Unraveling Workplace Bliss: The Mediating Influence of Flow Experience in the Relationship between Psychological Needs Satisfaction and Happiness at Work

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The purpose of this paper is to report on the results of a study that sought to establish the mediating role of flow experience in the relationship between psychological needs satisfaction and happiness at the workplace, specifically within the context of public hospitals in Uganda. A cross-sectional study was conducted, involving a sample of 800 professional nurses. Findings reveal that flow experience partially mediates in the connection between psychological needs satisfaction and workplace happiness. Limitations include; the use of a mono-research methodological approach, suggesting opportunities for future research through interviews to triangulate findings. By way of practical implications, the study explicates the psychological needs of the healthcare professionals examined and contributes to a more positive work environment and consequently, higher levels of workplace happiness.

Keywords: psychological needs satisfaction, happiness at work, professional nurses, health services, flow experience, and positive emotions

Introduction

Employee happiness is a condition in which employees experience positive feelings at the workplace while undertaking their routines. It characterized by feelings of joy, vigor, and a smooth workflow in which they are able to balance their work routines with life experiences (Ilies et al. 2017, Waterschoot et al. 2020). In the wake of COVID-19 pandemic; organizations mostly in the developing world, whether public or private, are yet to reassure their employees of the happiness that directly affects their productivity. This now highlights the significance of the consideration of workplace happiness in the face of interested scholars. It is not surprising that nurses’ happiness in Uganda’s public hospitals does not present a contrasting narrative. Ideally, nurses in Uganda experience; inadequate leadership support, limited professional growth opportunities, exclusion from decision-making processes, insufficient protective equipment, low remuneration, high patient-nurse ratios, working with less qualified staff, insufficient resources, and a lack of recognition (Kabunga and Okalo 2021, Musiimenta et al. 2022) among others. These and more, lay bare their persistent sense of dissatisfaction and discontent (Kawalya et al. 2019, Yu et al. 2018). However, what is amazing is that; despite extensive research on workplace happiness, there is a dearth of literature to indicate that the mediation role of flow experience has been

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considered in the relationship between psychological needs satisfaction and happiness at work (Kabunga and Okalo 2021, Musiimenta et al. 2022); above all in the unique context of Uganda’s public hospitals’ professional nurses. In order to formalize this investigation in the world of academia (Lester 2005), the following theoretical background has been adapted.

Theoretically, this study has adapted the Self-Determination Theory (Ryan and Deci 2002) to underpin the antecedents under consideration. The theory maintains that individuals experience happiness as long as their innate needs are achieved and these are: autonomy, competence and relatedness (Ryan and Deci 2002). By autonomy is meant the opportunity to live according to one’s values. Competence implies the ability to pursue life goals and; relatedness has to do with feeling a sense of belonging. This implies that for one to be happy at the workplace the psychological needs specified above, have to be satisfied. This is the extent to which SDT anchors psychological needs satisfaction as an explanatory variable of happiness at work. Equally, this study argues that for an employee to be happy at work, he or she has to be skillful in face of work challenges, concentrated on the work beforehand and feel a sense of control over the work being done. This is what is called flow experience. These specific conditions are retained in a mind that feels autonomous, competent and related as nurtured by the SDT (Ryan and Deci 2002). To this extent, even flow experience, is arguably a construct of the SDT as it is conceptualized herein as a second explanatory variable of happiness at work. Interestingly however, even with the realization that both psychological needs satisfaction and flow experience are anchored by SDT, there is a dearth of literature to indicate that they have both been studied in relation to happiness at work. Besides, is the near absence of literature to implicate the potential mediation effect of flow experience as underpinned by SDT, in the relationship between psychological needs satisfaction and happiness at work.

The primary objectives of this paper are twofold: 1-To examine the relationship between psychological needs satisfaction, flow experience, and happiness at work among professional nurses. 2-To determine the mediating role of flow experience in the relationship between psychological needs satisfaction and happiness at the workplace.

