Relationships among the nurse work environment, self-nurturance and life satisfaction

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Abstract

Title. Relationships among the nurse work environment, self-nurturance and life satisfaction

Aim. This paper is a report of a study to (1) ascertain the relationship among self-nurturance, perceived Magnet features and life satisfaction and (2) evaluate the predictive effects of self-nurturance and Magnet features on life satisfaction.

Background. Promoting health is a global priority for nurses and for the public who depend upon them to provide quality care. Health gains can be realized by modifying the work environment and by modifying lifestyle choices (self-nurturance). A study of nurses that examined perceptions of workplace features that enable nurses’ professional practice (Magnet features), self-nurturance and healthy outcomes (life satisfaction) was not found in the literature.

Methods. Survey data collected in May 2003 from a convenience sample of 310 Registered Nurses were used for this descriptive, correlational study.

Findings. Self-nurturing nurses were more satisfied with life and perceived that more Magnet features were present in the workplace. Nurses with a master’s degree were more self-nurturing than nurses without a baccalaureate degree. The synergistic effect of both self-nurturance and workplace factors predicted 29% of variance in nurses’ life satisfaction.

Conclusion. Higher levels of perceived Magnet features and frequent self-nurturance choices are important health influences on nurses’ life satisfaction. Greater life satisfaction is known to reduce job dissatisfaction while improving retention. Approaches that incorporate both self-nurturance and workplace Magnet features are suggested to improve the health and retention of experienced nurses.

Keywords: health promotion, life satisfaction, Magnet accreditation, nurse practitioner environment, Registered Nurses, self-nurturance

Introduction

Attaining the highest possible level of health for all people is the primary goal of the World Health Organization (WHO). Nurses are the key providers of health promotion services. As the largest group of healthcare professionals, they constitute a significant segment of the global population who seek to attain a high level of health for patients and also for themselves. Health promotion activities for nurses are especially important, as nursing shortages have become global problems. The supply of nurses in many developing and developed countries is failing to keep pace with increasing...
demand, and shortages are expected to worsen as the current workforce ages (International Council of Nurses 2004). The shortage is not necessarily a shortage of qualified individuals; it is a shortage of nurses willing and able to work as nurses in the present conditions. Therefore, the search for solutions should include a focus on the health motivations of nurses as they relate to working in nursing. Strategies that promote nurses’ health and enhance retention of an experienced workforce would help mitigate the impact that a global nurse shortage has on the health of people around the world. Healthy nurses are central to the delivery of care in all countries.

Significant health gains have been realized by modifying personal lifestyle behaviours. Health can also be enhanced in the workplace by modifying the work environment. Therefore, a holistic approach to health promotion is needed, incorporating both personal and workplace factors. Once the interrelationship between the factors is known, interventions can be developed to promote the health of individual nurses. Healthier nurses can have an effect on the quality of care.

In this study we surveyed Registered Nurses to examine perceptions of workplace factors and personal health promotion factors in order to determine inter-relationships. Workplace factors involve organizational policies in the nurse practice environment that enable nurses’ professional practice (Magnet features). Personal factors studied include self-nurturance (healthy lifestyle choices) and satisfaction with life (that is part of the WHO definition of health as well-being). A review of studies using the factors: (1) self-nurturance, (2) perceived Magnet features, (3) satisfaction with life is presented below.

