Are Happy Employees Healthy Employees?

Researching the Effects of Employee Engagement on STIIP Use

Research & Development
June 2008
CONTACT INFORMATION

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Executive Summary

For the past year, we have been proposing that one of the ways employees might express low engagement (i.e., a lack of commitment and satisfaction) is in absenteeism. The most immediate measure we have available to estimate absenteeism is the amount of sick time (i.e., short-term injury and illness plan—STIIP) an employee uses. Last year a preliminary analysis found that on average, employees who were highly engaged had taken significantly less hours of sick time than employees who were disengaged in 2006 (39 hrs versus 63 hrs, respectively). Given this observed difference in hours, we tested whether engagement could be predicting the amount of sick time an employee incurs. In other words, does an employee’s level of engagement have an effect on the amount of sick time they may use?

Contrary to expectations, the final regression results were not as strong as initially thought. Although a more engaged employee may use less sick time, the impact of engagement on the amount of sick time used is fairly marginal. Essentially, when controlling for differences in age, years of service, gender and union status, an employee’s level of engagement only explained 4.7% of the variance in sick time. To summarize these regression results, this means that for a 35-year-old unionized female employee, with 10 years of service and an engagement score of 100, the predicted sick time used would be 3.86 hours, whereas the same employee with an engagement score of 400 would have a slight decrease in STIIP use to 3.56 hours. This amounts to an 18-minute difference in annual STIIP use for employees who possess these demographic characteristics. The difference may vary depending on which set of demographic characteristics one is referring to.

Implications and Next Steps

This research process revealed four areas for future consideration and study.

1. The Contradictory Roles of Age and Service Years

As age goes up, years of service tends to increase as well. Despite the correlation between these two variables, each has a different effect on STIIP leave. As age increased, the amount of sick time taken also increased, yet as service years increased, the amount of sick time taken decreased. This demonstrated that while age and the length of time in a position were highly correlated, each had a significantly different impact on STIIP.

While age and tenure were highly correlated, each had a different impact on STIIP use.

2. The Differing Expressions of Gender

The second finding was the impact of gender on STIIP use. The analysis found that women were more likely to have higher uses of STIIP than men. However, women also had slightly higher engagement scores than men, concluding that women’s level of engagement was less of a determinant on absenteeism than it was for men.
engagement was less of a determinant on absenteeism than it was for men. There is ample research that details the level of familial duties that often influence a woman’s absenteeism. Simply tracking STIIP use ignores the problems that women face when trying to raise children and pursue a career.

Future research might look at the possibilities of an interaction effect around gender. This particular study further argues that not only should women’s and men’s STIIP use be looked at separately, there is also a need for more exploratory research that focuses on uncovering the different ways in which each gender understands and expresses engagement.

3. Improve Measures of Absenteeism

The scope of this analysis is limited to the cumulative number of STIIP hours used by each employee. This measure alone does not adequately cover the patterns or reasons behind sick leave taken. Circumstances such as taking the afternoon to attend to a sick child or spouse or being away due to a serious injury may have nothing to do with an employee’s engagement. For example, a highly engaged employee may incur 700 hours due to major surgery culminating in one 5-month period of recovery, while a less engaged employee may have less STIIP hours, but over several instances of use.

For this reason, using cumulative STIIP hours per employee may not be enough. The effect of an employee’s level of engagement on their use of STIIP may be better understood when different types or patterns of time are taken into consideration. One avenue of future research would be to test the effects of engagement scores against the frequency of an employee’s STIIP use, holding the length or type of STIIP use constant.