**Literature Review and Hypothesis Development**

*Psychological Needs Satisfaction, Flow Experience, and Happiness at the Workplace*

Existing literature indicates that psychological needs satisfaction, flow experience and happiness at work are related although with significant gaps that need to be addressed afresh. This is because: SDT proposes that individuals seek tasks that have the potential to achieve autonomy, competence, and relatedness as core inherent individual needs (Deci and Ryan 2000). Indeed, when one feels autonomous, competent to pursue his or her work and part of others in the process of undertaking the work assigned, there is a potential for him or her to feel a sense
of skillfulness in face of the challenges, concentrated to the extent that he is focused, and the essence of being in charge of the work delegated to him or her (Deci and Ryan 2000, Csikszentmihalyi 1997). However, at empirical literature level, there is limited scholarly evidence to that attest to the potential relationship both directly and indirectly inherent between and among psychological needs satisfaction, flow experience, and happiness at the workplace: Instead, psychological capital as opposed to psychological needs satisfaction; has been related to flow experience and happiness at work (Kawalya et al. 2019). Therefore, it was hypothesized that:

H1: There is a significant positive relationship between psychological needs satisfaction and happiness at work.
H2: There is a significant positive relationship between psychological needs satisfaction and flow experience.
H3: There is a significant positive relationship between flow experience and happiness at work.
H4: Flow experience mediates in the relationship between psychological needs satisfaction and happiness at the workplace.

This conceptual framework below is underpinned by the associated SDT and this prompted the subsequent examination of the potential relationships both direct and indirect between psychological needs satisfaction, flow experience, and happiness at the workplace, particularly within the unique context of professional nurses in Uganda. The hypotheses set the stage for empirical investigation, contributing valuable insights to the existing literature on workplace well-being.

**Figure 1. The Model Arising out of this Literature Review, was Developed to Guide this Study**

All the above assumed relationships (as illustrated in Figure 1 above) were tested and supported. The Automatic SPSS and AMOS software was used and the
partial mediation of the p<0.005 and significance of the mediation effect of flow experience in the relationship between psychological needs satisfaction and happiness at the workplace is indicated. The results are summarized in Figure 2.

Methods

Research Design, Population, Sample Size, and Selection Procedure

This study adopted a cross-sectional design. The population was 210,000 (Two hundred and ten thousand nurses employed in public hospitals in Uganda, in the selected public hospitals in the three (3) regions of Uganda that were investigated. These were: the central region, western, northern, and eastern regions. These regions were considered because; they have the highest numbers of public hospitals and professional nurses (Uganda Bureau of Statistics 2016). Out of these, a sample size of 384 (Krejcie and Morgan 1970) was obtained. The sampling techniques that were used included both purposive and convenience sampling approaches considering that even if the study targeted nurses in the stated regions of Uganda and in government hospitals, they had to declare their willingness to participate in the study until the required sample of 384 was obtained.

Variables Measurements, Data Collection Method and; Reliability and Validity Measurement of Variables

The study had three variables and these were: Happiness at work (DV); Psychological needs satisfaction (IV) and Flow experience (MV). There operationalization and measurements were as follows: Happiness at the workplace which was operationalized in terms of meaningfulness, personal engagement, life satisfaction, and positive emotions and this was in line with the works of Wörtler et al. (2020). Flow experience was measured in terms of challenge and skill balance, concentration on the task, and perceived control (Csikszentmihalyi 2005). Psychological Needs Satisfaction (PsyNS) was operationalized in terms of relatedness, competence, and autonomy, and this was in line with (Deci and Ryan 2000).

Data Collection Method(s)

The study used a closed ended questionnaire to enlist responses from respondents and it was a six point scale. Section A was an introduction, section B was about background information about the study respondents and C was about the questions related to the study objectives. Finally, all these were anchored on a six point likert scale because the response options for all the study variables were anchored on a six-point Likert scale ranging from 1=always without fail to 6= never less than a quarter of the time because, there was need to avoid undecided
responses from respondents who could have wanted to stick in the middle (Csikszentmihalyi 1997).