**Background**

**Magnet features**

Magnet hospitals and nurse practice environment are terms developed during a nursing shortage in the early 1980s when certain hospitals, which were considered good places to work, attracted and retained nurses like a magnet. Magnet features are organizational policies that nurses perceive as enabling job performance (Sluets 2000) and are valued by nurses as important to their professional practice (Flynn et al. 2005). Policies perceived to be present in the workplace that have been shown to enable the practice of nursing include decision-making autonomy, clarity of mission and organizational responsiveness (Estabrooks et al. 2002). McClure et al. (1983) examined organizational features from 41 hospitals that have an impact on the professional practice of nurses. The American Academy of Nursing reported on those features that retained and attracted nurses, even during a nursing shortage. The identified organizational Magnet features were found to reduce nurse burnout (Aiken & Sloane 1997a), improve safety (Aiken et al. 1997), and increase job satisfaction (Kramer & Hafner 1989). Two decades of studies have indicated that organizational Magnet features are associated with higher nurse retention (Aiken et al. 2000). These specified organizational features empower nurses with authority, autonomy and control over the environment in which they deliver nursing care (Aiken & Patrician 2000). The Magnet Nursing Service Recognition Program began in 1990 to acknowledge the success of organizations in creating professional nurse practice environments and the first Magnet award was designated in 1994. Regardless of the organization’s size, setting, or location, achieving Magnet designation served to attract and retain quality employees. Magnet designation also helped consumers locate healthcare organizations that have a proven level of excellence in nursing care (American Nurses Credentialing Center 2006).

In the two decades of Magnet studies, a similar inventory was used to measure Magnet features. Items included organizational aspects important to professional practice for nurses working in agencies with and without formal designation by the Magnet Nursing Service Recognition Program. Kramer & Hafner (1989) originally developed the Nursing Work Index to examine job satisfaction, productivity and perceptions of an environment conducive to quality of care. Later studies used the same core set of organizational features either entirely (Yoder 1995), or as a revised version (the Nurse Work Index-Revised, Aiken & Patrician 2000), or as a shorter modified inventory (Aiken & Sloane 1997b), or as a practice environment measure (Estabrooks et al. 2002). While most studies focused on working conditions in hospitals, Flynn et al. (2005) found that the same core set of Magnet features was also valued by nurses in non-acute settings.

**Self-nurturance and satisfaction with life**

The term self-nurturance refers to health promotion choices made by the individual (Nemcek 2003). Since self-nurturance studies began in the late 1980s, and researchers have found that self-nurturance is consistently associated with healthy outcomes, which include an absence of psychological symptoms and greater satisfaction with life (Seal 1995, Schmitz 2000). Qualitative researchers have also found self-nurturance to be a healthy trait for master psychotherapists (Mullenbach 2000), successful single parents (Olson & Haynes 1983) and successful single parents (Olson & Haynes 2000). McClure et al. (2005) found that the same core set of Magnet features was also valued by nurses in non-acute settings.
1993) and senior women living on limited incomes who engage in health promotion activities (Morris et al. 2000). Quantitative researchers have examined self-nurturance in well women, and women who suffer from eating disorders, such as bulimia and binge eating. It has been found that well populations are more able to self-nurture than comparison groups with a disorder (Lehman & Rodin 1989, Herald 1995, Lawless 1997). A phenomenological study of paediatric intensive care nurses found self-nurturance to be a primary theme in coping with a nurse’s grief after the death of a sick patient (Rashotte et al. 1997).

Satisfaction with life refers to a global judgment of happiness when an individual’s standards of success are realized. It is the cognitive appraisal of having ‘the good life’ and is based on criteria most valued by that individual (Pavot & Diener 1993). Seal (1995) and Schmitz (2000) examined the relationship between self-nurturance and life satisfaction and found that engaging in self-nurturance was associated with greater well-being. People who were more self-nurturing were also more satisfied with life, and people in the general population were also more satisfied with life than psychiatric patients (Seal 1995) or people with alexithymia (inability to talk about feelings due to lack of emotional awareness) (Schmitz 2000). People with depression and neuroticism are less satisfied with life (Schimmack et al. 2002). Myers and Diener (1995) recognized career satisfaction as important to satisfaction with life and reported that finding meaning in one’s work correlated positively with life satisfaction.

In summary, previous studies have found a positive correlation between self-nurturance and satisfaction with life, but nurses have not been sampled. The inter-relationship among perceived Magnet features in the nurse’s practice environment, self-nurturance and satisfaction with life have not been investigated. The literature is lacking studies that evaluate the synergistic effects of Magnet features and self-nurturance on nurses’ life satisfaction. Once understood, the knowledge gained can be used to promote nurses’ health, which would be expected to indirectly improve retention of an experienced workforce.

