

JOB DEMANDS AND RESOURCES AS ANTECEDENTS OF WORK ENGAGEMENT: A DIAGNOSTIC SURVEY OF NURSING PRACTITIONERS

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ABSTRACT

The global scarcity of nursing staff is a challenge to healthcare systems worldwide and creative solutions are needed to address this shortage. Work engagement of nursing practitioners is one essential factor in ensuring a sustainable nursing workforce and sustainable healthcare systems. The purpose of this study was twofold. Firstly, we diagnose the work engagement of nursing practitioners to identify the antecedents of work engagement of nursing practitioners of different nursing and age categories (using the Job Demands and Resources model). Secondly, we propose feasible remedial actions to healthcare management. A quantitative, ex post facto design was followed and data analysis included item analysis, correlation analysis, hierarchical multiple regression analysis, Partial Least Square (PLS) and Analysis of Variance (ANOVA). Findings confirmed work engagement deficiencies. As antecedents, the job resources remuneration, participation, career possibilities, variety at work, independence at work, opportunities to learn, and information require intervention. The job demands of pace and amount of work, mental load, emotional load, ambiguities of work, and uncertainty about the future were also deficient. Feasible, practical recommendations were proposed for each work engagement antecedent that was found to be at an unfavourable level and therefore require intervention. A distinction was made between interventions for

nursing staff of different ages and nursing categories where relevant. Significant contributions of this paper include the identification of work engagement deficiencies among nursing staff and mores, specifically the job demands and resources that will increase the work engagement of nursing practitioners in support of a sustainable South African healthcare system.

Keywords: job demands; job resources; nursing; work engagement

INTRODUCTION AND RESEARCH BACKGROUND

The global scarcity of nursing staff is a challenge to healthcare systems worldwide. Creative solutions are needed to address this shortage, and the ability to engage employees is recognised as a factor that significantly differentiates between healthcare organisations (Hilton and Sherman 2015). The work engagement of current nursing staff is one factor that can be addressed to ensure a sustainable nursing workforce, and as a result sustainable healthcare systems. The work engagement has been shown to improve a wide range of nursing outcomes (e.g. patient care and patient satisfaction) even in environments with insufficient nursing staff (Nahrgang, Morgeson and Hofmann 2011; Wang and Liu 2015).

Schaufeli, Martinez, Maques Pinto, Salanova and Bakker (2002,74) define engagement as “a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption”. Vigour is “high levels of energy and mental resilience while working, the willingness to invest effort in one’s work, and persistence even in the face of difficulties”, while dedication is characterised by a “sense of significance, enthusiasm, inspiration, pride, and challenge”. “Being fully concentrated and deeply engrossed in one’s work, whereby time passes quickly and one has difficulties with detaching oneself from work” is characteristic of absorption (Balducci, Fraccaroli and Schaufeli 2010; Schaufeli et al. 2002, 74). In short, engaged employees have higher levels of energy and are enthusiastic about their work. Moreover, they are often fully immersed and connected in their work, they show high levels of dedication, innovation and a wide range of positive work behaviours (Hakanen, Bakker and Schaufeli 2006; May, Gilson and Harter 2004; Salanova and Schaufeli 2008; Schaufeli and Salanova 2006; Van Wingerden, Bakker and Derks 2016; Wang and Liu 2015).

Work engagement interventions will only be successful if they address the antecedents that contribute to low levels of work engagement. Knowing what these antecedents are can contribute towards purposeful management of work engagement and can ultimately lead to the reduction of the scarcity of nursing practitioners. These important antecedents should therefore be explored from a diagnostic perspective. A diagnosis of the antecedents of work engagement would require the use of a diagnostic model. The Job Demands and Resources (JD-R) model of Bakker and Demerouti (2007) was selected for this purpose.

The JD-R model examines the impact of job demands and job resources on work engagement. This model posits that two underlying psychological processes play a role in the well-being of individuals: an effort-driven process in which excessive job demands and a lack of job resources lead to distress, and a motivation-driven process in which job resources lead to work engagement (Schaufeli and Bakker 2004).