4. Include Indicators of Mental and Physical Health

Due to the highly confidential nature related to employee STIIP use, many relevant variables were not made available, and therefore could not be included in the study. One such variable is employee physical or mental health as well as injury. Health or injury may be additional variables that may be affecting the impact engagement has on STIIP use. It is proposed that when controlling for issues stemming from health or injuries, the explanatory power of this model would increase dramatically.
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Introduction

In 2007 a survey was conducted to measure the levels of engagement for British Columbian civil servants. Following the Heskett model of the Service Value Chain (1994), one of the primary concerns for this government was the increasing attrition rates and its effect on service delivery. Essentially, Heskett’s model demonstrated that an engaged employee was more committed to their work and more likely to stay within the civil service, culminating in improved customer service. Furthermore, the social aspects of a workplace and questions of job satisfaction were closely linked to reasons for employees staying or leaving (Lease 1998). As some employees leave for the private sector, there is a growing focus on retaining employees and better understanding those that stay within the public service. Based on this idea, this research project questioned whether quitting was the only response to low job satisfaction. It is surmised that due to financial or family constraints, quitting a job is not always a viable option for many people. Consequently, one of the ways in which employees might also express a lack of commitment and satisfaction is in absenteeism. Though absenteeism is a broad term that is typically measured as “time away from work” that is either voluntary or involuntary (Sagie 156), one of the most immediate measures of absenteeism is the amount of sick time an employee uses. This can include taking the afternoon off for a headache, leaving to attend to a sick child or spouse, or being away due to a serious injury incurred in an accident.

Under the joint rubric of absenteeism and job satisfaction, the purpose of this study is to use a construct of engagement (i.e. job satisfaction) to test whether different levels of engagement have any effect on the amount of sick time (absenteeism) an employee incurs. It is worth mentioning that similar forms of research have been carried out before, as Lease notes in a very thorough review essay, “Job satisfaction is one of the most frequently studied work attitudes” (1998:154), and that one regularly researched outcome of an employee’s “work attitude” is their use of sick time. That being said, this project is in the unique position of having a large, well-defined population, and a precise measure for absenteeism. Under the employee benefits Short Term Illness and Injury Plan (STIIP), 53% of the survey respondents used a total of 633,560 hours during the 2007 calendar year, averaging 67 hours per person. This paper will look at whether there is any correlation between the amount of STIIP used, and an individual’s level of engagement, proposing an inverse negative relationship: as job engagement increases, STIIP use decreases. Testing the old adage, “A happy employee is a healthy employee,” this paper will demonstrate that though a more engaged employee may use less sick time, the differences in use between highly engaged employees and those not engaged are fairly marginal.

History

In April 2007, the Surveys and Analysis section of BC STATS sent out the second annual Workplace Environment Survey,¹ which consisted of 79 closed-ended questions and one open-

¹ Note: all subsequent tables and figures come from the data sub-set, EngagementFiltered, generated by this survey. For any inquiries on this data set, or the report, contact BC STATS.
ended question. The online survey was sent to over 25,000 BC government employees, with an approximate response rate of 70%.

This report is one of several BC STATS reports based on the annual Work Environment Survey. Other reports produced by BC STATS such as, Exploring Employee Engagement in Your Organization, provide further statistical information for each survey question. This particular report is a systematic application of the established engagement model that emerged from the parent report.

**Methods and Results**

**Sample**
The initial target population for this study was the entire set of BC public service employees. The sample for this report is a subset of cases which met all of the following criteria: employees in a full-time position, those in a permanent position for the entire 2007 calendar year, and employees who have used STIIP leave at least once during 2007. Of the initial 17,631 responses, the data have also been filtered to exclude employees on temporary assignment, part-time workers, retirees (within 2007), and those who have either voluntarily or involuntarily left the BC public service in 2007. The remaining sample (n= 13,389) was then filtered to exclude those employees who had not used STIIP leave in 2007, resulting in a final sample size of n= 9,408.

The overall model tested for a correlation between the effects of engagement scores on STIIP use, while controlling for age, years of service, gender and union status (Table 1). Following is a discussion of each variable.

<table>
<thead>
<tr>
<th></th>
<th>(n=9408)</th>
<th>Mean (SD)</th>
<th>Median</th>
<th>Mode</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>STIIP Use</td>
<td></td>
<td>67.34 (107.22)</td>
<td>31</td>
<td>1</td>
<td>840</td>
<td></td>
</tr>
<tr>
<td>Engagement Score</td>
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<td>245.44 (96.12)</td>
<td>250</td>
<td>300</td>
<td>0</td>
<td>400</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>45.98 (8.40)</td>
<td>47</td>
<td>21</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>Service Years</td>
<td></td>
<td>13.80 (8.35)</td>
<td>14</td>
<td>1</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>Gender†</td>
<td></td>
<td>0</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Union Status††</td>
<td></td>
<td>0</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Total Hours of STIIP Use = 633560
†Female coded as reference (0)
††Union Membership coded as reference (0)