The study

Aim

The purpose of this research was to (1) to ascertain the relationship among the variables: Magnet features, self-nurturance and satisfaction with life; (2) to evaluate the predictive effects of self-nurturance and magnet features on life satisfaction.

Design

A correlational survey design was used and the data were collected in 2003.

Participants

A convenience sample of 310 Registered Nurses was recruited in May 2003. These nurses resided in a small metropolitan area with a population of <1 million in the United States of America. Power analysis with multiple regression indicated that a sample size of 105 would be appropriate using Cohen’s definition (Cohen 1988) of a moderate effect size, with a power of 0.80 and an alpha of 0.05. Students enrolled on an RN to BSN conversion programme at a university were asked to collect data from Registered Nurse colleagues using the data collection procedure described below. Students who chose to participate were given the opportunity of an introduction to research and earning bonus points for their final examination. Twenty of the 26 enrolled students volunteered to participate.

Data collection

Participants were asked to complete four questionnaires.

Satisfaction With Life Scale

The Satisfaction With Life Scale (SWLS) (Diener et al. 1985) is a public domain scale used to measure a person’s subjective rating of a good or satisfactory life. It consists of five items rated from strongly disagree (1) to strongly agree (7) where higher scores indicated greater life satisfaction. We developed and added 1 item on career-satisfaction and 2 items on healthcare quality that were rated from strongly disagree (1) to strongly agree (7).

Practice Environment Index

The Practice Environment Index (PEI) (Estabrooks et al. 2002) consists of 26 items rating the extent of nurse agreement that the item was present in your current job from 1 ‘not at all’ to 5 ‘extremely’. Items describe workplace features that enable nurses’ professional practice (Magnet features) such as ‘Nursing controls its own practice’, ‘Freedom to make important patient care and work decisions’, ‘A lot of doctor and nurse teamwork’. This inventory has been used in past studies to measure the level to which nurses’ perceived that Magnet features were present in agencies not formally designated ‘Magnet’ by the Magnet Nursing Service Recognition Program. Registered nurses in our sample were similar to those in past studies of Magnet features because they worked...
in agencies without formal designation by the Magnet Nursing Service Recognition Program.

Self-Nurturance Scale
Reliability and validity tests were used to reduce The Self-Nurturance Scale (Seal 1995) from 54 items to a 29 item scale – the Self-Nurturance Survey (SNS). Following the completion of an earlier study with a convenience sample of 136 nurses, data were analysed in order to identify items that formed an internally consistent scale. Specifically, items were removed from the scale if their removal increased Cronbach’s alpha. This process was iterated until the alpha value could no longer be increased by the removal of an item. The final scale had an alpha of 0.92, indicating a high internal reliability of the shorter scale. Face validity was determined by a panel of nurses. In the present study, the Self Nurturance Scale items were rated from (1) ‘not at all true’ to (5) ‘extremely true’ statements describing either a health promotion behaviour (e.g. ‘I eat right’) or an attitude (e.g. ‘I forgive myself when I think I’ve done something wrong’).

Demographic data
A demographic data sheet was used to collect information on characteristics such as race, age and employment status.

Validity and reliability
The overall reliability of the SNS is reported as 0.94 by prior investigators (Seal 1995, Schmitz 2000). Cronbach’s alpha was 0.92 for the 29 item SNS used in this study. The internal reliability of the SWLS has been established with the coefficient alpha of 0.87 (Pavot & Diener 1993) and in the present study, the alpha was 0.89. The overall reliability of the PEI has been reported as ranging from 0.84 to 0.95 (Estabrooks et al. 2002) and in the present study Cronbach’s alpha was 0.95.

Ethical considerations
Approval for the study was obtained through the Institutional Review Board of the university where the data were collected. The consent form explained the study, indicated that participation was voluntary, and provided information about the researcher. Confidentiality and anonymity were assured.