Gordon, Demerouti, Bipp and Le Blanc (2015), Bakker and Demerouti (2007), Demerouti and Bakker (2014), Xanthopoulou, Bakker, Demerouti and Schaufeli (2007) as well as Schaufeli and Bakker (2004) argue that job resources refer to physical, social, or organisational aspects of the job that may reduce job demands and the associated physiological and psychological costs, be functional in achieving work goals, and stimulate personal growth, learning, and development. These authors explain that job demands represent characteristics of the job that could lead to strain when they exceed the employee's adaptive capability. Job demands thus refer to aspects of a job that require continuous physical and/or psychological effort and are associated with certain physiological and/or psychological costs, such as strain and burnout. According to the JD-R model, job demands are initiators of a health impairment process and job resources facilitate work engagement while buffering any potential negative effects that job demands may have on employee wellbeing (Bakker, Demerouti and Euwema 2005; Demerouti and Bakker 2011; *ibid.* 2014). Adequate resources can lead to, for example, work engagement and work performance, while job demands that require various forms of effort, for example work and emotional pressure, could result in forms psychological and physiological costs such as strain and burnout (Demerouti and Bakker 2014).

In an adapted JD-R model proposed by Rothmann and Jordaan (2006) (refer to Figure 1) the following job resources were included: variety at work, opportunities to learn, independence at work, relationships with colleagues, relationships with supervisor, information, communication, participation, career possibilities, contact possibilities and remuneration. The job demands were pace and amount of work, mental load, emotional load, ambiguities of work, and uncertainty about the future.

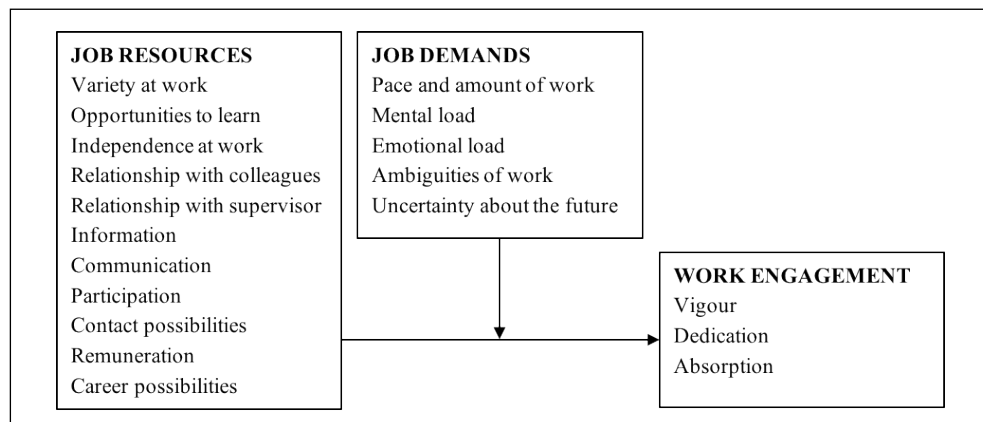


Figure 1: The Job Demands and Resources Model (Compiled from Rothmann and Jordaan 2006)

RESEARCH PROBLEM AND OBJECTIVES

From the research initiating question: “What are the job demands and job resources that influence work engagement of nursing practitioners?”, the specific primary research objectives of this study were:

- To confirm that the work engagement of nursing practitioners are currently at unfavourable low levels
- To determine and investigate the most salient eliciting job demands and resources that influence work engagement of nursing practitioners
- To investigate potential differences in the antecedents of work engagement of nursing practitioners of different age groups and different nursing categories
- To make practical recommendations to Human Resources and Management departments to enhance the work engagement of nursing practitioners

METHODOLOGY

A quantitative, ex post facto design was followed. A non-probability convenience sampling method was employed from the employee data base of a pre-selected private hospital group that has over 50 hospitals countrywide with more than 8 000 permanently employed non-managerial nursing practitioners. Non-managerial nursing practitioners were invited by email to complete an electronic or hard copy questionnaire. The data gathering process yielded a total of 151 electronic (8% response rate) and 302 hard copy (46% response rate) surveys (total sample $n = 453$). Permission to do the research was obtained from the executive management of the private hospital group and the ethical committee of Stellenbosch University.

Three sections were included in the survey: (1) Demographics (customised survey questionnaire), (2) Work Engagement (Utrecht Work Engagement Scale (UWES) of Schaufeli and Bakker (2003), and (3) Job Demands and Resources (Job Demands-Resources Scale (JDRS) of Jackson and Rothmann (2005)).