**STIIP Use**
The dependent variable, STIIP Use, measured the amount of annual short-term sick leave in one-hour increments, producing a range from 0 to 1,134 hours per employee. The extreme of 1,134 hours posed a problem for analysis when trying to separate serious health issues from

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2 For details on the open-ended question, see the Improving your work environment: Suggestions from within report. This report complements the statistical data with greater detail offered through a qualitative analysis of employees’ comments.
employees using STIIP as an outcome of low engagement. When reviewing the rules of STIIP use, it was noted that no single instance of STIIP use could exceed six months.³ This limitation helped to frame an upward boundary of 840 hours for the study.⁴ Those with over six-months of STIIP use were filtered out (n=34). The basis for this decision was that a predominantly small group of employees with such extensive STIIP use should be looked at as a separate group, rather than be included as extreme outliers in this study.

Similarly, due to the nature of the research question (the effects of engagement on STIIP use), it was decided that the high number of respondents who did not use any STIIP hours (30%) constituted a large enough group to warrant a separate study. Based on the research question, one would have expected a higher proportion of observations falling within the “highly engaged” end of the scale. However, a similar regression applied to the group with zero STIIP use demonstrated a relatively normal distribution across the engagement scale.

The STIIP variable was then recoded to exclude employees with 0 hours of STIIP (n= 3,981), and 840+ hours of STIIP use (n=34), resulting in a new STIIP variable with a range of 1 to 840 hours (n=9,408, Mean= 67.34, Sd.=107.22). This particular variable exhibited a strong positive skew (see Analysis: tests for assumption).

Engagement Score
The second variable, engagement score, was used as the independent variable central to the analysis of STIIP use. The engagement score was a composite of four questions (Table 2), which were combined to create one overall score that reflected an employee’s level of engagement with their job. Respondents selected a response category from a five-point likert scale ranging from Strongly Disagree (0) to Strongly Agree (100).⁵ It should be noted that this study did not follow the well-established Job Description Index (JDI) format that is typically used to measure job satisfaction (Lease 1998; Stanton et al 2002), as the exploratory nature of the research instead dictated the necessity for an abridged version. Along with the considerations of the above authors, Koustelios and Bagiatis (1997) argue that job satisfaction needs to be measured at a number of levels. Based on this, efforts were made to maintain an acceptable level of construct validity by addressing the over-arching themes of the JDI and previous research on absenteeism, namely measurements of: organizational commitment, turnover intentions, and personal satisfaction.

The cumulative range for the engagement score was 0 to 400, with a mean of 245 (Sd.= 96.12). Interestingly, the mode was 300 while the median was 250, indicating that the data were negatively skewed. In looking at the distribution, it was possible to see that the skewness was partially explained by a disproportionate amount of observations centering around a score of 300, and another cluster around 400. Rather than simply using the mean to

³ As noted on the Employees benefits website, “Maximum Entitlement: In the event you are unable to work due to an illness or injury for a period in excess of six months, and you are a regular status employee…. Note: Some employer groups have a maximum entitlement of seven months. Check with your personnel or payroll office” (Province of British Columbia 2007: para. 5).
⁴ 24 weeks * 35 hrs/per week = six months.
⁵ Usual practice at BC STATS is to attribute values to each categorical response that culminates in a top value of 100.
describe the dispersion, a more accurate representation of the data would be to consider either the median (250) or possibly the mode (300).

In order to understand the effects of each Engagement Score question on STIIP Use, a stepwise regression was employed. The resulting model was significant at $p<0.001$ ($F= 69.92$, $df= 3$, 8,885) and the Adjusted $R^2$ indicated that questions a72, a75, and a76 could only explain about 2.3% of the variance in STIIP Use. Furthermore, this process showed that question a75 accounted for 2% (of the 2.3%) of the variance, and that question a77 was not significant, and therefore, was dropped from the model. Following this logic, Chronbach’s test for reliability was performed to assess the internal reliability of the composite scores. The findings demonstrated that all questions were worth including with an overall alpha of $\alpha= 0.871$. As all variables met the required alpha level ($\alpha \leq 0.8$), and were correlated with the total scale to the degree of lower $r= 0.505$, all questions were retained and used in the composite engagement score for later regression.