Data analysis
Data were analysed statistics using the Statistical Package for the Social Sciences, 14, (SPSS Inc., Chicago, IL, USA). Descriptive statistics were computed on study variables and examined for the presence of random or systematic missing data, significant skew and outliers. The SWLS, SNS, PEI, career satisfaction, and healthcare quality data were not skewed. Associations among different variables were examined using Kendall’s tau, Pearson’s r and ANOVA. The post hoc comparisons from the ANOVAs were adjusted using the Bonferroni method. Multiple regression was used to examine the predictors of satisfaction with life and an evaluation of assumptions was completed. An evaluation of the underlying assumptions for use of this statistical methodology was performed as recommended by Tabachnick and Fidell (2001) and the results of this investigation were such that the statistical analyses were deemed appropriate.

Results
Selected demographic characteristics of the sample are presented in Table 1. The participants (n = 310) ranged in age from 22 to 65 with a mean age of 38 (sample SD = 9.9). Years worked in nursing ranged from < 1 to 40, with a mean of 10.9 (sample SD = 9). Most were women (n = 268, 88%), married

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(n = 187, 60%), White, n = 256 (83%), worked full-time (N = 286, 86%); most worked in the hospital (n = 276, 89%) and 58% of the nurse respondents held a nursing baccalaureate or higher degree. While salary data were not collected, nurses working one full-time job generally earn what is considered to be the ‘median income’ for this region (U.S. Census Bureau, Housing and Household Economic Statistics Division 2005). No statistically significant relationships were found when examining demographic factors, except when ANOVA was used to evaluate level of education and self-nurturance \( F (3,287) = 4.14, P < 0.007 \). Post hoc testing revealed that nurses with a Master’s or doctoral degree were more self-nurturing than those educated at the diploma and associate degree level. This finding suggests that self-nurturance might be a learned skill and that self-nurturing content might be present in nursing school curricula for baccalaureate and higher degree students. Teaching might be effective in improving nurse self-nurturance.

Mean SNS score was 3.41 (sample \( SD = 0.62 \)) based on the 29-item 5-point Likert scale. SWLS scores produced a mean of 4.56 (sample \( SD = 1.18 \)) from the 7-point Likert scale. PEI mean scores produced a mean of 3.13 (sample \( SD = 0.75 \)) from the 5-point Likert scale, where (5) indicated that Magnet features supporting the professional practice of nursing were present to a high degree in the hospital organization. Sampled nurses were not geographically near agencies with formal designation by the Magnet Nursing Service Recognition Program and the mean score of 3.13 was consistent with prior studies. Aiken and Patrician (2000) reported a Magnet features mean of 3.12 for non-Magnet hospital nurses as compared with Magnet hospital nurses with a mean score of 3.85.

Statistically significant positive correlations were found using Pearson’s \( r \) and Kendall’s tau between life satisfaction and self-nurturance, between Magnet features and self-nurturance, and between life satisfaction and Magnet features (see Table 2). Higher levels of perceived Magnet features in the workplace were associated with higher levels of self-nurturance and life satisfaction. When nurses choose to self-nurture frequently, they also perceived higher levels of Magnet features at work and reported more satisfaction with their life. The statistically significant correlations suggest that both personal and workplace processes might be important contributors to life satisfaction.

The results of the multiple regression analysis with the variables (self-nurturance, Magnet features) entered in at once showed that the independent variables (self-nurturance and Magnet features) explained 22.2% of the variation in life satisfaction indicated by the adjusted \( R^2 \). Because prior researchers found career satisfaction and finding meaning in one’s work to be correlated positively with life satisfaction, these factors were included to the regression model. Including one independent variable on career satisfaction:

‘I am satisfied with my nursing career’ and two other items on care quality (‘I am satisfied with my ability to effect quality health care’ and ‘Where I work the quality of health care is excellent’) provided a better multiple regression model with all variables entered in at once that predicted 29% of the variation in satisfaction with life.