Reliability and Validity Tests

The questionnaire was tested for reliability and Cronbach (1951) and Hair et al. (2010), recommend a cut off of 0.7 and above as reliable. For this study, the Cronbach alpha coefficients were 0.85, 0.83, and 0.84 for happiness at the workplace, flow experience, and PsyCap respectively. For validity, questionnaires were given to experts in practice and various scholars on happiness. These made changes to the items and the questionnaire was revised accordingly. The questionnaire was given to the experts before going to the field. Therefore, the revised questionnaire was used for data collection and after data collection, Cronbach alpha was computed. Data management and analysis

Data Management

This was consistent with the recommendations by Field (2009). In particular, data were cleaned, coded, and entered into a statistical package for the social scientist's data editor. The data was analyzed through the Statistical Package for Social Scientists (SPSS) (Preacher and Hayes 2010). The authors of this study checked for missing values and outliers which are data points (observations) that do not fit the trend shown by the remaining data (Hair et al. 2012). Finally, 800 usable questionnaires were retained for final analysis. Note that outliers bias the mean and inflate the standard deviation (Field 2009). Field (2009) explains several options for dealing with outliers. These options include deleting the data from the person who contributed to the outlier, transforming the data, or changing the score and this involves changing the score to be one unit above the next highest score in the data set, calculating what score would give rise to a z-score of 3.29 or using the mean plus two times the standard deviation (rather than three times the standard deviation) (Field 2009).

In this study, outliers were dealt with by calculating what score would give rise to a z-score of 3.29 (or perhaps 3) by rearranging the z-score equation in section 1.7.4, which gives us \( X = (z \times s) + X \). All this implies that we calculated the mean (\( X \)) and standard deviation (s) of the data; we know that z is 3 (or 3.29 if you want to be exact) so we just add three times the standard deviation to the mean, and replace our outliers with that score. Because the questionnaires were checked by the authors and research assistants before leaving the respondents, there were no missing values in the data set. The assumptions of normality, the linearity of data, and the homogeneity of variance were found to be tenable. For example, the assumption of homogeneity of variance was tested using Levene’s test and for the variables of interest; Levene’s test was not significant at \( p > 0.05 \).

According to Hair et al. (2010), the structural equation model (SEM) involves constructing a model that combines the manifest and latent variables of all the global variables into a single model for decision-making in AMOS through bootstrap. Hair et al. (2010) recommends that two competing model should be
constructed to determine the model that is better for decision-making. Additionally, Preacher and Hayes (2010) also recommend that the p-values should be used to determine the type of mediation effect that exists, and for full mediation, the \( p < 0.001 \), and for partial mediation the \( p < 0.005 \). Thus, to establish the mediating role of flow experience in the relationship between psychological needs satisfaction and happiness at the workplace, an SEM model combining the independent variable (psychological needs satisfaction), mediator variable (flow experience), and dependent variable (happiness at the workplace) was constructed. (As illustrated in Figure 2) The results are indicated in the next section.

Results

Sample Characteristics

The results from this study indicated that the majority (40%) of the respondents were in the 31-40 age brackets as compared to those who were in the 20-30 age brackets. Besides, the results also showed that the majority (77%) of the respondents were female as compared to the males who comprised 23%. Furthermore, the results also revealed that most (51%) of the respondents had attained a certificate level of education as compared to those with a master's degree (0.8%). In addition, the results also indicated that most of the respondents (62%) were located in the central region as compared to those from the western region (9%). Similarly, the results also showed that most (64%) of the respondents were general nurses as compared to the registered nurses who constituted only 1.6%. More so, the results also showed that the majority (62%) of the respondents were married as compared to 3.5% who were in a relationship.

