

Measuring Structural and Psychological Empowerment in Nursing Profession: Scale Validation through Pilot Study

* Najia Shaikh, Assistant Professor

** Ashique Jhatial, Professor

*** Muneerudin Soomro, Professor

Abstract

Research in the field of the nursing profession has attained its heights, especially in the developed countries. Most of the research in this field has addressed nursing empowerment, work attitude, and organizational outcomes. This study aims to extend understanding of whether structural and psychological empowerment drive work outcomes. Thus, this study has attempted to develop and customize a scale for primary data collection. Researchers highlighted various steps of questionnaire development, data collection procedure, and establishing reliability and validity at the pilot level. These steps help researchers to ground data collection tools in extant literature. Initial findings from pilot study data are reported. Data for this study was collected through a closed-ended questionnaire by employing a convenience sampling technique from registered nurses from public-private sector hospitals in Hyderabad, Sindh. Cronbach's alpha, mean, and corrected total-item correlation for all items are well above the threshold values. Findings of EFA shown that there are seven factors in the model. The CFA identified that every factor arises as a single factor and loads onto its construct with significant levels of indices.

Keywords: Structural Empowerment, Psychological Empowerment, and Nursing Profession

Introduction

The term empowerment has been given various shades of meaning. However, World Bank considers structural and psychological empowerment as a source of enhancing employees' ability, volume, and potential to attain desired results. Palmier (1998) observed that empowerment carries an immense influence on the productive functioning of an institutional working. Several scholars contributed in the field especially on structural power and its connection with the growing empowerment of employees with organizations (Kanter, 1993; Kluska, Laschinger and Kerr, 2004; Sui, Laschinger and Vingilis, 2006; Anthony, 2004; Erikson, Hamilton, Jones and Ditomassi, 2003). Previous research indicates that conventional and unconventional power delegation influence the workforce differently and it needs to research in the nursing profession.

Kanter's (1997) and Spreitzer's (1995) theories of empowerment have bridged the gap of understanding the subject in detail. Kanter's theory of structural empowerment and Spreitzer's theory of psychological empowerment have widely been researched in developed countries as a predictor of work assignment, job satisfaction, intent to stay, and institutional devotion, performance. However, there is an urgent need to investigate these two theoretical frameworks in developing countries' context for a larger generalization of theories. As a result, this study aims to fill this gap by providing empirical evidence from registered nurses in Pakistan. Adopted the approach of Khokhar et al. (2021) study aimed to develop scale so that the underlying theories and concepts involved can be measured quantitatively (See figure 1). This study at the pilot study level developed and validated a survey questionnaire tool based on structural, and psychological empowerment to measuring their consequent impact on work outcomes in the nursing profession in Sindh, Pakistan.

Structural Empowerment

Kanter's structural empowerment has given a befitting explanation of institutional empowerment and its outcomes at work. This theory signifies employees' formal empowerment that explains employees' access to information, resources, support, and chance to evolve and perform better. Kluska et al.

* Institute of Commerce, University of Sindh, Jamshoro Email: najia.shaikh@usindh.edu.pk

** Institute of Commerce, University of Sindh, Jamshoro Email: ashique.jhatyal@usindh.edu.pk

*** Institute of Commerce, University of Sindh, Jamshoro Email: muneer.soomro@usindh.edu.pk

(2004). Maintained that psychological empowerment possesses abstract qualities of sovereignty, job meaningfulness, competence, and capability to impact the institution. Besides that Degner (2005) noted that employees who are empowered to the maximum make not only the most of their abilities to raise the growth bar of the organization but also fulfill the assigned work decently. Additionally, Siu et al. (2005) view it in a way that a conducive environment to the independent workers access them to the resources which in turn help them achieve their desired results. Erickson et al. (2003) firmly believe that once workers of the firm are empowered, the organization and its employees attain Self Actualization.