The UWES consists of 17 items that measure the three dimensions of work engagement (vigour, dedication and absorption) on a 7-point Likert frequency scale ranging from 0 (never) to 7 (always). The internal consistency of the UWES is generally considered high with Cronbach's alpha values between 0.80 and 0.90 (Schaufeli and Bakker 2004). The UWES is also regarded as an unbiased instrument because of the equivalence between different racial groups. The scale has been validated in several countries, including China (Yi-Wen and Yi-Qun 2005), Japan (Shimazu, Schaufeli, Kosugi, Suzuki, Nashiwa, Kato and Kitaoka-Higashiguchi 2008), Italy (Balducci et al. 2010), Greece and Netherlands (Xanthopoulou, Bakker, Kantas and Demerouti 2012), Sweden (Hallberg and Schaufeli 2006), and Finland (Hakanen 2002), among others. Storm and Rothmann (2003) specifically validated the UWES in the South African context, which corroborates that the UWES is a highly appropriate tool in the South African context, and therefore is suitable for this study.

The JDRS consists of 42 items that measure the eleven job resources and five job demands on a 4-point Likert frequency scale ranging from 1 (never) to 4 (always). Narainsamy and Van der Westhuizen (2013) report that the job demands and resources scale analysis resulted in a Cronbach's alpha coefficient of 0.70 in a study within the medical laboratory setting.

DATA ANALYSIS AND RESULTS

Sampling Population

The sample group was well represented by all age groups, with most (41%) respondents between the age of 31 and 45. As expected from the nursing profession, 91% of the respondents were female. The respondents predominantly belonged to the white population group (45%), followed by African (32%), and coloured population groups (18%). In terms of nursing category, 38% of the sample consisted of Professional/Registered Nurses, 26% were Senior Professional Nurses, with 22% Enrolled Nurses and 11% Enrolled Nurse Auxiliaries. The majority (69%) of the sample indicated that their highest qualification was a certificate or diploma, with 17% indicating a degree or postgraduate degree. Fifty-seven per cent indicated more than five (5) years' service. Nurses represented 30 hospitals situated across South Africa.

Reliability of the Measuring Instruments

All the items in the work engagement measure provided high levels of reliability, with an overall reliability coefficient of 0.78. This result concurs with Schaufeli and Bakker (2004) and Schaufeli et al. (2008) who also report high levels of internal consistency for the UWES.

Five subscales in the JDRS, namely, pace and amount of work ($\alpha = .69$), mental load ($\alpha = .64$), participation ($\alpha = .54$), ambiguities of work ($\alpha = .61$) and career possibilities ($\alpha = .67$), resulted in Cronbach's alphas below 0.70. In cases of low Cronbach's alpha values (lower than 0.70), one contributing factor could be the fact that very few items were used to measure the subscale (2 to 3 items). In these cases the corrected item-total correlations were consulted to determine whether the items measured the intended subscale. In all cases the corrected item-total correlations exceeded the value of 0.30, and as a result all the items were retained in the scale for all further analysis. This result concurs with Narainsamy and Van der Westhuizen (2013) and Jackson and Rothmann (2005), who also report acceptable Cronbach's alpha values for the JDRS. Of note is that the reliability coefficient for a composite score was not calculated for this measurement instrument because only the scores on the subscales were used in subsequent analysis. Overall, it was posited that the measuring instruments were sufficiently reliable and the data could be used for further data analysis.

Testing the Diagnostic Model

Empirical support for the diagnostic model is important to ensure that valid and credible conclusions are derived in the diagnostic study. To successfully diagnose the specific causes of the low levels of work engagement, the identity of the determining latent variables and the manner in which they combine to affect engagement need to be validly understood, and this was achieved through the use of three distinct processes. Firstly, the relationship between each independent variable (all the job demands and resources) and the dependent variable (work engagement) was established through correlation analysis. Secondly, the proposed effect of the moderating variables was established through hierarchical multiple regression analysis. Hierarchical multiple regression evaluates each possible relationship in isolation from the other hypothesised relationships. Finally, the complete model (inclusive of all interactions simultaneously) was assessed by PLS analysis.