Descriptive Statistics

Descriptive statistics were generated to show how the observed data fit well with the model developed under this study. The results from the descriptive statistics analysis indicated that the variable of psychological needs satisfaction had a mean = 1.85 and standard deviation = 0.805, while flow experience had a mean = 1.77 and standard deviation = 0.703, and happiness at the workplace at a mean = 1.71 and standard deviation = 0.803. The descriptive statistics results revealed that all the variables had their means not far from the standard deviation. This implies that the observed data fitted well to the model developed under this study since the means were far from the standard deviation as the measure of central tendency. Furthermore, statistics were also generated for the Skewness and Kurtosis. The rule of thumb is that the figures for both the Skewness and Kurtosis for normal data should range between -3.29 and 3.29 (Field 2009). However, Tabachnick and Fidell (2007) suggest that Skewness and Kurtosis statistics for normal distribution should range between -2 to +2 although a more lenient +3 to -3 can also show normality. The results from this study showed that Skewness and
Kurtosis statistics were achieved and tenable since they ranged between -2 to +2 as stipulated by Tabachnick and Fidell (2007). The results are indicated in Table 1.

### Table 1. Descriptive Statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Dev</th>
<th>Skewness Stat Std err</th>
<th>Kurtosis Stat Std err</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Exp.</td>
<td>800</td>
<td>1</td>
<td>6</td>
<td>1.77</td>
<td>0.02485</td>
<td>1.457 0.086</td>
<td>3.991 0.173</td>
</tr>
<tr>
<td>PsyNS</td>
<td>800</td>
<td>1</td>
<td>6</td>
<td>1.85</td>
<td>0.02849</td>
<td>1.213 0.086</td>
<td>2.444 0.173</td>
</tr>
<tr>
<td>Happiness</td>
<td>800</td>
<td>1</td>
<td>6</td>
<td>1.71</td>
<td>0.02840</td>
<td>2.001 0.086</td>
<td>1.458 0.173</td>
</tr>
</tbody>
</table>

*Source: Primary data (by authors. Automatic SPSS software generated.)*

### Correlation Analysis Results

This is the second stage of analysis. It uses Pearson correlations analysis (shown in Table 2) to explore the relationship between predictor and outcome variables. The Pearson correlation coefficient and parametric statistics require interval data for both variables (Creswell 2009, Field 2009). This is to test its significance and normality. Parametric statistics assume that sample data comes from a population that follows a probability distribution based on a fixed set of parameters. The results here indicate that there is a significant positive relationship between psychological needs satisfaction and flow experience (r=0.58**, p≤0.01). This means that a unit change in psychological needs satisfaction may lead to a 0.577 change in flow experience in the same direction. This finding supports H1 which states that there is a significant positive relationship between flow experience and happiness at the workplace.

The results further indicate that flow experience is positively and significantly associated with happiness at work (r=0.60**, p≤0.01). This finding provides support for H2 which states that there is a significant positive relationship between flow experience and happiness at the workplace. Finally, psychological needs satisfaction and happiness at work are positively and significantly associated (r=0.63**, p≤0.01). This finding implies that an increase in the level of psychological needs satisfaction may lead to increased happiness at the workplace. This supports H3 which states that there is a significant positive relationship between psychological needs satisfaction and happiness at the workplace. The age which is treated as a control variable in this study was found to be negatively but significantly associated with happiness at work.

### Table 2. Correlation Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological needs satisfaction (1)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flow experience (2)</td>
<td></td>
<td>.58*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happiness at the workplace (3)</td>
<td></td>
<td></td>
<td>.60**</td>
<td></td>
</tr>
<tr>
<td>Age (4)</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

*Note: **. Correlation is significant at the 0.01 level (2-tailed). *p < .01.

