

La dépression chez les infirmières et les infirmiers

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La guérison des patients relève entre autres de la qualité des services dispensés par le personnel infirmier, et le bien-être du personnel dépend à son tour de la qualité des milieux de travail et de pratique. L'Enquête nationale sur le travail et la santé du personnel infirmier (ENTSPI) s'est penchée sur un large éventail de tâches et de troubles de santé chez les infirmières et les infirmiers. Cette démarche a révélé un constat troublant : le personnel infirmier affiche un taux de dépression supérieur (1 sur 10) à celui relevé chez ses homologues (indiqué dans d'autres études nationales). Cette analyse secondaire des données s'est penchée sur les résultats liés à la dépression et a été effectuée auprès d'un sous-échantillon d'infirmières et d'infirmiers qui ont participé à l'ENTSPI. L'étude a notamment examiné les liens entre la dépression et des variables afférentes au travail, comme le stress causé par le travail, la surcharge des rôles, le respect, le soutien social et le soutien fourni par l'employeur, ainsi que la perception du personnel infirmier quant à la qualité des soins qu'il dispense. Une régression logistique multivariée a indiqué la présence d'un risque de dépression accru chez les infirmières et les infirmiers qui vivent du stress lié au travail et une surcharge de rôles, et qui ne bénéficient pas d'un respect.

Mot clé : stress

Depression in Nurses

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Patient outcomes are reliant on nursing calibre, which in turn is dependent on the health of work environments and practice settings. The National Survey of the Work and Health of Nurses (NSWHN) examined a broad spectrum of nurses' work and health, with one finding of particular concern: Nurses have a higher rate of depression (1 in 10) than their counterparts (as found in other national surveys). This secondary analysis of the data focused on the outcome of depression in a subsample of the nurses surveyed by the NSWHN and examined associations between depression and work-related variables such as job strain, role overload, respect, social and employer supports, and nurses' perception of the quality of the care they provided. A multivariate logistic regression found an increased risk of depression in nurses experiencing job strain, role overload, and a lack of respect.

Keywords: mental health/pyschosocial, nurse relationships/professional issues, stress and coping, work satisfaction

Introduction

Nursing is emotionally, mentally, and physically demanding work that is both rewarding and challenging in view of the profound changes that have occurred in health-care provision over the past several decades. Organizational downsizing, staffing cutbacks, work redesign, and advances in medical treatment have left the community care and hospital sectors dealing with larger needs populations at a time when fewer nurses are available. Furthermore, nursing is not attracting enough new recruits to replace aging nurses set to retire in the next few years (Canadian Institute for Health Information, 2008). All levels of government, health-care leaders, and health-care educators are concerned about the deepening shortage of health human resources as the need for access to safe, quality health care is increasing due to our aging population. Maintaining the health and well-being of the current nursing workforce is becoming paramount — a daunting prospect considering that the majority of Canadian nurses are in their mid-forties or older, having worked through at least two decades of upheaval in their workplaces.

The link between working conditions and nurse and patient outcomes is evident in the findings of a large body of research on North American magnet hospitals (Armstrong & Laschinger, 2006; Tourangeau et al., 2007; Upenieks, 2002). Current workloads and staffing pressures

can lead to high levels of stress and burnout, affecting absenteeism and injury rates and resulting in chronic physical and mental conditions (Shamian, Kerr, Laschinger, & Thomson, 2002). Nurses' health is considered crucial, and workplace conditions that affect it are being closely monitored. The National Survey of the Work and Health of Nurses (NSWHN) was completed by close to 20,000 nurses across Canada in 2005 (Statistics Canada, 2009). One of the most disconcerting early outcomes, for health-care leaders, researchers, educators, and health-care consumers alike, is the high prevalence of depression among nurses (1 in 10) compared to members of the general public (Shields & Wilkins, 2006); by comparison, only 5.1% of nurses' female counterparts working outside of health care are depressed (Gilmour & Patten, 2007).

Why the high prevalence of depression in nurses? Is there a relationship between nurses' depression and their work? Policy-makers need to focus on improving the mental, physical, and emotional health of nurses, since the current nursing shortage is expected to intensify. The benefits of improving the health of nurses could include improved organizational health, leading to enhanced recruitment and retention of these valued professionals on whom patient outcomes depend. This study was conducted with the aim of adding to our knowledge about nurses' depression and its possible connections to their workplaces.