The results of the correlation analysis revealed that 15 of the 16 job demands and resources were significantly related to the dependent variable (work engagement). The job demand, pace and amount of work, did not statistically significantly correlate with work engagement ($p = 0.32$). Interestingly, this result does not corroborate previous research, which indicates that pace and amount of work is negatively correlated with work engagement in the nursing industry (Tomic and Tomic 2011). It is posited that

because nursing practitioners have become accustomed to working at a fast pace (likely due to the nursing shortage), the effect of this variable on work engagement has become less significant. The majority of the other job demands and resources, which did indicate a significant correlation with work engagement, yielded medium strength positive relations to work engagement (r between 0.3 and 0.45). The results further revealed that only one independent variable was significantly negatively correlated with the dependent variable. The Pearson correlation coefficient (r) of the job demand emotional load ($r = -0.15$) indicated a significant, but weak negative correlation with work engagement.

The results of the hierarchical multiple regression analysis indicates that only nine of the possible 55 job resources x job demands interaction effects were statistically significant. Three of the job demands were involved in interaction effects with job resources that statistically significantly ($p \leq 0.05$) explained unique variance in work engagement that is not explained by job resources, namely, emotional load (moderates the effect between 6 of the 11 possible job resources and work engagement), mental load (moderates only the relationship between variety at work and work engagement), and uncertainty about the future (moderates only the relationship between contact possibilities and opportunities to learn with work engagement).

Finally, PLS modelling was attempted on the complete JD-R model, however, the complexity of the model failed to return a solution. Consequently, to simplify the analysis, a PLS analysis was firstly conducted on the model without including the moderating effect of the job demands. Only five occurrences were found where analysis confirmed statistically significant ($p \leq 0.05$) paths between the exogenous job resources and job demands latent variables and the single endogenous work engagement latent variable. The statistically significant ($p \leq 0.05$) paths include:

- Ambiguities of work and work engagement
- Emotional load and work engagement
- Opportunities to learn and work engagement
- Uncertainty about the future and work engagement
- Variety at work and work engagement

The identified job resource and job demand latent variables that confirmed significant paths with work engagement were then utilised to build a new simplified structural model. In the simplified structural model, the latent job demand effects that were found to significantly explain variance in engagement in the first PLS model were allowed to moderate the effect of the job resource latent variables on engagement in the second PLS model. The second PLS model therefore included two independent latent variables (opportunities to learn and variety at work), three moderating latent

variables (ambiguities of work, emotional load and uncertainty about the future), and one latent dependent variable (work engagement). PLS modelling was conducted on this new simplified model. Results of the PLS analysis on the simplified model are depicted graphically in Figure 2.

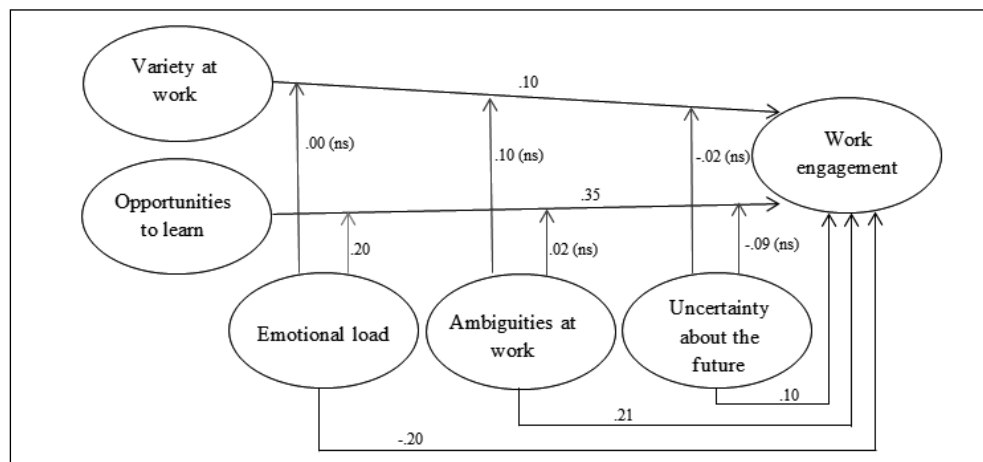


Figure 2: Simplified PLS Model with Path Coefficients

The inferences made from this analyses indicate that the only one confirmed moderating relationship exist, namely, emotional load, which moderates the relationship between opportunities to learn and work engagement. Where only one of 55 possible moderating paths is confirmed, the possibility that the result of a single confirmed path may be due to chance cannot be disregarded. Hence, it seemed rational to conclude that the notion that job demands weaken the relationship between work engagement and job resources is not true for this sample of nursing practitioners.