<table>
<thead>
<tr>
<th>Table 2. Distribution of Scores Per Engagement Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>0= Strongly Disagree 25= Disagree 50= Neutral 75= Agree 100= Strongly Agree Mean (SD) n.</td>
</tr>
<tr>
<td>a72. I would prefer to stay with the BC Public Service even if offered a similar job elsewhere.</td>
</tr>
<tr>
<td>8.50% 12.70% 23.70% 30.20% 24.90% 62.58 (30.75) 8964</td>
</tr>
<tr>
<td>a75. I am satisfied with my job.</td>
</tr>
<tr>
<td>5.20% 11.80% 25.90% 36.70% 20.40% 63.81 (27.43) 9363</td>
</tr>
<tr>
<td>a76. I am satisfied with my organization.</td>
</tr>
<tr>
<td>9% 16.20% 30.10% 31.30% 13.50% 56.03 (28.67) 9329</td>
</tr>
<tr>
<td>a77. Overall, I am satisfied in my work as a BC Public Service employee.</td>
</tr>
<tr>
<td>4.60% 11.20% 30.80% 37.10% 16.30% 62.33 (25.93) 9314</td>
</tr>
</tbody>
</table>

Note: all percentages are valid percents.

Age
Age was the first of four control variables. This particular variable had a range from 21 to 66, with a mean age of 46 (Sd. 8.40). The distribution of ages had a slightly negative skew but it was surprising to note how closely this skew followed a normal distribution pattern (Figure 1).

One of the main considerations with this variable was the decision to not group ages into categories. This decision was influenced by research conducted by Bedian, Ferris, and Kacmar in which they argued that age and tenure (length of service years) were both systematically linked to an employee’s job satisfaction (1992:34). Given this, it was felt that by controlling for age at all levels, the model would have greater explanatory value.
To test this idea, when age was divided into groups, the means for all STIIP use by age groups fell within the range of 43.24 and 47.42, whereas the median for age groups under 35, 35-44, 45-54, and 55+ were 21, 18, 14 and 14, respectively. Contrary to preconceived assumptions of a correlation between an increase in age and an increase in STIIP use, when separated out, the frequency of STIIP use was higher in the younger age groups. However, there were no significant distinctions between age groups and engagement scores, with a total group mean of 251.92 (Sd. 62.98), and a mean range of 248.80 (Sd. 62.2) to 255.57 (Sd. 63.89) between the lowest and highest age group.

**Service Years**

The second control variable measured an employee’s length of service in one-year increments. The variable Service Years had a mean of 13.8 (Sd. 8.35) with a range from 1 to 39 years of service.

The distribution for this variable was multi-modal with high clusters around 1-2 and 16-18 years of service, as well as an additional smaller cluster around 26 years (Figure 2). The latter clusters may be partially explained by the extensive province-wide lay-offs in 2003, leaving a disproportionate amount of employees with seniority. The former spike in service years may be attributed to the subsequent hiring boom that had occurred due to the aforementioned recent round of lay-offs, as well as an increased amount of hires due to the current retirement cohort.

Incidentally, employees with less than one year of service were only entitled to prorated amounts of STIIP use, depending on their tenure. Because of this, employees with less than one year of service were coded as missing. This allowed the study to focus on permanent full-time employees who would have had comparable access to STIIP use.

**Gender and Union Status**

Both Gender and Union Status were dichotomous dummy variables (Table 3). For the variable Gender, females comprised 64% (n=9,408) of the respondents and were coded as the reference category (0). It should be noted that due to the small sample size of respondents that identified as Other (n=3), they could not be used in this analysis. It might be beneficial to look at this group of people with a more qualitative approach, rather than one that is focused on making predictions or inferences to an entire population.