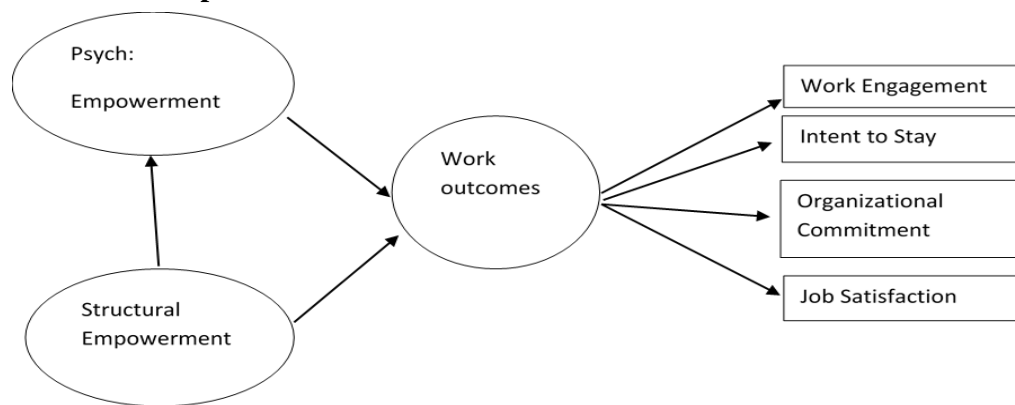
Kanter (1997) defined structural empowerment concerning the access employees i.e., (a) an opportunity for advancement, (b) access to the information, (c) support, (d) access to resources, (e) formal power, and (f) informal power. Most of the organizational behaviorists studied structural empowerment based on these factors. Wanger et al. (2010) identified that access of employees to these six factors enhances performance in the healthcare sector, similarly, Krebs, Madigan, and tullai-McGuinness (2008) observed that if employees feel empowered, low work pressure and are supported by the higher-ups they show best of their abilities.

Psychological Empowerment

Wallach and Muller (2006) observed that structural empowerment gives birth to psychological empowerment. Earlier, Spreitzer (1995), and Vgot & Murrell (1990) suggest that where there is structural empowerment in the workplace there is a greater chance that psychological empowerment persists as its consequence. Moreover, several researchers noted that environmental indicators also enhance psychological empowerment at work (Thomas and Velthouse, 1990; Laschinger, 1996; Conger and Kanungo, 1988; and Spreitzer, 1995). Likewise, Spreitzer (1992) observed that four dimensions of psychological empowerment seem befitting which include first, "*Impact*" that refers to employee's ability to transform behavior to achieve desired results, second "*Self-efficacy*" individual's capability to perform a task adroitly, third, "*Meaningfulness*" employees' devotion and commitment to his/ her jobs, and fourth "*Self-determination*" it suggests dutifulness with motivation to one's work.

Work outcomes

Job satisfaction is employees' inner feeling of contentment achieved from work. Whereas, work engagement depicts personal investment in the work tasks on a job (Macey and Schneider, 2008). Schaufeli and Bakker, (2002) view work engagement as a positive, fulfilling, work-related cognitive condition of an employee which is bifurcated into vigor, dedication, and absorption. Gonzalze-Roma et al. (2010) noted that work engagement has an inverse relationship with burnout and intent to quit. Likewise, another outcome variable of interest in the current study is 'intent to say. Irrespective of all the development taking place in modern science and technology, human resources are held as high assets for competitive advantage (Tourani, & Etal, 2016). To survive and thrive in the business it is quite challenging and important for any organization to motivate competent and talented employees and retain them (Kemelgor and Meek, 2008 and Kumar, 2014). Retaining such people within the organization has become a very challenging assignment for the institutions (Abraham, Renaud, & Saulquin, 2016). It has been observed that nurses who tirelessly render their services to the patient are always in search of a better workplace with structural and psychological empowerment (Galzone and et al., 2010; Amieva, & Ferguson, 2012; Nethenson, 2012). In addition, these outcomes variables discuss above, organizational commitment (OC) has widely been linked with structural and psychological empowerment especially in the nursing profession. OC has been defined as someone's trust and affiliation in an organization's core value structures and objectives. OC refers to an individual's involvement with work and organization in totality and prefers to remain with the organization (Mowday et al. 1979). Allen and Meyer (1990-91) classified organizational commitment into three types commitment. First, affective commitment refers to the employee wishes to be part of an organization, second continuance commitment indicates to the employees who in no way intend to get stripped of their socio-economic privileges because they need to stay with the organization and normative commitment when there lies an obligation like a contract for the employees to stay within the organization because they have to or else, they might pay a great price in the violation. Based on these concepts, this study conceptualizes the study model as under.

