items per factor, eigenvalues, and reliability values. Based on EFA results, two items had factor loadings of less than .40 thus failing to load in any factor (ie, “Pull-out to other units that are understaffed” and “Feeling helpless in the case of a patient who fails to improve”). Based on the results of EFA, a CFA was performed to test whether a nine-factor model of the NSS fits the data. Only items with a factor loading of greater than or equal to .50 were retained resulting in the exclusion of one item (ie, “Fear of making a mistake in treating a patient”). Table 2 shows the CFA factor loadings of the retained items; Table 3 shows that the remaining 31 items distributed in nine factors reached the required model fit criteria (Bentler, 1990) while the original seven factor solution did not fit the data.

2.3.2 | Dependent variables

This study has three dependent variables: job satisfaction, perceived quality of care, and turnover intention.

To measure job satisfaction, we used six items from Blegen et al. (2004). These include (a) “I feel that I am happier in my work than most people,” (b) “I am disappointed that I ever took this job” (reverse item), (c) “Each day of work seems like it will never end” (reverse item), (d) “Most of the time, I have to force myself to go to work” (reverse item), (e) “I am satisfied with my job for the time being,” and (f) “I find real enjoyment in my work.” Respondents were asked to indicate their response using a 5-point Likert scale ranging from “1” (strongly disagree) to “5” (strongly agree). Blegen et al. (2004) reports a Cronbach’s alpha of .83 while this study obtained a relatively similar value of .82 (M = 3.56, SD = .65).

To measure perceived quality of care, we used three items from Van Bogaert et al. (2013). These include (a) “The quality of care that you have provided over the previous 6 months has been,” (b) “Most of the time, I have to force myself to go to work” (reverse item), (c) “How would you describe the quality of nursing care delivered to patients in your unit?” and (f) “I find real enjoyment in my work.” Respondents were asked to indicate their response using a 5-point Likert scale ranging from “1” (poor) to “5” (excellent). Recent works show that this is a reliable scale (Bautista, Rosenthal, Lin, & Theng, 2018; Van Bogaert et al., 2017), and in this study, we found Cronbach’s alpha = .86 (M = 3.85, SD = .67).
Finally, we measured turnover intention using three items from Kelloway, Gottlieb, and Barham (1999). These include (a) “I plan on leaving my job within the next 6 months,” (b) “I have been actively looking for other jobs,” and (c) “I want to remain in my job (reverse item).” Respondents were asked to indicate their response using a 5-point Likert scale ranging from “1” (strongly disagree) to “5” (strongly agree). Recent works show that this is a reliable scale (Boamah & Laschinger, 2016; Shahpouri, Namdari, & Abedi, 2016), and in this study, we found Cronbach’s alpha = .80 (M = 2.91, SD = .94).

### 2.4 Data analysis

We used IBM SPSS Statistics 23 and Mplus 7 for data management and analysis. Since the data collection was through a web survey, the dataset did not have missing values and was anonymous.

To answer RQ1, descriptive statistics (eg, mean, standard deviation, and percentage) were performed using IBM SPSS Statistics 23.

To answer RQ2, Mplus 7 was used to perform structural equation modelling to model and estimate the relationships between several independent (nursing stress and control variables, such as demographics and work background) and dependent (ie, nurse outcomes, such as job satisfaction, perceived quality of care, and turnover intention) variables. A P value of less than .05 was considered statistically significant.

### 3 RESULTS

RQ1 asks which stressor has the highest occurrence. Table 2 shows the descriptive results that reflect the extent of occurrence of each stressor. On the basis of the results, stress due to workload has the highest mean score (M = 1.70, SD = .71). A close inspection of the items regarding workload showed that stress due to having “too many non-bedside nursing tasks” (M = 1.95, SD = .89) had the highest mean score. This is followed by other workload items such as “not enough staff to adequately cover the unit” (M = 1.86, SD = .99) and “breakdown of computer” (M = 1.78, SD = .91). Conversely, the stressor that had the lowest occurrence is work uncertainty (M = .83, SD = .66).

RQ2 asks which stressors are related to job satisfaction, perceived quality of care, and turnover intention. Table 4 shows the SEM results. Preliminary results suggested that the model fits the data, $X^2/df = 1.78$, RMSEA = .043 (90% CI, .040–.046), CFI = .91, TLI = .90, SRMR = .055. The percentage of variance explained per dependent variable ($R^2$) ranged between 16.6% and 31.5%. Results were controlled for demographics (ie, gender, age, and education) and work background (ie, years of experience, area, and shift).

Among various stressors, only workload ($B = -.32, \beta = -.42, P < .001$) was negatively related to job satisfaction. This indicated that a high workload is likely to reduce nurses’ job satisfaction. Predictors of job satisfaction accounted for 31.5% of the variance.