![Figure 2. Distribution of Service Years](image)

For the control variable Union Status, union members (78%) were coded as the reference category (0). There were no missing data in this variable.
Analysis
In order to be consistent with the goal of the research, OLS regression was used. Initially, all variables were included in the model. At this stage, the model was statistically significant at p<0.001 (F= 51.957, df₁= 5, df₂= 8881). The adjusted R² signified that 2.8% of the variance in STIIP use could be explained by all the variables in the model, including an employee’s engagement score. Due to missing data, the number of observations for the regression model dropped to n=8886.

Next, tests for assumptions revealed that there were no considerable problems with multicollinearity as the tolerance levels for each variable were well above the 0.4 thresholds. However, a test for normality revealed that Union Status and STIIP Use were both highly skewed. While nothing could correct for Union Status, the natural logarithm method was used on STIIP Use and an acceptable level of normality was reached. The logged variable was then used in all other regressions. Figures 3 and 4 illustrate the correction in the skewed variable.

The third stage of assumptions involved testing for heteroscedasticity. The Levene’s test indicated that Union Status was statistically significant at p< 0.001, while the other remaining variables were not statistically significant.6

The final assumptions test was to identify any issues with outliers. Using a variety of tests (the zresid, sdresid and cook methods), only one outlier was found. Upon investigation, there appeared to be no problems with the actual observation. As the standardized residual was only slightly off from the predicted value, a decision was made to retain the case in the dataset.

The next method of analysis was to employ a stepwise (or “remove”) regression method to the model. In doing so, the model remained statistically significant at p< 0.001 (F= 87.971, df₁= 5, df₂=8881), and removed the Years of Service variable. This method was discarded, as the

6 The p-value for the Engagement Score variable was 0.001.
following section will explain why an employee’s years of service were deemed too important to exclude.

Once the assumptions were dealt with, the final logged regression model was statistically significant at p<0.001 (F= 87.971, df₁= 5, df₂=8881). Though the model was significant, there was only a moderately weak negative relationship between STIIP use and engagement (R=0.217). However, by logging the STIIP Use variable, the prediction ability was increased by almost 2% as the new R² stated that 4.7% of the variance in STIIP use could be explained by an employee’s engagement score, while controlling for all other variables. All variables, with the exception of Years of Service, were significant at p<0.001. In other words, as a respondent’s Engagement Score increased (t= -11.86, b= -0.001), there would be a slight decrease in the amount of STIIP hours used; an increase in an employee’s Age (t= 4.58, b=0.007) would see a slight increase in the amount of STIIP used; women (t= -10.105) typically used more STIIP hours than men; and, unionized members (t= -12.507) used more STIIP hours than non-union members; all while controlling for the other variables. Additionally, Years of Service was statistically significant at the level of p< 0.05 (t= -2.953), indicating that as an employee’s years of service increased, there was a 0.005 decrease in their amount of STIIP use.

The model’s overall ability to predict the level of engagement score on STIIP use demonstrated that for every 1 unit increase in an engagement score (β= -.001), there would be a predicted 0.001 decrease in STIIP leave, while controlling for all other variables (Table 4). This meant that for a 35-year-old unionized female employee, with 10 years of service and an engagement score of 100, the predicted STIIP use would be 3.86 hours, whereas the same employee with an engagement score of 400 would have a slight decrease in STIIP use to 3.56 hours.

<table>
<thead>
<tr>
<th>Coefficients(a)</th>
<th>Unstandardized</th>
<th>Standardized</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>3.765</td>
<td>0.073</td>
<td>51.692</td>
<td>0.000</td>
</tr>
<tr>
<td>Engagement Score</td>
<td>-0.001</td>
<td>-0.124</td>
<td>-11.855</td>
<td>0.000</td>
</tr>
<tr>
<td>AGE</td>
<td>0.007</td>
<td>0.055</td>
<td>4.58</td>
<td>0.000</td>
</tr>
<tr>
<td>Service Years</td>
<td>-0.005</td>
<td>-0.035</td>
<td>-2.953</td>
<td>0.003</td>
</tr>
<tr>
<td>Gender†</td>
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<td>-0.106</td>
<td>-10.105</td>
<td>0.000</td>
</tr>
<tr>
<td>Union Status††</td>
<td>-0.358</td>
<td>-0.131</td>
<td>-12.507</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table 4.