Figure 1: Conceptual Framework

Methodology

For pre-testing of the tool, researchers relied on structured interviews using a survey questionnaire. This technique helps researchers to interact with research subjects and helps to understand whether they comprehend the concepts employed otherwise necessary revisions in the content be done. For piloting the instrument, a convenience sampling technique was utilized in nursing staff of government, and private hospitals in Hyderabad, Sindh. Data were analyzed through *Statistical Packages for Social Sciences (SPSS)* version 25.0. Whereas constructs were measured on the scale i.e., 1=Strongly Disagree..., and 7= Strongly Agree using a seven-point Likert-type scale.

Operationalization of constructs

The first section of the instrument contained biographical information of the respondent such as age, gender, religion, degree, work experience, and position. Kanter's (1977) structural empowerment scale containing six dimensions with 20 items were utilized to measure structural empowerment. In the same vein, Spreitzer's (1995) scale of psychological empowerment scale consisting of four dimensions with twelve items was used to measure the concept of psychological empowerment. Similarly, Warr-Cook-Wall (WCW) (1979) was used to measure job satisfaction. WCW contained 10 items to measure the underlying concept. Another 12 item scale developed by Allen and Meyer (1997) has been used to measure three sub-dimensions affective commitment, continuance commitment, and normative commitment. A 9-item Utrecht Work Engagement Scale (UWES) of Schaufeli and colleagues (2006) was adopted to measure the work engagement of nurses under investigation. We also used Price and Mueller's (1986) scale to measure the work engagement of nurse's intent to stay.

Results and discussion

Demographic Information

A sample of 57 nursing staff participated in pre-testing of data collection. Out of 57 staff, 64.9% were serving as staff nurses. The vast majority of participants' age group was between 20-29 years which, indicates that respondents were in middle age. About 60% of nurses were diploma holders, whereas the majority e.g., 78.9% of the nurses were Muslims.

Table 1: Cronbach's Alpha (Construct wise and overall)

S. No	Construct	Cronbach's alpha	No of Items in a Construct	Remarks
1.	Overall Reliability	.907	79	Internally consistent
2.	SE	.820	20	Consistent
3.	PE	.792	12	Consistent
4.	JS	.734	10	Consistent
5.	OC	.828	12	Consistent
6.	WE	.915	09	Consistent
7.	IS	.311	04	Need to be revised

Purdy et al. (2010) reported that from 1996 to 2008 several researchers including (Laschinger et al, 2001) suggested that if reliability scores of structural and psychological empowerment range between 0.70 to 0.80 then scale can be considered adequate. Table 1 shows 0.907 as overall Cronbach's Alpha, which directs the internal consistency to the high levels of the instrument. However, the same 'intent to say' coded as IS appears to be below the standard threshold value which

needs to be revised or deleted. After assessing Cronbach's alpha overall and construct-wise, the authors tested the scale's mean and corrected item-total correlation for each item of the construct. Previous research advised that the mean value for each item should be more than 3.5 if the 7-point scale is used and if any item's score is less than 0.19 then it may be deleted (Khokhar et al. 2021; Laschinger et al. 2001; Hair et al, 2006).