Theoretical Framework

Since early in the last century, when Hans Selye formulated a definition of stress (strain), researchers have been studying the connections between work and health. According to the demand/control model of work stress (Karasek & Theorell, 1990), if the demands on nurses exceed their control in the workplace, their health may suffer. High levels of demand and low levels of control result in job strain; jobs with a high level of control are considered healthier, especially in low-strain work environments. Johnson and Hall (1988) review the evidence on social support — its moderating or buffering effects on perceived stress/strain known to influence mental and physical health. They propose that Karasek and Theorell's model be modified to include work-related social support and be redefined as the demand/control/support model.

A second theoretical model of interest is the effort/reward model, in which high cost/low gain conditions "are likely to elicit recurrent feelings of threat, anger, and depression or demoralization" (Siegrist, 1996, p. 30), which evoke sustained autonomic arousal and can affect cardiovascular health. Assuming respect to be a key element of the rewards construct, Laschinger (2004) found that respect was negatively related to mental health outcomes such as emotional exhaustion, depressive state of

mind, and intention to leave; in addition, respect was significantly related to perception of nursing-care quality and adequate staffing and thus acted as a mediator between working conditions and outcomes. DeCicco, Laschinger, and Kerr (2006) also found respect to be a mediator between working conditions and organizational and nurse outcomes. Thus, working conditions that foster disrespect may be harmful to nurses' mental health.

Literature Review

Intuitively, one would think that organizational efforts to reduce the stress or workload of nurses would lead to retention, increased sense of security, and reduced strain. Supportive management is linked to an increased ability to cope with role overload (Higgins, Duxbury, & Lyons, 2007). High-quality care may provide nurses with the sense of accomplishment that is needed for their emotional and mental well-being. Zellars, Perrewe, Hochwarter, and Anderson (2006) found that a high degree of positive affect and high levels of conscientiousness are associated with low levels of all strain variables. For a productive workforce, policy-makers must recognize the relationship between work stress and mental health, as well as the importance of primary prevention and adequate treatment (Blackmore et al., 2007).

In Canada, stress is a major contributor to mental health problems (Public Health Agency of Canada, 2006). Wang (2005) found that a high level of work stress is associated with high risk for a major depressive episode (MDE). Mental disorders such as depression, which are classified using the International Classification of Diseases, are among the leading causes of disability worldwide and have a high cost to society because of short- and long-term work impairment, absenteeism, and chronic illness (Gilmour & Patten, 2007; Stansfeld et al., 1995; Stephens & Joubert, 2001). Adler et al. (2006) looked at the job performance of employees with depression, employees with other chronic illnesses, and members of a control group with no physical or mental illness. They found that multiple dimensions of job performance were more impaired when employees had depression. Lerner and Henke (2008), in their review of the research on depression and work outcomes, found more unemployment, absenteeism, and work-performance deficits among those with depression than those without depression, at a multibillion-dollar annual productivity cost in the United States. Worldwide, depression ranks third, ahead of ischemic heart disease, as a contributor to global disease burden from non-communicable sources; in middle- to high-income countries such as Canada, it ranks first (World Health Organization, 2008).

An examination of the literature reveals a gap in evidence on factors contributing to depression in nurses, although there is a large research literature on burnout in nurses. Cox, Kuk, and Leiter (1993) contend that burnout does not carry the same stigma as a diagnosis of mental illness, that burnout represents the interaction of occupational stressors, in addition to the characteristics of the burned-out worker, while a worker with a diagnosis of mental illness becomes the focus and may be blamed for the condition. The stigma of mental illness may be part of a larger, systemic, response and could explain why burnout is a focus in nursing research while depression is not. It is important that nurses who are depressed receive appropriate treatment. Burnout, however, is not listed as one of the recognized diagnoses in the latest edition of the *Diagnostic and Statistical Manual (DSM-IV)* (American Psychiatric Association, 1994). One wonders if terminology such as burnout clouds the issue for many nurses. For Hallsten (1993), burning out is one route to depression, while Burisch (1993) has compiled 130 symptoms that various writers attribute to burnout and cautions “none of the symptoms was unique to burnout i.e. *not* to be found in other nosological entities such as depression” (p. 77). Therefore, access to a large Statistics Canada survey that used a valid and reliable method of assessing MDE (a subset of the Composite International Diagnostic Interview [CIDI]), as well as valid tools for work stress, presented an ideal opportunity to examine associations between depression in nurses and work-related variables.