In summary, results of analyses on the diagnostic model indicated positive correlations between the independent variables and work engagement (with the exception of pace and amount of work that indicated no correlation and emotional load that confirmed a negative correlation). However, significant evidence was not found in support of the moderating effect of job demands. Consequently, the proposed moderating effects of the job demands in the diagnostic model were excluded from further analysis, and inferences were only made based on the correlational relationships that were confirmed.

Diagnosing Work Engagement of Nursing Practitioners

The main objective of this study was to diagnose the hypothesised low levels of work engagement of nursing practitioners. In order to truly understand the drivers

of work engagement of nursing practitioners, a detailed investigation of the levels of engagement of the sample population and an investigation in the differences in work engagement levels between age and nursing category subgroups were necessary. In a similar vein, the general levels of satisfaction pertaining to each specific job demand and job resource within the diagnostic model, including differences between subgroups for each of the independent variables, needed to be investigated and understood. In an attempt to identify whether these subgroups differed significantly in terms of these variables, a one-way analysis of variance (ANOVA) was performed by comparing the independent variable means of the subgroups.

In contrast to what was anticipated, the work engagement of nursing practitioners in this sample was not low. The grand work engagement mean for this sample of nursing practitioners was found to be $\bar{x} = 4.47$, which, according to the UWES standard norm groups published by Schaufeli and Bakker (2003), can be interpreted as average. Although this average score is higher than the anticipated low score, it remains at unfavourable levels as positive individual and organisational outcomes of work engagement are experienced in circumstances of higher work engagement. We thus conceded that work engagement of nursing practitioners warrants remedial action.

Within this sample, age did not seem to play a significant role in the work engagement levels of nursing practitioners. This result contradicts the research findings on engagement and age (Pitt-Catsoupes and Matx-Costa 2008) that reported that nursing practitioners of different ages report different levels of work engagement. Differences in levels of work engagement between different nursing categories were, however, observed. The work engagement mean of Enrolled Nurse Auxiliaries (ENAs) ($\bar{x} = 4.81$) was higher than the work engagement mean of Professional Nurses (PNs) ($\bar{x} = 4.39$), Senior Professional Nurses (SPNs) ($\bar{x} = 4.38$) and Enrolled Nurses (ENs) ($\bar{x} = 4.54$). These work engagement means indicate a decline in work engagement as nursing practitioners become more senior in terms of their nursing categories.

To fully understand work engagement levels of Nursing Practitioners, the differences in job demands and job resources, as antecedents of work engagement, need to be investigated. An ANOVA analysis was employed and Table 1 provides a summary of the results.

Table 1: Summary: Job Demands and Resources

Rank	Job resource	Total mean score ^a	Significant age differences	Significant nursing category differences
1	Relationships with supervisor	3.27	No	No
2	Relationship with colleagues	3.12	No	No
3	Contact possibilities	3.12	No	No
4	Communication	3.06	No	Yes
5	Information	2.98	Yes	No
6	Opportunities to learn ^c	2.95	No	No
7	Independence at work	2.95	No	No
8	Variety at work	2.89	Yes	No
9	Career possibilities	2.43	Yes	No
10	Participation	2.38	No	Yes
11	Remuneration	1.82	Yes	No
Rank	Job demand	Total mean score ^b	Significant age differences	Significant nursing category differences
1	Emotional load ^{c, d}	2.45	No	Yes
2	Uncertainty about the future	2.48	No	Yes
3	Pace and amount of work ^e	2.83	No	Yes
4	Mental load	3.40	No	Yes
5	Ambiguities of work	3.44	No	Yes

a Job resource mean: 1 = job resource perceived as provided least; 4 = job resource perceived as provided most

b Job demand mean: 4 = Highest perceived demand; 1 = lowest perceived demand

c Emotional load moderates the relationship between opportunities to learn and work engagement

d Emotional load has a negative correlation with work engagement

e Pace and amount of work is not correlated with work engagement

The job resources are presented from highest mean score to lowest mean score, indicating the job resources that nursing practitioners perceive as provided most to least often. The job demands are sorted from lowest means score to highest mean score to provide an overview of the demands that they are faced with in order of frequency (least often to most often). The table also presents an indication of whether significant differences in means were found for nursing practitioners of different age groups and nursing categories.

The job demands and resources were measured by 42 items in the JDRS on a 4-point frequency scale ranging from 1 (never) to 4 (always). In the absence of empirically evaluated norm groups, one would anticipate that a score of 3 (most of the time) (for those factors that load positively on work engagement) or 2 (sometimes) (for those factors that contribute negatively to work engagement) can be viewed as satisfactory. These scores were applied as guidelines to identify those job demands and resources that were at problematic levels.