Table 2: Structural Empowerment

S. No	Items Codes	Mean	SD	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	SE1	4.95	1.623	.217	.932
2	SE2	5.32	1.146	.392	.931
3	SE3	4.75	1.505	.595	.930
4	SE4	4.09	1.687	.000	.934
5	SE5	3.75	2.185	-.010	.935
6	SE6	3.71	1.755	.413	.931
7	SE7	5.09	1.225	.771	.929
8	SE8	5.11	1.289	.715	.930
9	SE9	5.18	1.295	.101	.933
10	SE10	3.89	1.592	.122	.933
11	SE11	4.38	1.396	.317	.932
12	SE12	4.59	1.437	.626	.930
13	SE13	3.89	1.557	-.043	.934
14	SE14	4.41	1.247	.422	.931
15	SE15	5.14	1.182	.469	.931
16	SE16	5.20	1.327	.506	.931
17	SE17	4.91	1.195	.462	.931
18	SE18	4.07	1.386	.459	.931
19	SE19	3.75	2.002	.457	.931
20	SE20	3.68	2.037	.359	.932

Table 3: Psychological Empowerment (PE)

S. No	Items Codes	Mean	SD	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	PE1	5.39	1.614	.536	.930
2	PE2	5.43	1.524	.648	.930
3	PE3	5.23	1.584	.618	.930
4	PE4	5.66	1.632	.667	.929
5	PE5	4.89	1.485	.642	.930
6	PE6	4.96	1.525	.593	.930
7	PE7	4.05	1.566	.424	.931
8	PE8	4.34	1.676	.148	.933
9	PE9	3.82	1.539	.218	.932
10	PE10	4.66	1.283	.478	.931
11	PE11	3.80	1.299	.266	.932
12	PE12	3.71	1.615	.571	.930

Table 4: Job Satisfaction (JS)

S. No	Items Codes	Mean	SD	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	JS1	4.46	1.640	.538	.930
2	JS2	3.79	1.358	.493	.931
3	JS3	5.13	1.585	.698	.929
4	JS4	4.79	1.498	.748	.929
5	JS5	3.80	1.699	.298	.932
6	JS6	3.82	1.889	-.109	.935
7	JS7	4.38	1.484	.149	.933
8	JS8	4.63	1.602	.133	.933
9	JS9	4.79	1.558	.587	.930
10	JS10	5.04	1.452	.619	.930

Table 5: Organizational Commitment (OC)

S. No	Items Codes	Mean	SD	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	OC1	4.80	1.507	.757	.929
2	OC2	5.14	1.394	.711	.929
3	OC3	4.71	1.474	.445	.931
4	OC4	5.02	1.120	.371	.931
5	OC5	4.27	1.355	.297	.932
6	OC6	4.54	1.414	.692	.930
7	OC7	4.29	1.546	.561	.930
8	OC8	4.07	1.488	.526	.930
9	OC9	4.55	1.451	.397	.931
10	OC10	4.63	1.613	-.075	.934
11	OC11	4.04	1.477	-.074	.934
12	OC12	4.89	1.836	.569	.930

Table 6: Work Engagement (WE)

S. No	Items Codes	Mean	SD	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	WE1	5.21	1.534	.460	.931
2	WE2	5.14	1.577	.672	.930
3	WE3	5.11	1.461	.639	.930
4	WE4	5.34	1.698	.579	.930
5	WE5	5.21	1.522	.623	.930
6	WE6	5.41	1.627	.619	.930
7	WE7	5.57	1.715	.561	.930
8	WE8	5.14	1.257	.288	.932
9	WE9	4.52	1.618	.367	.931

Table 7: Intent to Stay (IS)

S. No	Items Codes	Mean	SD	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	IS1	3.48	1.427	-.457	.936
2	IS2	3.63	1.484	.027	.933
3	IS3	3.84	1.411	.141	.933
4	IS4	3.88	1.585	.398	.931

Tables 2 to 7 depict the most of the items score pretty good and are above threshold values of mean and corrected item-total correlation expecting fewer items such as SE4, SE5, SE9, SE10, SE13, PE8, JS6, JS7, JS8, OC10, OC11, IS1, IS2 and IS3 which fall below the threshold level. As a result, all of these items which do not meet up threshold levels need to be revised before conducting the final survey.