*Source: Primary data (by authors. Automatic SPSS software generated.)*

To explore the relationships more robustly, Structural Equation Modeling (SEM) using AMOS 23 was undertaken. First, the measurement models for each
of the latent variables (psychological needs satisfaction, flow experience, and happiness at the workplace) were tested using Confirmatory Factor Analysis (CFA). All the models exhibited good fit for the data, thus meeting the criteria of Comparative Fit Index (CFI) and Incremental Fit Index (IFI) above .95, and Root Mean Square Error of Approximation (RMSEA) below .08. This allowed the latent variables to be used in a path model thereby simplifying interpretation (Fornell and Larcker 1981).

Testing for Mediation Using SEM Bootstrap Approach

Measurement Model

The measurement models were constructed before testing the mediation effect through the SEM bootstrap approach in AMOS (Preacher and Hayes 2008, Zhao et al. 2010). The measurement model was constructed to show how the manifest variables are linked well to the latent global variable of psychological needs satisfaction. The results indicated good model fit indices with Chi-square = 23.287; Tucker-Lewis index (TLI) = 0.978; Comparative Fit Index (CFI) = 0.988; Incremental Fit Index (IFI) = 0.988; Root Mean Square Error of Approximation (RMSEA) = 0.049. Besides, another measurement model was constructed to show how the manifest variables link well to the latent global variable of flow experience. The results indicated good model fit indices with Chi-square = 21.838; TLI = 0.893; CFI = 0.928; IFI = 0.9981; RMSEA = 0.098. Furthermore, a measurement model for happiness at the workplace was constructed to show how the manifest variables linked it. The results also indicated a good model fit indices with Chi-square = 69.690; TLI = 0.964; CFI = 0.975; IFI = 0.975; RMSEA = 0.047 (See Table 3).

Table 3. SEM Competing Models for Non-Mediation and Mediation Effects

<table>
<thead>
<tr>
<th>Variables</th>
<th>Non-mediated model</th>
<th>Mediated Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow exp. ← → Psy NS</td>
<td>0.738***</td>
<td>0.679***</td>
</tr>
<tr>
<td>Happiness ← → Psy NS</td>
<td>0.691***</td>
<td>0.373***</td>
</tr>
<tr>
<td>Happiness ← → Flow exp.</td>
<td>0.399***</td>
<td>0.141***</td>
</tr>
<tr>
<td>CMIN</td>
<td>23.287</td>
<td>49.116</td>
</tr>
<tr>
<td>Degrees of freedom (Df)</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>Probability (P)</td>
<td>0.003</td>
<td>0.002</td>
</tr>
<tr>
<td>Incremental fit index (IFI)</td>
<td>0.988</td>
<td>0.986</td>
</tr>
<tr>
<td>Tucker-Lewis index (TLI)</td>
<td>0.978</td>
<td>0.979</td>
</tr>
<tr>
<td>Comparative fit index (CFI)</td>
<td>0.988</td>
<td>0.986</td>
</tr>
<tr>
<td>Normed fit index (NFI)</td>
<td>0.983</td>
<td>0.973</td>
</tr>
<tr>
<td>Relative fit index (RFI)</td>
<td>0.967</td>
<td>0.960</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.049</td>
<td>0.036</td>
</tr>
<tr>
<td>Squared multiple correlations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happiness</td>
<td>0.218***</td>
<td>0.230***</td>
</tr>
<tr>
<td>Flow exp.</td>
<td>-</td>
<td>0.461***</td>
</tr>
</tbody>
</table>

Note: n = 800; significance level: *** p<.0001
Source: by authors. Automatic SPSS software generated.
SEM Model for Mediating Effect