Hypothesis

Depression in nurses is positively associated with role overload and job stress and negatively associated with nurses’ perception of the quality of care provided and the respect and support of employers and co-workers.

Major Study Variables and Concepts

Depression

Depressive symptoms include depressed mood, loss of interest, significant weight gain or loss, insomnia or hypersomnia, psychomotor agitation or retardation, fatigue or loss of energy, feelings of worthlessness or hopelessness, diminished ability to think or concentrate, and recurrent thoughts of death or suicide ideation or attempt (Wang & Patten, 2001). In the NSWHN, an MDE was established using the methodology of Kessler et al. (1994), with the interviews using a subset of questions from the CIDI. A nurse with five or more of the nine symptoms listed above would have met the requirements for a 90% probability of an MDE diag-

nosis had she or he completed the CIDI long form (Statistics Canada, 2009).

Job Strain

Work stress was assessed using a modified version of Karasek et al.'s (1988) Job Content Questionnaire, the original having 12 questions relating to job strain, supervisor and co-worker respect, job insecurity, and physical demands, with internal consistency estimates of 0.7 for all subscales. The modified version has been used in other large, complex surveys, such as the Canadian National Population Health Survey (NPHS) 1994–95, as noted by Wang (2005). It was also used in the Canadian Community Health Survey–Mental Health and Well-Being survey (CCHS-1.2; Wang 2006). Shields and Wilkins (2006) acknowledge that the estimates of Cronbach's alpha for job stress scales used in the NSWHN are lower (0.23 to 0.54) and suggest that this is related to the limited number of items used.

Role Overload

Role overload is an imbalance between the resources available to the employee to do the work and the demands on the employee. While role overload can also be taken to mean the multiple roles that persons play in their lives, in the NSWHN survey the questions related directly to the nurses' main job. The role overload score, a derived variable, was assessed in the NSWHN using five statements based on a subscale of the Occupational Stress Inventory, with a reported alpha coefficient of 0.8, as described in Decker and Borgen (1993).

Respect

Three statements based on Siegrist's (1996) effort-reward imbalance scale were used to score nurses' responses concerning their perceptions about respect from their superiors and colleagues and the level of respect received in general considering their efforts and achievements. A derived variable with a possible range of 0 to 9 (higher score indicating a higher level of respect) was computed from these statements (Statistics Canada, 2009).

Employer Support

For the present analysis, a mean employer support score was calculated by first summing the scores for the questions relating to whether the employer offered support such as child care, exercise facilities, adequate nutrition, and Employee Assistance Programs (EAP) and whether the employer offered scheduling flexibility with regard to days or shifts worked.

Perception of the Quality of Care

Of the NSWHN questions that assessed nurses' perception of quality of care in their workplace, two were chosen that might influence or mediate nurses' mental and emotional well-being, namely perception of staffing on their last shift worked and perception of the quality of the care they provided on that shift. As indicated in the literature review, there is a relationship between a sense of accomplishment in one's work and one's well-being.

Methods

This secondary data analysis was a non-experimental descriptive correlational study. The database of interest, the NSWHN (2005), a large cross-sectional survey, was available through the Research Data Centre at the University of Western Ontario. For the present analysis, only the data for registered nurses (RNs) and registered psychiatric nurses (RPNs) employed in direct care in Canada were used, to ensure a more homogeneous sample. The required sample size of 591 was calculated as suggested by Tosteson, Buzas, Demidenko, and Karangas (2003) for logistic regression. The present study had excellent statistical power, as the subsample consisted of more than nine thousand RNs and RPNs.

In the present study, all preliminary analyses were conducted using SPSS[®] version 17.01, with logistic regression used to analyze associations between depression and work-related factors. STATA/SE[®] version 10.0 was used to apply a bootstrap weight procedure in the final multivariate logistic regression analysis, as suggested for use in large, complex national surveys (Chowhan & Buckley, 2005; Piérard, Buckley, & Chowhan, 2004; Rao, 2006). Statistics Canada provides survey weights developed for the NSWHN. The bootstrap procedure accounts for design effects, which could underestimate the true variance required to calculate accurate odds ratios and 95% confidence intervals.