**Discussion**

Low life satisfaction for nurses is linked to nurturing others and neglecting self nurturing

The life satisfaction mean score of 4.56 had a 95% confidence interval (CI) of 4.42–4.69. This was slightly lower than the range of scores from 4.6 to 5.6 reported in varied studies of well groups (Pavot & Diener 1993). Seal (1995) reported that nurses scored higher than the mean scores for persons with mental health problems, which included a mean of 2.80 in psychiatric patients, while Pavot and Diener (1993) found a mean of 2.40 for incarcerated person. Higher life satisfaction is found when more personal needs are met (Diener et al. 1999), including the adult need for self-nurturance. Nurses’ unmet needs for self-nurturing may be an explanation for their life satisfaction mean. The self-nurturance mean score of 3.41 for nurses was lower than the mean of 3.57 reported by Seal (1995) for well non-nurses. A comparison between the self-nurturance mean for nurses and well non-nurses was carried out using a two-sample \( t \) statistic (\( t = 2.44, P < 0.01 \)) that was statistically significant. The lower self-nurturance mean among our nurses may indicate that they were less well than the non-nurses sampled by Seal (1995); however, our nurses’ mean scores were higher than those for

<table>
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<th>Self nurturance</th>
<th>Satisfaction with life</th>
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</thead>
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<td>Kendall’s tau 0.21**</td>
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<td>Satisfaction with life</td>
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<td>Kendall’s tau 0.46**</td>
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<tr>
<td>( n )</td>
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**Correlation significant at the 0.01 level (two-tailed)."
groups with varied health problems, such as the mean of 2.89 for psychiatric inpatients (Seal 1995) and 3.11 for people with alexithymia (Schmitz 2000). Health status should be investigated in future studies. A prior study found that nurturing of others occasionally resulted in positive feelings for women, but often competed with personal needs and resulted in diminished self-esteem and depression (Duffy 1994). Career and parenting issues have been reported as related, such that women who made time for self-nurturance were more satisfied with their parenting skills (Miller-Kallenbach 1995). Nursing jobs with high work demands, which include caring for the needs of others, may conflict with personal self-nurturance needs. Our findings suggest that nurses may have a conflict between nurturing themselves and nurturing others. This would contribute to an unmet need for self-nurturing and reduced satisfaction with life, which would be possible explanations for the positive correlation between self-nurturing and life satisfaction.

Consistent with prior investigators (Seal 1995, Schmitz 2000), respondents who were more self-nurturing were also more satisfied with life. One explanation for the positive correlation might simply be that frequent self-nurturing choices help a person attain and maintain a feeling of satisfaction (Seal 1995). Another explanation for this finding might be that frequent self-nurturing choices help a person with attaining personal needs. Life satisfaction increases as needs are fulfilled (Diener et al. 1999).

Nurses in our study self-nurtured more frequently in workplaces that included many Magnet features. One explanation might be that self-nurturing nurses were more discerning about where they chose to work and selected an organization or department where Magnet features were prevalent. Another explanation for higher self-nurturing may be that working conditions for nurses were better when Magnet features were present. Magnet features made it possible for them to take better care of their personal needs during their time at work, thus resulting in more frequent self-nurturing choices. Researchers in the Nurses’ Health Study II identified organizational features, similar to Magnet features, which affected nurses’ health. Nurses were found to suffer poor health or health decline when their jobs were lacking flexibility, reasonable demands and social support (High Demands and Lack of Control on the Job Damage Health 2002).

**Magnet features and self-nurturance promote life satisfaction**

Magnet feature scores were also positively associated with life satisfaction scores, indicating greater life satisfaction when features that enabled professional practice were perceived to be present in the workplace. Other researchers have not studied the practice environment for correlations with life satisfaction. However, Myers and Diener (1995) found that career satisfaction and finding meaning in one’s work were predictors of life satisfaction. In the present study, career satisfaction for nurses was positively correlated with life satisfaction \( r = 0.45, P < 0.01 \). Meaningful work for nurses (‘I am satisfied with my ability to affect quality health care’ \( r = 0.37, P < 0.01 \) and ‘Where I work the quality of health care is excellent’ \( r = 0.23, P < 0.01 \) ) was also positively correlated with life satisfaction. Based on the results of the multiple regression analysis, both personal self-nurturance and Magnet workplace features influenced the healthy outcome of life satisfaction. Self-nurturance and Magnet features explained 22.2% of the variance in satisfaction with life. Adding the item on career satisfaction and those affecting care quality provided a better model that predicted 29% of variance in life satisfaction.