Exploratory Factor Analysis (EFA) was undertaken to validate the scale in the light of Tabachnik, Fidell, and Ullman (2016) who noted that EFA is considered to establish construct validity of the scale (Table 8). Streiner, Norman, and Cairney (2015) suggested that if the item-total correlation value is higher than >0.30 then it adequately measures the concept. Similarly, we followed the study of Whittaker (2016) in carrying out Kaiser-Meyer-Olkin (KMO) in EFA and found that all values of constructs are pretty above >0.6 except one construct i.e. 'Intent to Stay' with 0.5. This study used oblique rotation to evaluate correlation with Eigenvalue >1 (Osborne, Costello & Kellow, 2008). Scree plots, parallel analysis, tests were used as a guideline to retain several factors. Items were deleted if there were factor loading, 0.32 or cross-loading i.e., discrimination between factors, 0.20 (Tabachnik, Fidell & Ullman, 2016; Gaskin & Happell, 2014; Osborne, Costello & Kellow 2008). Findings of EFA shown that there are seven factors in the model (see Table 8). The CFA identified that every factor arises as a single factor and loads in the prospective factor with significant levels of indices.

Conclusion

An increasing body of knowledge has shown interest in the concepts of structural and psychological empowerment especially in the profession of nursing. Most of the studies conducted in western and

advanced countries are far better in terms of working environment, human resource management policies and practices, salary structures, and empowerment. Whereas, developing nations including Pakistan is experiencing several issues at work setting relating to high workload, low pay structure, and poor supervision. As a result, the findings of previous studies undertaken in advanced nations are not generalizable in developing countries. Based on insights from extant literature review, the current study conceptualized (figure 1) and operationalized and attempted to measure the concepts employed in the nursing profession in Sindh, Pakistan. Thus, this study developed and validated tools through pre-testing in the nursing profession in Sindh which could be used by future studies in developing countries and beyond. The current study developed a tool based on two theories such as Kanter's (1977) theory of structural empowerment and Spreitzer's (1995) theory of psychological empowerment added up by few outcome variables including JS, WE, OC and IS to look at employed theories and their impact on these constructs in the healthcare system. Findings of the study suggest that questionnaire has shown adequate alpha reliability (0.7) and most of the items are well scored on the mean (3.5) and corrected item-total correlation (.19) with satisfactory scores of EFA and CFA. Hence, this tool could be utilized for data collection for the main study in the nursing profession. In addition to that all the items which scored low on mean and corrected item-total correlation be revised or deleted from the final survey questionnaire.

References

- Allen, N. J., & Meyer, J. P. (1990). The Measurement and Antecedents of Affective, Continuance, and Normative Commitment to the Organization. *Journal of Occupational Psychology*, vol. 63, no.1, pp.1-18.
- Anthony, M. (2004). Shared governance models: The theory, practice, and evidence. *OJIN: The Online Journal of Issues in Nursing*, vol. 31, no. 9, Retrieved February 1, 2008, from: www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Volume92004/Number1January31/SharedGovernanceModels.aspx
- Armstrong, K.J., & Laschinger, S.H.K. (2006). Structural empowerment, Magnet hospital characteristics, and patient safety culture. *Journal of Nursing Care Quality*, vol.21, no.2, pp. 124-132.
- Bakker, A.B., & Bal, M. (2010). Weekly work engagement and performance: A study among starting teachers. *Journal of Occupational and Organizational Psychology*, vol. 83, pp.189–206.
- Bartell, M. (2003). Internationalization of universities: A university culture-based framework. *Journal of Higher Education*, vol. 45, no.1, pp. 43-70.
- Baston, V. 2004, 'Shared governance in an integrated health care network' *AORN*, vol. 80, no. 3, pp. 493-496, 498, 501-504, 506, 509-512.
- Burston, S., Chaboyer, W., & Gillespie, B. (2014). Nurse-sensitive indicators are suitable to reflect nursing care quality: a review and discussion of the issue. *Journal of Clinical Nursing*, vol.23, pp.13/14.
- Cowden, T. L., & Cummings, G. G. (2012). Nursing theory and concept development: a theoretical model of clinical nurses' intentions to stay in their current positions. *J Adv Nurs* vol., 68, pp.1646-57.
- Dalal, R.S., Brummel, B.J., Wee, S., & Thomas, L.L. (2008). Defining employee engagement for productive research and practice. *Industrial and Organizational Psychology*, vol. 1, pp. 52–55.
- Davies, A., Wong, C. A., & Laschinger, H. (2011). Nurses' participation in personal knowledge transfer: the role of leader-member exchange (LMX) and structural empowerment. *J. Nurs. Manage.* Vol.19, pp. 632–643.
- Degner, L. (2005). Knowledge translation in palliative care: Can theory help?. *Canadian Journal of Nursing Research*, vol. 3 no.2, pp. 105-113.
- Douglass, J. (2005). How all globalization is local: Countervailing forces and their influence on Higher education markets?. *Higher Education*, vol. 18, pp. 445-473.
- Erickson, J.I., Hamilton, G.A., Jones, D.E., & Ditomassi, M. (2003). Measuring the impact of collaborative governance: Beyond empowerment. *Journal of Nursing Administration*, vol. 33, no.2, pp. 96-104.
- Gonzalez-Roma, V., Schaufeli, W.B., Bakker, A.B., & Lloret, S. (2000). Burnout and engagement: Independent factors or opposite poles? *Journal of Vocational Behaviour*.