The results (see Figure 2) of the structural equation model revealed a perfect model fit indices with Chi-square = 49.116; TLI = 0.979; CFI = 0.986; IFI = 0.986; RMSEA = 0.036. Besides, the results showed that there is a significant and positive relationship between psychological needs satisfaction and flow experience (β = 0.97, p-value = 0.0001). Thus, this supports hypothesis H1 of this study. Similarly, the results from this study indicated that there is a significant and positive relationship between psychological needs satisfaction and happiness at the workplace (β = 0.156, p-value = 0.001). This is in line with hypothesis H2 under this study. The results from this study also show that there is a significant and positive relationship between flow experience and happiness at the workplace (β = 0.138, p-value = 0.081). This lends support to hypothesis H3 of this study. Finally, the results indicate that flow experience significantly and positively mediates the relationship between psychological needs satisfaction and happiness at the workplace and it is a partial type of mediation effect (β = 0.096, p-value < 0.05) (Tables 4-5). This supports hypothesis H4 of the study. The inclusion of flow experience in the model explains 14 percent of the variation in happiness at the workplace. When flow experience is included in the model, it boosts the explanatory power of psychological needs satisfaction on happiness at the workplace by 9.6 percent (see Table 4).

Table 4. Total, Direct, and Indirect Effects in a SEM Mediated Model

<table>
<thead>
<tr>
<th>Standardized total effects</th>
<th>PsyNS</th>
<th>Flow exp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow exp.</td>
<td>0.679***</td>
<td>0.000</td>
</tr>
<tr>
<td>Happiness</td>
<td>0.469***</td>
<td>0.141***</td>
</tr>
<tr>
<td>Standardized direct effects</td>
<td>PsyNS</td>
<td>Flow exp.</td>
</tr>
<tr>
<td>Flow exp.</td>
<td>0.679***</td>
<td>0.000</td>
</tr>
<tr>
<td>Happiness</td>
<td>0.373***</td>
<td>0.141***</td>
</tr>
<tr>
<td>Standardized indirect effects</td>
<td>PsyNS</td>
<td>Flow exp.</td>
</tr>
<tr>
<td>Flow exp.</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Happiness</td>
<td>0.096***</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table 5. Bootstrap Mediation Results

<table>
<thead>
<tr>
<th>Bootstrap mediation results:</th>
<th>Point Estimates</th>
<th>SE</th>
<th>Lower Bounds</th>
<th>Upper Bounds</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>PsyNS ← Happiness</td>
<td>0.695</td>
<td>0.193</td>
<td>0.360</td>
<td>1.101</td>
<td>0.001</td>
</tr>
<tr>
<td>Flow exp. ← Happiness</td>
<td>0.241</td>
<td>0.173</td>
<td>0.103</td>
<td>0.584</td>
<td>0.164</td>
</tr>
<tr>
<td>Flow exp. ← PsyNS</td>
<td>0.738</td>
<td>0.131</td>
<td>0.524</td>
<td>0.044</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Note: n = 800; significance level: *** p < .0001; ** p < .001; * p < .05
Source: by authors. Automatic SPSS software generated.
Discussion

This study contributes to the existing literature on happiness at the workplace, psychological needs satisfaction, and the role of flow experience in the relationship between psychological needs satisfaction and happiness at the workplace. Based on the hypothesis (H1), this study finds that there is a positive relationship between psychological needs satisfaction and flow experience among professional nurses in public government hospitals in Uganda. The findings suggest that employees who are friends with co-workers experience concentration at work (Moore and Prentice 2013). Petri (2010) also argues that collegial relationships are all consistent with a more long-lasting flow experience. However, Moore and Prentice (2013) argue that a lack of interpersonal skills impedes collegial
interactions in the workplace. Therefore, the study argues that psychological needs satisfaction predicts flow experience.

Further, the results also reveal that there is a significant positive relationship between flow experience and happiness at the workplace. This confirms the hypothesis (H2) of the study. The study finds that flow experience leads to employees’ contentment and meaningfulness in the workplace (Chitty and Black 2015). This finding is consistent with (Moore and Prentice (2013) who noted that skill variety relates to employee happiness. However, Van Hooff and Van Hooft (2017) argue that a lack of skills variety may induce boredom at work. This study argues that skill set/variety predicts joyfulness. This provides support for Psychology flow theory (Csikszentmihalyi 1990).