DISCUSSION

In terms of job resources, it is evident that nursing practitioners are least satisfied with their remuneration ($\bar{x} = 1.82$). This result corroborate the findings of Mee (2005) and Ning, Libo and Oiuje (2009) who pointed out that many nursing practitioners consider themselves significantly underpaid in comparison with other professionals. Mee (2005) furthermore argues that a perceived good salary can still be regarded as poor compensation by nurses who are challenged on a daily basis with unsafe staffing levels, overtime and other problems pertaining to the nursing shortage. These challenges remain today.

Results indicated that age plays a significant role in perceptions on remuneration. Older nursing practitioners (46–65 years old) are generally less satisfied ($\bar{x} = 1.69$) with remuneration in comparison to younger nursing practitioners (31–45 years old, $\bar{x} = 1.84$ and 18–30 years old, $\bar{x} = 1.96$). Potentially, higher remuneration expectations of older nursing practitioners, based on the premise that they should be rewarded for their years of experience and tenure, could contribute to this finding.

Nursing practitioners report that they are provided with opportunities to participate at work only some of the time ($\bar{x} = 2.38$). Added to this, indications are that nursing category plays a significant role in the mean scores of opportunities to participate: professional nurses report to have the least opportunities to participate at work ($\bar{x} = 2.25$). Of note is the reported Cronbach's alpha of this subscale that was found to be 0.54. Hence, caution should be applied when interpreting the results related to this subscale.

The average mean score of career possibilities ($\bar{x} = 2.43$) indicate that nurses perceive opportunities to progress in their careers only sometimes. This finding supports Robinson and Murrels (1998) who pointed out that career planning support for nurses has received little attention based on lack of career options. In a more recent study, Eley, Francis and Hegney (2013) concur that among nurses who were dissatisfied with career progression, the lack of support from the employer to advance knowledge was cited as one of the four main themes which contributed to this dissatisfaction across all sectors (aged care, private and public). In particular, older nursing practitioners (46–65 years old) report to have limited career prospects.

The mean score of variety of work was $\bar{x} = 2.89$, which is below preferred levels. Younger nursing practitioners (18–30 years old) reported less variety at work

($\bar{x} = 2.83$) than older nursing practitioners (46–65 years old) ($\bar{x} = 3.07$). This result is attributed to the notion that older nursing practitioners often have more practical experience that managers might draw on for the allocation of additional or different tasks; this leads to a perception of greater variety at work for this group.

The strict scope of practice that governs the work that nursing practitioners do, together with the limited opportunities for autonomy that the profession offers, is reflected in the result pertaining to independence at work. Nursing practitioners of all ages and categories report limited independence at work ($\bar{x} = 2.95$).

As postulated, nursing practitioners of all ages and categories reported unsatisfactory opportunities to learn ($\bar{x} = 2.95$). PLS analysis revealed that the relationship between opportunities to learn and work engagement is moderated by the job demand emotional load (which is negatively correlated to work engagement). Due to the fact that emotional load is also above the optimal level (a mean score of two), it is deduced that providing additional opportunities to learn, without addressing high levels of emotional load, is likely to be less effective.

In terms of the job resource information, significant differences between the mean scores of different ages were reported. The older nursing practitioners reported acceptable levels of information ($\bar{x} = 3.07$), whereas the younger nursing practitioners report insufficient information ($\bar{x} = 2.85$).

Overall average mean scores for the job resources communication, contact possibilities, relationship with colleagues, and relationships with supervisor exceeded a score of three. This implies that nursing practitioners are provided with these job resources at least most of the time. However, it is important to note that in order to ensure sustainable sufficient work engagement levels of nursing practitioners, attention should not merely be paid to those problematic job demands and resources, it would be prudent to ensure that the current sufficient levels of the abovementioned job demands and resources are maintained to ensure that they continue to positively influence the work engagement of nursing practitioners.