a. Dependent Variable: STIIP1to840Logged2
†Female coded as reference (0)
††Union Membership coded as reference (0)

**Discussion**

While the initial intentions of this research were to ascertain the effects of engagement on STIIP use, and finding that the model was significant, explaining only 4.7% of the variance in STIIPP use was not a particularly impressive achievement. However (and perhaps more noteworthy), the research process revealed a number of important issues that should influence any future analysis. For example, topics that have emerged as requiring further investigation include: the correlations between age and service years; the effects of gender on STIIP use; and some interesting limitations on this particular study.
In looking at correlations, some slight relationships were to be expected; however, this first area of interest lies in a fairly high positive correlation (0.493) between age and years of service (Table 5). Traditionally, arguments around strong associations state that if there is a high correlation, then both variables may be explaining the same thing. One option is to discard the less significant variable. In spite of this high correlation, some researchers state that although the two variables may be positively associated, as age goes up, years of service also tends to go up, there is not necessarily the same relationship between each independent variable and their effects on engagement scores. Bedeian, Ferris and Kacmar provide a persuasive argument for retaining both variables, suggesting that the impact of age on job satisfaction is indirect; and that an employee’s years of service have a type of time bias (1992:35). Essentially, while older workers tend to be in positions of higher wages with more autonomy, the intervening variable (Years of Service) might be positively affecting their engagement score. By separating age from service years, distinctions began to appear, demonstrating that older people new to a position did not have the same level of engagement as younger employees who have been in the civil service for a lengthy period. For this reason, Bedeian et al suggest that a rigorous model retain both variables.

Based on this argument, the separate effects of Years of Service and Age were tested on STIIP Use. The current model indicated that while an employee’s years of service had a negative effect on STIIP use ($\beta = -.005$), Age had a positive effect ($\beta = .007$). In other words, as Age increased, STIIP use also tended to increase, but as Service Years increased, STIIP use tended to decrease. Figures 5 and 6 present a visual representation of this relationship, demonstrating that while age and the length of time in a position were highly correlated, each had a significantly different impact on STIIP, justifying the inclusion of both in the model.

<table>
<thead>
<tr>
<th>Table 5. Correlations With STIIP Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>STIIP Use</td>
</tr>
<tr>
<td>1. Engagement Score</td>
</tr>
<tr>
<td>Pearson Correlation</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>2. Age</td>
</tr>
<tr>
<td>Pearson Correlation</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
</tr>
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</tr>
<tr>
<td>Years of Service</td>
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<tr>
<td>Pearson Correlation</td>
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<tr>
<td>Sig. (2-tailed)</td>
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<tr>
<td>Gender</td>
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<tr>
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</tr>
<tr>
<td>Sig. (2-tailed)</td>
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<tr>
<td>N</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
Female Coded as Reference
Union member Coded as Reference
The second notable finding was the effect of gender on STIIP use. The model established that women were more likely to have higher uses of STIIP than men. However, women also had slightly higher engagement scores than men. Specifically, the distributions showed that on average, although women used approximately 15 more STIIP hours than men, they also had a higher than average engagement score (253) than men (231) (Table 6). Vanden Heuval and Wooden’s (1995) research on the differences between gender and absenteeism helps to provide some credibility for these findings. As their study also demonstrated, women typically had higher satisfaction scores, while maintaining higher levels of absenteeism. Similar to the findings of this research, they concluded that women’s job satisfaction was less of a determinant on absenteeism than for men.

The importance of a gender effect is that it is not simply enough to make a judgment that high levels of STIIP use will be equally correlated with low work engagement. Future research might look at the possibilities of an interaction effect around gender. Moreover, one should not overlook the additional benefits of engagement; as the research revealed, a “healthier” employee is not necessarily a more engaged employee. There is ample research that details the level of familial duties that often influence a woman’s absenteeism. The research of Preston et al. explains that even when both husbands and wives were working, family arrangements usually fell to the women to organize, as women “felt obliged to do most of the adapting” (2008:154). In another study on professional work, Ranson (2008) noted that when women chose to pursue a career, it was usually to the detriment of family life. Her argument was that work norms in the engineering field were set by men, men who had traditionally pulled out of familial responsibilities in order to focus on their career. Proving their worth meant shifting the bulk of housework and childcare to their partners. Consequently, those who could not share the work were often forced to take sick leave or unpaid leave. Ranson’s study illustrates similar problems for women who were trying to raise children and pursue a career that might also be influencing this study’s findings.