Based on the hypothesis (H3) of this study, the results revealed that there is a significant positive relationship between psychological needs satisfaction and happiness at the workplace. Duffy et al. (2013) and Wörtler et al. (2020) argue that psychological needs satisfaction is an important aspect in providing support to co-workers, and has a positive effect on employee contentment. Indeed as noted by Madlock and Booth-Butterfield (2012), when psychological needs satisfaction (relatedness, autonomy, and competence) is strong, employee’s meaningfulness and engagement will be easily observed, thus, a feeling of happiness, which encourages friendships in the workplace.

Regarding H4 on the mediation role of flow experience, the results indicate partial and significant mediation effect of flow experience on the relationship between psychological needs satisfaction and happiness at the workplace, thus supporting hypothesis H4. This confirms that the presence of flow experience partly acts as a conduit in the association between psychological needs satisfaction and happiness at the workplace among professional nurses in public hospitals in Uganda. This then means that whereas psychological needs satisfaction is directly associated with happiness at the workplace, its contribution can be partly felt through flow experience. It also means that psychological needs satisfaction and flow experience are significant predictors of happiness at the workplace. Therefore, when professional nurses are not feeling bored, have skills to meet challenges, get involved in hospital activities, persevere, and feel free to express ideas, it may enhance a powerful urge in them to care for patients and be joyful. This finding is consistent with Bakker and Demerouti (2017), who argue that employees who are competent and balance their work challenges usually have a sense of meaningfulness at work. This finding also supports PsyFT (Csikszentmihalyi 1975), which argues that concentration on the task, and balancing challenges and skills promotes personal engagement and meaningfulness.

Conclusion

The current study examined the relationship between PsyNS and happiness at the workplace and the mediation role of flow experience in the relationship between PsyNS and happiness at the workplace. Through the self-administered questionnaire, 800 professional nurses were selected in Uganda’s 3 regions,
central, western, and northern, to be part of the study. The current study hypothesized that there is a positive relationship between PsyNS and flow experience, PsyNS and happiness at the workplace, and flow experience and happiness at the workplace. We also hypothesized that flow experience mediates the relationship between PsyNS and happiness at the workplace. Our results supported the hypotheses developed. This current study, recommends that those in charge of public hospitals in Uganda should not just focus on employee happiness, but should consider the flow experience of professional nurses. This is because flow experience has been found in this paper to have a significant impact on professional nurse's happiness. As flow experience increases, professional nurses are more engaged and happier.

The study combined two theories; SDT and PsyFT by Fredrickson (2001) and Ryan and Deci (2002) respectively, to explain happiness at the workplace. Therefore, the integration of the two theories has provided a more robust understanding of happiness at work and what explains it. This study is beneficial to human resource managers of public hospitals who deal with health employees. They should redesign the recruitment system and policies that can boost PsyNS and flow experience to promote happiness at the workplace among professional nurses in Uganda.

Like any other study, this study also has limitations which are discussed alongside suggestions for future studies. First, the research only considered professional nurses in the public health sector in Uganda and did not consider other categories of medical workers, like medical doctors, clinical officers, administrators, support staff, and even professional nurses in private medical practice. These could be used as samples in future studies. This research only focuses on two factors that predict happiness at the workplace: PsyNS and flow experience. Future studies can consider other factors that predict happiness at the workplace, such as environmental factors and self-driven personality (Csikszentmihalyi 2005, Luthans 2002) among other factors. Future researchers should be interested in finding out other factors that predict happiness at the workplace in developing countries like Uganda. Hence, the implementation of autonomy, relatedness, and competence must be aligned with the organization's strategic goals like employee happiness at the workplace. In addition, this study focused only on cross-sectional data, thus, a longitudinal study and experiments may be used. Besides, the current study was purely quantitative, therefore a qualitative survey or a mixed methods design may be utilized in the future.

**List of Acronyms**

PsyNS: Psychological Needs Satisfaction  
HWP: Happiness at the Workplace  
SEM: Structural Equation Modelling  
AMOS: Analysis of Moment Structure  
SDT: Self Determination Theory
References