On job demands, ambiguities of work were reported to be the most challenging ($\bar{x} = 3.44$). These results concur with Chang and Hancock (2003) who reported that increased levels of responsibility and roles, and performing duties outside their area of speciality due to low staffing levels can create uncertainty that is linked to role ambiguity. This may be attributed to the frequency that nursing practitioners might be required to function outside their scope of practice (due to the shortage of nursing staff). Role ambiguity is also often linked to higher turnover rates among nurses (O'Brien-Pallas, Murphy, Shamian, Li and Hayes 2010). Results further revealed that nursing practitioners of different categories experience different levels of ambiguities of work. ENAs reported highest levels of ambiguities ($\bar{x} = 3.63$) possibly because their scope of practice is most strict, and SPNs the least ($\bar{x} = 3.35$).

The results of this study indicate that nursing practitioners experience high levels of mental load most of the time ($\bar{x} = 3.40$). Similar conclusions have been made in

supporting literature (e.g. Potter, Boxerman, Grayson, Sledge, Dunagan and Evanoff 2005), which elaborate on the various work related and environmental factors that increase the mental load experienced by nursing practitioners. More senior nursing categories reported higher levels of mental load (PN, $\bar{x} = 3.48$; SPN, $\bar{x} = 3.39$) in comparison to the more junior nursing categories (ENA, $\bar{x} = 3.35$; EN, $\bar{x} = 3.32$). This can potentially be attributed to the notion that senior nursing category staff members are expected to assist the junior categories with more difficult patients. Of note is the confirmed positive correlation between mental load and work engagement, which would imply that the reported high level of mental load is not problematic to the construct of work engagement. However, due to potential alternative adverse impact of high levels of mental load, some remedial action may still be sensible.

In terms of pace and amount of work, for which no correlation with work engagement was found, no specific actions plans are suggested. However, it is noteworthy that pace and amount of work are largely influenced by the shortage of nursing staff. If healthcare institutions manage to implement work engagement strategies that achieve higher work engagement levels, and as a result reduce turnover and draw employees to the nursing industry (thereby reducing the nursing shortage), any challenges pertaining to pace and amount of work would be addressed indirectly because the nursing shortage will have be reduced.

The total mean score of uncertainty about the future was reported to be $\bar{x} = 2.48$, which is above preferred levels. This result supports that of Laine, Van der Heijden, Wickstrom, Hasselhorn and Gackenberg (2009) who provide evidence that despite the shortage of nursing staff, in general, nursing practitioners experience job insecurity and uncertainty about the future. Nursing practitioners of all categories reported unsatisfactory levels of uncertainty about the future with the most junior experiencing the most uncertainty and the senior professional nurses the least (ENAs: $\bar{x} = 2.73$; ENs: $\bar{x} = 2.69$; PNs: $\bar{x} = 2.39$; SPNs: $\bar{x} = 2.33$). It is apparent that nursing practitioners become less concerned about their future as they progress in their careers and grow into more senior roles.

Although emotional load (the only job demand with a confirmed negative correlation with work engagement) is listed as the job demand with the lowest total mean score ($\bar{x} = 2.45$), this mean score is still higher than acceptable and it suggests that the emotional load on nursing practitioners may be high enough to have a negative impact on work engagement. Chou, Hecker and Martin (2012) corroborate that nursing practitioners regularly perform emotional labour. Results indicate that nursing category plays a significant role in the reported levels of emotional load; PNs ($\bar{x} = 2.53$) and SPNs ($\bar{x} = 2.55$) report the highest levels of emotional load, and ENs ($\bar{x} = 2.22$) the lowest. Furthermore, emotional load possibly moderates the relationship between opportunities to learn and work engagement, which implies that this job demand is not only important in its own right, but suboptimal levels will also impact the relationship between opportunities to learn and work engagement.

In summary, while the overall level of work engagement of nursing practitioners in the sample might not have been as low as had been anticipated, there are clearly deficiencies that need to be addressed. In terms of job resources, those factors that were found to be below optimum levels, and which therefore warrant intervention, included remuneration, participation, career possibilities, variety at work, independence at work, opportunities to learn, and information. In terms of job demands, all job demands were reported to be at unacceptably high levels; however, because no correlation between pace and amount of work and work engagement was confirmed, these specific job demands are excluded from further discussions pertaining to practical recommendations.

RECOMMENDATIONS

Practical recommendations are presented in Table 2 for each job demand and resource that was found to require remedial action.