Descriptive statistics for demographic variables (age, gender, marital status, place of employment, and full-time or part-time status) were generated from the subsample. Chi-square cross-tabulations and *t* tests were done to assess statistically significant relationships prior to entering the independent variables in a multivariate logistic regression model. The independent variables for the regression were nurses' work-related stress, role overload, respect and support, and perception of the quality of care and staffing in their workplace. Pearson correlations between the independent variables were also assessed. Lastly, variables representing chronic disease status and smoking and drinking history were recoded as binary control variables for analysis in the regression model, given their known association with depression (Glassman, Helzer, & Covey, 1990; Kessler et al., 2003; Rehm et al., 2009).

Sample

The subsample of nurses from the NSWHN used for this study (Table 1) comprised RNs and RPNs working in direct care in Canada ($n = 9,322$). The majority of these nurses worked in hospitals (67.1%), followed by community care (13.2%) and long-term care (10.2%), full-time (59.3%) or part-time (40.7%). Most of the nurses were diploma-prepared as opposed to degree-prepared (71.3 vs. 28.7%).

Table 1 Sample Demographic Variables			
Variable	Frequency	Percentage	Cumulative Percentage
Age			
< 35	1,981	21.3	21.3
35–44	2,674	28.7	49.9
45–54	3,108	33.3	83.3
≥ 55	1,559	16.7	100.0
Sex			
Male	510	5.5	5.5
Female	8,812	94.5	100.0
Marital Status			
Married/ living common law	6,991	75.0	75.0
Single	1,228	13.2	88.4
Widowed	143	1.5	89.9
Separated/divorced	940	10.1	98.0
Case Definition Depression			
No	8,383	89.9	91.0
Yes	832	8.9	98.9
Diagnosis of Depression			
Yes	881	9.4	9.5
No	8,430	90.4	99.9
Antidepressant			
Yes	836	9.0	9.0
No	8,466	90.8	99.8
Chronic Conditions			
≥ One	6,735	72.2	72.4
None	2,567	27.5	99.8
<i>Note: Total percentage may not be 100 if missing or not stated is removed from the total.</i>			

Table 2 Multivariate Logistic Regression With Bootstrapped Replication

Depressed Case	Odds Ratio	Standard Error	T	P > t	95% Confidence Interval
Independent Variables					
Role overload*	1.058	0.017	3.49	0.001	1.025 1.091
Respect*	0.889	0.035	-3.02	0.003	0.823 0.960
Social support	1.066	0.036	1.87	0.062	0.997 1.139
Job strain*	1.792	0.397	2.63	0.009	1.159 2.769
Perception of staffing	1.106	0.145	0.77	0.441	0.855 1.431
Perception of care given	1.097	0.287	0.35	0.723	0.656 1.835
Employer support	1.120	0.336	0.38	0.705	0.622 2.018
Control Variables					
Age*	0.984	0.006	-2.65	0.008	0.972 0.996
Married*	1.409	0.190	2.54	0.011	1.081 1.836
Depression question*	4.796	0.957	7.86	0.000	3.241 7.097
Chronic disease*	1.712	0.344	2.68	0.008	1.154 2.540
Antidepressant use*	3.199	0.726	5.13	0.000	2.049 4.995
Smoking history*	2.118	0.365	4.36	0.000	1.511 2.970
Drinking history	1.221	0.167	1.46	0.145	0.933 1.599

* Significant at $p < .05$.

Results

Cross-tabulation of nurses' reported mental health status with the case definition and probability of having had an MDE revealed that 5.8% of nurses who did not meet the case definition answered *yes* when asked if they had suffered or now suffered from depression. More than half of those who met the case definition for MDE (54.7%) did not report suffering from depression. Cross-tabulation with use of anti-depressants revealed that 39.3% of depressed nurses used anti-depressants. Fully 60.7% of those who were identified as depressed according to the case definition did not use anti-depressants. Cross-tabulation of nurses' chronic disease and depression caseness revealed that the majority (89.5%) of those who were depressed according to the case definition had at least one chronic condition. There was no significant association in a cross-tabulation of nurses' depression and full-time or part-time status in their main jobs and there was no significant association between their education level and whether they met the case definition of depression. The proportion of nurses who thought the staffing on their last shift was inadequate was 35.9%; however, 95% of this group thought that the care they gave on their last shift was good to excellent. No age difference was found between depressed and non-depressed nurses ($t = 1.768; p = .077$).