- Griffith, C., Larkin, M., Cierpial, C., Gettings, E., & Capasso, V. (2007a). How to create an innovative journal club and keep it going. *American Nurse Today*, vol. 11, no.2.
- Griffith, C., Larkin, M., Cierpial, C., Morrison, V., O'Malley, C., & Capasso, V. (2007b). MGH nursing research committee develops an innovative subcommittee structure for succession planning. Poster session presented at the annual meeting of the Eastern Nursing Research Society, Providence, R.I.
- Kahn, W.A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, vol. 33, pp.692–724.
- Kanter, R.M. (1993). Men and women of the corporation (2nd ed.). New York: Basic Books.
- Kanungo, R. N. (1982). Measurement of Job and Work Involvement. *Journal of Applied Psychology*, vol. 67, no.3, pp. 341-349.
- Khan, M. A., Kashif Ur, R., Ijaz Ur, R., Safwan, N., & Ahmad, A.(2011). Modeling link between internal service quality in human resources management and employee's retention: A case of Pakistani privatized and public sector banks. *African Journal of Business Management*, vol. 5, no.3, pp.949–959.
- Khattak, J., Khan, M., Haw, A., Arif, M., & Minhas, A. (2011). Occupational stress and burnout in Pakistan's banking sector. *African Journal of Biotechnology*, vol. 5, no. 3, pp.810-817.
- Kluska, K.M., Laschinger, H. K., & Kerr, M. S. (2004). Staff nurse empowerment and effort-reward imbalance. *Canadian Journal of Nursing Leadership*, vol. 17 no.1, pp. 112-128.
- Khokhar, S.A., Pathan, H., Jhatial, A.A., Taj, S. & Mushtaq, F. (2021). Customization and Validation of a Scale Measuring Second Language Teachers' Motivation for Professionalization. *TESOL International Journal*, Volume 16 Issue 1 2021, ISSN. 2094-3938.
- Kramer, M., & Schmalenberg, C. (2008). Confirmation of a healthy work environment', *Critical Care Environment*, vol.28, no.2, pp.56-64.
- Larkin, M., Griffith, C., Capasso, V., Cierpial, C.L., Gettings, E., Walsh, K., & O'Malley, C. (2007). Promoting research utilization using a conceptual framework. *Journal of Nursing Administration*, vol. 37, no. 11, pp. 510-516.
- Laschinger, H. K. S., Shamian, J., & Thomson, D. (2001a). Impact of magnet hospital characteristics on nurses' perceptions of trust, burnout, quality of care and work satisfaction. *Nursing Economics*, vol.19, no.5, pp. 209-219.
- Laschinger, H. K. S., Finegan, J. & Shamian, J. (2001b). The impact of workplace empowerment and organizational trust on staff nurses' work satisfaction and organizational commitment. *Health Care Management Review*, vol.26, no.3, pp. 7-23.
- Laschinger, H. K., Wong, C. A. & Grau, A. L. (2013). Authentic leadership, empowerment, and burnout: a comparison in new graduates and experienced nurses. *J NursManag*, vol. 21, pp. 541-52.
- Laschinger, H. K., Nosko, A., Wilk, P., & Finegan, J. (2014). Effects of unit empowerment and perceived support for professional nursing practice on unit effectiveness and individual nurse well-being: a time-lagged study. *Int. J. Nurs. Stud*, vol.51, pp.1615–1623.
- Laschinger, H., Finegan, J., & Wilk, P. (2009). The impact of unit leadership and empowerment on nurses 'organizational commitment. *Journal of Nursing Administration*, vol. 39, pp.228–235.
- Laschinger, H., Finegan, J. E., Shamian, J., & Wilk, P. (2004). Longitudinal analysis of the impact of workplace empowerment on work satisfaction. *Journal of Organizational Behavior*, vol.25, pp.527–544.
- Lodahl, T. M., & Kejner, M. (1965). The Definition and Measurement of Job Involvement', *Journal of Applied Psychology*, 49 (1), pp. 24–33.
- Mangold, K.L., Pearson, K.K., Schmitz, J.R., Scherb, C.A., Specht, J.P., & Loes, J.L, (2006). Perceptions and characteristics of Registered Nurses involvement in decision making. *Nursing Administration Quarterly*, vol. 30, no. 3, pp. 266-272.
- Manohlovich, M. (2007). Power and empowerment in nursing: Looking backward to inform the future. *The Online Journal of Issues in Nursing*, vol.12, no.1.
- Meyer, J. P., & Allen, N. J. (1991). A Three-Component Conceptualization of Organizational Commitment. *Human Resource Management Review*, vol. 1, no.1, pp. 61–89.