Similarly, only workload was negatively related to perceived quality of care ($B = -.27, \beta = -.26, P < .001$). This indicated that a high workload reduces nurses’ perceived quality of care rendered to patients. Interestingly, male nurses reported higher perceived quality of care than female nurses ($B = .20, \beta = .12, P = .018$). Predictors of perceived quality of care accounted for 16.6% of the variance. Finally, workload ($B = .30, \beta = .27, P < .001$) and conflict with nurses ($B = .41, \beta = .28, P = .004$) were positively related to turnover intention. This indicated that a high workload and conflicts with nurses increased nurses’ intention to resign. We also found that younger nurses ($B = -.04, \beta = -.21, P = .004$) and those assigned in specialty areas ($B = -.25, \beta = -.16, P = .004$) were more likely to have reported greater turnover intention. Predictors of turnover intention accounted for 22.2% of the variance.

### 4 DISCUSSION

These results provide insights on various stressors faced by nurses in a private hospital in the Philippines. Interestingly, we found that the
NSS has a different factor structure based on a sample of nurses in the Philippines, and not all stressors were related to each nurse outcome when the results are based on SEM. The following paragraphs provide a discussion of key findings in this study.

Contrary to the original seven-factor structure of the NSS (Gray-Toft & Anderson, 1981b), this study produced a nine-factor structure. We provide robust evidence of its nine-factor structure based on CFA results, where it had a greater model fit than the seven-factor structure. Although previous works have produced five (García-Izquierdo & Ríos-Ríos, 2012) or seven factors (Lee et al., 2007), this study is one of the first to produce a nine-factor structure based on the 34-item NSS (a nine-factor structure was previously produced but using the 57-item expanded NSS: French, Lenton, Walters, & Eyles, 2000). Similarly, this is also the first study to provide a detailed examination of the factor structure of the NSS using a sample of nurses in the Philippines. Obtaining a different factor structure and item count when administering the NSS is expected since it reflects the current sample’s unique stress experiences and the workplace’s organizational context (García-Izquierdo & Ríos-Ríos, 2012).

Results showed that workload was rated as the most frequent stressor. Moreover, the results suggest that heavy workload is a specific stressor that is likely culprit for poor job satisfaction. This is consistent with previous research (eg Gray-Toft & Anderson, 1981a, 1981b, Hayes et al., 2015, Healy & McKay, 2000). However, we noted that the top item for workload is quite different from the study of Gray-Toft and Anderson (1981b). Specifically, results showed that “too many non-bedside nursing side tasks” ranked first, and “breakdown of computer” ranked fourth while the latter ranked first in the study of Gray-Toft and Anderson (1981b). A potential reason for this discrepancy is the technology used for documentation. Although the hospital where the study was conducted is currently developing its electronic documentation system, documentation is still primarily paper-based. Considering that there are several forms that should be completed within a short period of time, this inevitably creates considerable stress among nurses.

We also found that workload has a negative relationship to perceived quality of care. This result is consistent with previous works (eg Ball et al., 2014; Stalpers et al., 2017). A potential explanation for this outcome is that heavy workload due to spending so much time for documentation and understaffing takes away time that should have been used for direct patient care. This is expected since studies show that nurses spend more time on documentation than patient care activities (Hendrich, Chow, Skierczynski, & Lu, 2008), and paper-based documentation reduces the time for patient care (Bosman et al., 2003). Considering that the hospital is still dependent on paper-based documentation, it is reasonable that this is a source of stress, and this can reduce nurses’ perceived quality of care provided to patients.

Moreover, we found that control variables such as age and area of designation were related to turnover intention. Consistent with previous studies (Flinkman, Leino-Kilpi, & Salanterä, 2010; van Dam, Meewis, & van der Heijden, 2013), younger nurses were more likely to report greater turnover intention. A potential explanation is that younger nurses are more susceptible to experience greater effort/reward imbalance than older nurses (Lavoie-Tremblay, O’Brien-Pallas, Gélinas, Desforges, & Marchionni, 2008). This is best exemplified by the reality faced by most young nurses in the Philippines, where they must deal with a heavy workload and start with low pay (Labrague et al., 2018).

It is also interesting to note that nurses from specialty areas reported higher turnover intention. Specialty areas in the hospital include the emergency department, intensive care unit, and operating room. Based on the hospital’s guidelines, nurses are usually assigned in specialty areas after obtaining at least 2 years of experience in clinical areas (ie, general wards, medical, and surgical units). Considering these details, a probable reason why nurses from specialty areas have a higher intention to resign is that they have the required work experience to apply for nursing work abroad.