Table 2: Recommendation summary

Job Demand or Resource	Recommendation
Remuneration	Relook broader company remuneration strategies to ensure that there is a mindful balance between economic sustainability and the needs of the employees Identify alternative ways to reward employees, including monetary and non-monetary rewards Consider the use of flexible benefit and compensation plans Communicate reward and benefits structures clearly
Participation	Provide employees with an opportunity to voice their ideas and concerns by means of structured, companywide surveys Allow employees to select representatives who would attend general meetings on behalf of the larger employee population Allow work-related participation with peers by implementing a collaborative model Ensure that leaders use a participatory management style Provide employees with an opportunity to interact with their more senior managers Ensure access to shared computers in open areas to generate participation electronically (the access should be password protected) Make use of open electronic employee forums Provide platforms where employees can access the electronic forums via cellular phones Capitalise on social media platforms and include fun elements into the work place (for use outside working hours)

Career possibilities	<p>Provide alternative career paths and career counselling</p> <p>Identify and advocate alternative avenues for career growth</p> <p>Implement formal structures and processes to facilitate the identification of high potential nursing practitioners and provide them with dedicated, structured development programmes</p>
Variety at work	<p>Implement job or task rotation</p> <p>Appoint shift-leaders who will be expected to perform alternative tasks</p> <p>Identify non-nursing alternative tasks to provide variety at work</p>
Independence at work	<p>Appoint shift leaders who are required to fulfil an informal supervisory role</p> <p>Identify other non-nursing avenues of independence, for example, appointing nursing practitioners as the chair of a committee, or the leader of a project at work</p>
Opportunities to learn	<p>Make use of formal mentorship to provide regular on-the-job training</p> <p>Ensure access to computers, cellular phones and/or electronic tablets in the units to capitalise on e-learning solutions</p> <p>Ensure there is time for staff to attend training opportunities by planning and budgeting for the utilisation of extra nursing practitioners</p>
Information	<p>Provide access to computers, cell phones and tablets to enable information access</p> <p>Capitalise on social media (outside working hours), cell phone and tablet technology</p> <p>Ensure that unit managers are dedicated to conducting regular one-on-one formal and informal appraisal interactions with staff</p>
Ambiguities of work	<p>Implement more rigorous governing processes and structures that will prevent the performance of tasks outside the scope of practice</p> <p>Interact with doctors to ensure that they fully understand the scope of practice of nursing categories</p> <p>Ensure that clear and direct instructions (from doctors, management, etc.) are given to nursing practitioners in ambiguous situations</p> <p>Make use of technology that can enhance instruction and record-keeping methods</p> <p>Ensure regular structured performance interactions with unit managers</p>
Mental load	<p>Provide space and opportunities for relaxation</p> <p>Ensure that nursing practitioners take their lunch and tea breaks</p> <p>Ensure the fairness of shift allocation</p> <p>Develop and implement tools, techniques and technology that can assist with some cognitive tasks</p>
Uncertainty about the future	<p>Implement health and wellness strategies to address uncertainties pertaining to injury on duty</p> <p>Provide sufficient medical aid contributions and injury on duty insurance</p> <p>Explicitly state the economic state of the organisation to provide assurance of employment</p> <p>Keep nursing practitioners proactively up to date with developments within the healthcare industry that could affect their employment status</p>

<p>Emotional load</p>	<p>Provide structures, facilities and support to assist nursing practitioners in dealing with their emotions Be more flexible with visiting hours (the mental load on nursing practitioners can be reduced when family/friends are available for emotional support) Ensure the availability of staff counsellors and implement staff support groups Implement confidential health and wellness programmes Ensure the provision of breakaway rooms for staff</p>
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LIMITATIONS OF THE STUDY

Although this study provides valuable insight into the work engagement of nursing practitioners, some limitations need to be considered in order to improve future studies. The non-probability sampling method did not include all private and public healthcare institutions and the ex post facto research design resulted in an inability to determine causality. Within this study surveys were utilised to gather data, which means that data were gathered at a single point in time that could increase mono-method and response bias (Salkind 2010). The use of Likert-type scales (4 point and 7 point scales) could prove difficult to some respondents due to lack of proficiency in English.

In terms of data analysis, it is noteworthy that when a large number of analyses are conducted on the same dataset (such as in the case of the 34 ANOVA tests conducted), the probability of a type I error (finding a false positive report) is increased (Salkind 2010). Finally, the low reliability of the JDRS measurement scale can be viewed as a potential limitation to this study.

CONCLUSION

The paper made a significant contribution by identifying work engagement deficiencies among nursing staff and identifying specific job demands and resources that will increase the work engagement of nursing practitioners in support of a sustainable South African healthcare system.

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