A multivariate logistic regression analysis (Table 2) revealed that those nurses who were experiencing a higher degree of job strain were 80% more likely to have suffered an MDE in the previous year (OR 1.79; $p = 0.009$), while those who were experiencing role overload (OR 1.05; $p = 0.001$) had slightly increased odds of having had an MDE in the previous year. Nurses' perception of the care given, employer support, social support, and staffing were not statistically significant in relation to the odds of being depressed. However, nurses who had respect from their co-workers, from their supervisors, and for their efforts in general were less likely to have experienced an MDE in the previous year (OR .88; $p = 0.003$).

Age was protective, with a statistically significant negative relationship to depression (OR .98; $p = 0.008$). As age was a continuous variable in this analysis, with a negative t score, the younger the nurse the higher the rate of depression. If one compares a nurse of 65 years of age with a nurse of 25, the younger nurse has nearly double the odds of depression. Having a history of smoking more than doubled the odds of experiencing an MDE (OR 2.12; $p = 0.00$), while having a history of drinking was not statistically significant in relation to the odds of suffering depression. Nurses with a chronic disease diagnosis were nearly twice as likely to have suffered an MDE in the previous year as those without a chronic disease (OR 1.7; $p = 0.008$).

Discussion

This multivariate logistic regression revealed that the independent variables of role overload and job strain are significantly related to the case definition of depression. The job strain and role overload variables were scaled in the original survey, so that higher scores indicated more job stress and overload. In the present analysis, the results reflect this positive direction in the regression positive *t* scores. Depressed nurses were nearly twice as likely to be experiencing severe job strain, although the odds were somewhat lower for nurses experiencing role overload.

Respect was scaled so that higher scores reflect a greater feeling of being respected; therefore, one would surmise that more respect will be negatively related to having depression. The results of the analysis indeed support this conclusion, as the odds of being depressed were lower for nurses with higher levels of respect, as evidenced by the protective odds ratio (i.e., $OR < 1$). The variables for social support and employer support were not statistically related significantly to depression in the sample, nor was nurses' perception of the quality of care they provided in the last shift worked or their perception of staffing.

In conclusion, there was partial support for the hypothesis of a positive and significant association with role overload, job stress, and risk of depression in nurses. In addition, respect was negatively and significantly associated with depression in nurses. However, the hypothesis that employer and social support and the perceived quality of care provided would lessen the risk of depression was not supported by this analysis.

Implications

The results of this study lend support to findings from other research (Gilmour & Patten, 2007), notably on the presence of associations between depression, workplace stress, role overload, and respect. The results also reinforce known relationships between depression and chronic conditions. The strong association between chronic disease and depression and the fact that 75% of the sample had at least one chronic condition are worrisome findings, indicating that nurses are at risk for major health issues in addition to depression. We need occupational health-care policies and programs that are supportive of and promote the mental and physical health of nurses. One such program used in an American health-care facility was designed by Putnam, McKibbin, Lancaster, and Schwade (2003), who surmised that underutilization of EAP (thought to be related to the stigma of and barriers to accessing EAP in a traditional format) might be addressed by a multilevel implementation focused on reaching out to depressed employees in a non-threatening, holistic manner. The successful initiative included education, diagnostic tools, and surveys

designed for privacy and for the busy work schedules of health-care employees, and it could be replicated in Canada.

Another interesting finding of this study with implications for the workplace is that half the nurses who met the case definition of depression did not indicate that they had suffered or were suffering from depression. One cannot be certain whether this indicates a reluctance to acknowledge illness or a lack of knowledge about depression. Seeking assistance is self-care and is indicative of health promotion, but nurses who are open about their mental illness could face repercussions. For example, the College of Nurses of Ontario, as part of its mandate to protect the public, recently adopted standards for reporting and removing from practice nurses who are deemed incapacitated (College of Nurses of Ontario, 2009). While protection of the public is paramount, one wonders if this process might prevent nurses from seeking help for or admitting to having mental health problems such as depression or addiction. Health-care providers such as physicians are reported to face increased risk of suicide related to mental health issues, in addition to risking the safety of their patients (Rosen et al., 2009). According to Rosen et al., these physicians need advocacy, not disapproval, and suicide among health-care providers may be an extreme form of withdrawal from an overwhelmingly stressful or painful situation.