Nonetheless, independent of the control variables, the results showed that stressors such as workload and conflict with nurses have positive relationships to turnover intention. The results are consistent with past studies. For instance, several studies have shown that heavy workload arising from understaffing (Wendsche, Hacker, & Wegge, 2017) and overtime (Kwon & Kim, 2012) positively predict turnover intention. Conflict with nurses, such as in the form of organizational politics (Labrague et al., 2017) and workplace incivility (Spence Laschinger, Leiter, Day, & Gilin, 2009) can also lead to greater turnover intention. In general, the findings raise the need for effective strategies to maintain adequate staffing and the establishment of a supportive work environment to prevent nurse conflicts, reduce turnover, and maintain a stable nursing workforce.

### 4.1 Study limitations

Although this study contributes additional knowledge regarding the impact of stressors on nurse outcomes, there are several limitations that should be recognized. First, despite having a larger sample size compared with previous works that have examined stress among nurses in the Philippines (eg Labrague et al., 2018; Lu, 2008), the results are limited since our respondents only came from one private hospital in the Philippines. Future works can expand the study by including respondents from both government and private hospitals. Moreover, since the study used cross-sectional data, it is unclear whether the findings will remain consistent after using longitudinal data. Future studies can incorporate longitudinal data to determine the impact of stressors on nurse outcomes over time. Finally, the results are not completely generalizable to other countries. Future research can explore the use of cross-country samples to determine the extent of the finding’s generalizability.

### 5 Conclusion

#### 5.1 Implications for nursing management

The results have several implications for nursing management. First, it is crucial for nurse managers to have an open line of communication with their staff. Previous research shows that conflicts often arise and remain unresolved because of poor communication between staff
nurses and their superiors (Wagner et al., 2015). For instance, stress due to conflict with nurses can be mitigated when there is an open line of communication between staff nurses and their superiors.

Second, the results also reiterate the importance of addressing, if not resolving, workload issues. Nurse managers can resolve them by ensuring adequate staffing levels in all nursing units of the hospital. While this is easier said than done, nurse managers can explore the use of workforce data analytics as a basis for staffing decisions (Kerfoot, 2015). Another way of reducing workload is to facilitate the immediate transition from paper-based to computer-based documentation (Pourasghar, Malekafzali, Koch, & Fors, 2008).

5.2 Implications for nursing practice

The results provide implications for nursing practice. First, this study shows that there are several stressors that nurses encounter in their work. It is crucial for nurses to recognize them so that they can immediately perform stress reduction techniques (e.g., deep breathing, guided imagery, and talking with colleagues), if needed. Therefore, training programmes focusing on stress awareness and reduction techniques should be instituted. Second, the findings highlight the increasing importance of reminding nurses of upholding a safe and supportive workplace to mitigate the detrimental effects of stress to nurse outcomes (Chang, Hancock, Johnson, Daly, & Jackson, 2005).

In summary, stress is an inevitable part of nursing practice, and nurse managers should be attentive in identifying and mitigating stressors in their areas. While not all stressors can lead to poor nurse outcomes, nurse managers should pay special attention in making sure that nurses’ workload is within acceptable means since an excess of this can reduce job satisfaction, deteriorate the quality of care rendered to patients, and increase turnover. This is also true to a certain extent in a workplace environment where there are conflicts among nurses.

Managerial strategies that can reduce nurses’ workload and promote a supportive workplace environment are needed to mitigate stress and improve nurse outcomes. Aside from education-focused strategies (e.g., conducting stress awareness lectures and seminars), additional strategies that nurse managers can implement include the use of horizontal communication (to establish an open line of communication between staff nurses and their superiors) and adoption of computerized documentation and staffing systems (to reduce burden due to paperwork and avoid conflicts due unpredictable staffing and scheduling).

Finally, the results of this study provide nurse educators with relevant information about stressors affecting professional nurses in the Philippines. Since the Philippines is currently experiencing a decline in the number of practicing registered nurses (Castro-Palaganas et al., 2017) and students taking up the country’s Nurse Licensure Examination (Bautista, Ducanes, & David, 2019), there is a need for newly hired nurses to be stress resilient to maintain a stable nursing workforce. As such, we hope that the results of this study inform nurse educators to enhance existing stress reduction interventions (e.g., deep breathing, guided imagery, and critical incident stress debriefing with peers and clinical instructor) used to improve nursing students’ resilience during clinical placements.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHORSHIP STATEMENT

PAL, JRB, MCC, MMM, HV, and RS conceived, designed, and obtained funding for the study. RA provided administrative support for data collection. JRB, PAL, MCC, MMM, HHV, and RS were responsible for data collection. JRB and PAL analysed and interpreted the data. JRB wrote the first draft of the manuscript. All authors made critical revisions to the manuscript for important intellectual content and approved the final version to be published.

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