To follow this argument, Vanden Heuval and Wooden found that, “previous research has erred by treating men and women as if they respond in an identical fashion to the various forces influencing work attendance patterns” (1995:1326). This particular study further argues that not only should women’s and men’s STIIP use be looked at separately, there is also a need for more exploratory research that focuses on uncovering the different ways in which each gender understands and expresses engagement.

When broken down into gendered sub-sections of engagement scores, this research found that there was typically less than 1% difference between the women and men, for each category. The one area where they do differ is in the 400 score; here, the gap is increased as 10% of women rank a score of 400, while only 7% of men rank at a score of 400. Otherwise, the distribution is fairly consistent between genders (Figure 7).
Limitations and Implications for Future Research

The last relevant finding of this research centres on the limitations that were uncovered during the course of this study. Three particular areas all stem from a lack of relevant data.

Due to the highly confidential nature related to employee STIIP use, many relevant variables were not made available, and therefore could not be included in the study. One such variable is employee health. It is surmised that when controlling for health issues, the explanatory power of this model would increase dramatically. Furthermore, the scope of this analysis is limited to the cumulative STIIP hours used by each employee. This measure does not adequately reflect the effects of engagement on STIIP use. For example, a highly engaged employee may incur 700 hours due to major surgery culminating in one 5-month period of recovery, while a different employee may have less STIIP hours, but over several instances of use. Additional research points to a distinction between the effects of voluntary and involuntary STIIP use on absenteeism (Sagie 1998). In other words, by only tracking the
total volume of STIIP use per individual, this research cannot differentiate between either the frequency or type of STIIP used. It is possible to surmise that a disengaged employee would have higher frequencies of STIIP use, and that a highly engaged employee, who might have incurred more hours, would have less instances of STIIP use. One possible future research design would be to test the effects of engagement scores against the frequency of an employee’s STIIP use, holding the length of STIIP use constant.

Along similar lines, the effects of gender distinctions on STIIP use are lost in this research, as the reasons for STIIP use were not made available. Whether women take more involuntary STIIP use than men (and whether there is an inverse correlation for voluntary STIIP use) remains unknown. Vanden Heuvel and Wooden note that the research across studies on absenteeism is often inconsistent and contradictory, leaving this author to agree with their conclusion that “simply including sex as a binary explanatory variable is inadequate” (1995:1327).

Finally, the limitations of using secondary data should be acknowledged. In other words, these data were collected for purposes other than this particular research question. As noted earlier, much has been done on the benefits of the established JDI model of satisfaction. Although there is some disagreement on how extensive such a model needs to be, four questions cannot adequately represent the proposed seventy-nine questions that typically make up a job-satisfaction model (Russell et al. 2004; Stanton et al 2002; Lease 1998). In light of the low (4.7%) explanatory power of this research, it is argued that the limited scope of this survey hampers the descriptive abilities of this research project, consequently affecting any possible generalizations to the population.

Conclusions

The primary objective of this research was to test whether an employee’s level of engagement had any effect on the amount of STIIP use they would incur. Though the overall findings were statistically significant, thus corroborating the research hypothesis, the relationship was relatively weak; only 4.7% of the variation in STIIP use could be explained by an employee’s engagement score (controlling for age, years of service, gender and union status).

During the course of this research process, some contradictions emerged between the findings and the significance of the model. First, women had a higher level of both engagement and STIIP use than men; this result was in direct contradiction with the significance of the model. Second, though assumed to be correlated, there was an inverse relationship between age and STIIP use, and service years and STIIP use. And finally, the limitation on access to other variables was found to have hampered the explanatory power of this research.

For the above reasons, any conclusions of statistical significance are tentative at best, and point to the need for a more sophisticated conceptualization of “engagement,” and operationalization of STIIP use.
Works Cited