The majority (60.7%) of nurses in this study who met the case definition of depression were not taking any antidepressants; considering the increasing reliance on pharmaceutical treatment for depression, this is a surprising finding. It may be, however, that nurses were receiving other therapeutic interventions for their illness.

Education of nurses on their own mental health is paramount and should begin early. It would be simplistic, however, to think that mental health literacy alone will increase nurse well-being; the complex interplay in our lives calls for integrated, long-term, coordinated solutions. One such solution in England is a broad action targeting stigma and discrimination in mental illness by a program called Time to Change (Mind and Rethink, n.d.). Reducing the stigma associated with mental illness can serve to promote healthy and inclusive workplaces that are truly supportive of nurses.

Reducing mandatory overtime, attending to scheduling, and providing adequate notice “of available work so that nurses can meet other life commitments such as childcare” are methods that employers can use to support nursing staff and at the same time benefit the organization (Wallace & Pierson, 2008). Self-scheduling, which increases staff autonomy by giving nurses control over their work schedule, is thought to promote staff retention, decrease absenteeism, and support team development (Dechant, 2006). A systematic review of the effects of workplace

and individual efforts to prevent or reduce workplace stress found limited evidence of such efforts, which suggests the need for further research into risk factors (Marine, Ruotsalainen, Serra, & Verbeek, 2006). Employers who value their employees and support a holistic view, in which employment is only one part of a person's life, know that synergy between work and family demands (Gordon, Whelan-Berry, & Hamilton, 2007; Kanter, 1977) results in healthier, more committed, more engaged nurses.

Mentorship by a generation of nurses who have learned to cope with work stress and role overload during decades of change could help young nurses who, according to the results of this study, are at a higher risk for depression. However, mentorship will be most effective as a recruitment and retention initiative if it is included — and appropriately resourced — as part of the older nurse's workload and does not become an additional stressor or burden.

Limitations

As a secondary data analysis, this study was limited to the scope of the original survey; however, the NSWHN was a Statistics Canada survey with rigorous attention to design, using instruments with known reliability and dependability in a large, representative national sample.

Although certain associations between variables were apparent, in a cross-sectional study the direction or temporal association cannot be determined. For example, although there was a significant association between depression, strain, and overload in this sample of nurses, it is not clear whether depressed nurses experienced more strain and overload or whether the strain and overload preceded and increased their risk of depression.

The sample of nurses was primarily female (94%). In their analysis using data from the 2002 CCHS and NPHS surveys, Gilmour and Patten (2007) found that depression in women was nearly twice that in men (5.2% vs. 2.6%). Perhaps the rate of depression in the NSWHN sample reflects the higher rate of depression among women found in other surveys, even before considering the known stressors and workload of the profession.

Conclusion

Depression in the workplace is a costly issue for all, but is of particular concern during the shortage in health human resources now being experienced by all health-care organizations. We need increased mental health literacy, with attention to workplace education on depression — how it can be identified and where nurses and employers can obtain support for the nurse who is depressed. The stigma of mental illness can be problem-

atic for health professionals because it can induce avoidance and isolation and a negative feedback cycle. Recognition of the complexity of mental well-being and the importance of good mental health for individuals, their communities, and their workplaces is galvanizing research aimed at producing action plans and a healthy, productive society (Jenkins et al., 2008). This work requires investment of time and money.

Nurses who are suffering from depression need to be supported by early diagnosis, so they can obtain appropriate treatment and minimize the impact on their ability to deliver safe care. Never before has this been so imperative, as the current nursing shortage is likely to worsen with the imminent retirement of aging nurses. Health-care organizations should strive to provide less stressful, more respectful workplaces in order to support the physical, emotional, and mental health of their employees in a proactive and responsive manner. This applies especially to nurses, since nurses are central to patient safety and quality outcomes in health care.

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