**Life satisfaction is affected by individual choices and work environment**

Our findings provide empirical support for the synergistic effects of workplace and individual health promotion efforts on nurses’ life satisfaction. For example, in a Magnet environment, nurses may feel supported in providing quality care without conflicting demands. Even if unexpected patient needs arise, a back-up plan is in place that will allow for time to sit down at mealtimes. Self-nurturing choices such as eating a healthy meal at work may similarly contribute to nurses feeling supported at work and to greater perceived levels of Magnet features in the workplace. Then pride is felt from a job well done in a supportive environment and nurses feel that their personal needs are better fulfilled when self-nurturance choices are more frequent. Both Magnet features and self-nurturance contribute to feeling more satisfied with life in the present study.

This study represents a first systematic examination of a range of health influences, including workplace and personal factors, on nurses in relation to the outcome satisfaction with life. Modifying personal health choices has been a primary focus of past health promotion strategies, but changing the individual is only one factor. Strategies to bring about healthy changes within the organizational environment are another. Aiken et al. (2000) found that high levels of Magnet features improved patients’ health, with reduced mortality and morbidity, and helped nurses by reducing burnout and increasing job satisfaction. Other researchers carried out a meta-analysis and found that greater life satisfaction is
associated with reduced job dissatisfaction while improving retention and productivity (Lyubomirsky et al. 2005). Our results suggest that Magnet features also have a positive impact on nurses' life satisfaction. Therefore a holistic approach, incorporating both personal and workplace factors, seems needed to promote nurses' health.

Study limitations

Generalizability was limited because the investigated group was not a random sample, and convenience sampling was limited to one geographical area. In addition, the accuracy of the self-report data was not corroborated with physical evidence. It is possible that self-nurturance and Magnet features would not account for 22% of the variation in life satisfaction once the added factors of career satisfaction, ability to effect quality of health care, and the quality of health care at the work site were added to the multiple regression computation.

A limited definition of health was used in this study and nurses' health status was not examined. Future research needs to include health status and additional health outcome measures. The variables examined were limited to personal and workplace factors. The only workplace organizational factor examined was the Magnet characteristics. Other workplace features may support nurses' health more than Magnet features and not all healthcare organizations will choose to undertake the entire Magnet process. Therefore future studies are needed to identify specific organizational features that improve nurses' life satisfaction.

Nursing education may also impact nurses' health. Nurses with a master's degree were more self-nurturing than nurses without a baccalaureate degree and instruction might improve nurses’ self-nurturance. Examining the nursing education environment for organizational policies that support self-nurturing is recommended for future studies. Further research is suggested in the following areas: (1) investigating health status of nurses using other health outcome measurements; (2) examining the health impact of nursing education environments; (3) evaluating the impact of self-nurturance on nurse retention and (4) identifying specific organizational policies that effect health.

Conclusion

The findings of this research suggest a new direction for understanding the motives of nurses. Improving health and happiness through nurturance should be a primary professional focus when providing care to others. These are values that attract students to nursing and are central to the professional socialization that occurs in nursing education programmes. In addition to helping others, improving health and happiness through nurturance can be applied to one's self and may be useful for the health and retention of Registered Nurses. Because self-nurturance and life satisfaction have not previously been studied in a group of nurses, our results provide a foundation for replication and developing future research. The time is right to break the recurrent cycles of nursing shortages using organizational and individual activities for nurses. Knowledge of factors such as self-nurturance and Magnet features can be used to promote the health of nurses, which would be expected to benefit the patients they serve.

Acknowledgements

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Author contributions

MAN was responsible for the study conception and design and the drafting of the manuscript. MAN performed the data collection. MAN and GDJ performed the data analysis.
MAN provided administrative support. MAN made critical revisions to the paper. MAN and GDJ provided statistical expertise. MAN supervised the study.

References