- Mowday, R. T., Porter, L. W., & Steers, R. M. (1979). The Measurement of Organizational Commitment. *Journal of Vocational Behavior*, vol. 14, no.2, pp. 224-227.
- Palmier, D. (1998). How can the bedside nurse take a leadership role to affect change for the future? Concern. *Saskatchewan Registered Nurses Association*, vol. 2, no.1.
- Paullay, I., Alliger, G., & Stone-Romero, E. (1994). Construct Validation of Two Instruments Designed to Measure Job Involvement and Work Centrality.
- Porter-O'Grady, T., Hawkins, M.A., & Parker, M.L., (Eds). (1997). *Whole Systems Shared Governance: Architecture for Integration*. Gaithersburg, MD: Aspen Publishers.
- Schaufeli, W., Salanova, M., Gonzalez-Roma, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *The Journal of Happiness Studies*, vol. 3, pp. 71-92.
- Siu, H.M., Laschinger, H.K.S., & Vingilis, E. (2005). The effect of problem-based learning on nursing students' perceptions of empowerment. *Journal of Nursing Education*, vol.44, no. 10, pp. 459-469.
- Van Bogaert, P., Timmermans, O., Weeks, S. M., Van heusden, D., Wouters, K., & Franck, E. (2014a). Nursing unit teams matter: impact of the unit-level nurse practice environment, nurse work characteristics, and burnout on nurse reported job outcomes, and quality of care, and patient adverse events: a cross-sectional survey. *Int. J. Nurs. Stud.* Vol.51, pp.1123-1134.
- Wagner, J. I., Warren, S., Cummings, G., Smith, D. L., & Olson, J. K. (2013). Resonant leadership, workplace empowerment, and "spirit at work": impact on RN job satisfaction and organizational commitment. *Can. J. Nurs. Res.* Vol.45, pp.108-128.
- Wang, S., & Liu, Y. (2015). Impact of professional nursing practice environment and psychological empowerment on nurses' work engagement: a test of structural equation modeling. *J. Nurs. Manage. J. Nurs. Manag.* Vol.23, pp.287-296.
- White, M. (2015). How effective is the productive ward initiative?. *Nursing Times* 111, 12-14. Available online at: www.nursingtimes.net
- Yang, J., Liu, Y., Huang, C., & Zhu, L. (2013). Impact of empowerment on professional practice environments and organizational commitment among nurses: a structural equation approach. , *Int. J. Nurs. Pract.*, Vol.19 (Suppl. 1), pp. 44-55.