COMM1190 T1 examplary report b

Data, Insights and Decisions (University of New South Wales)

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Introduction

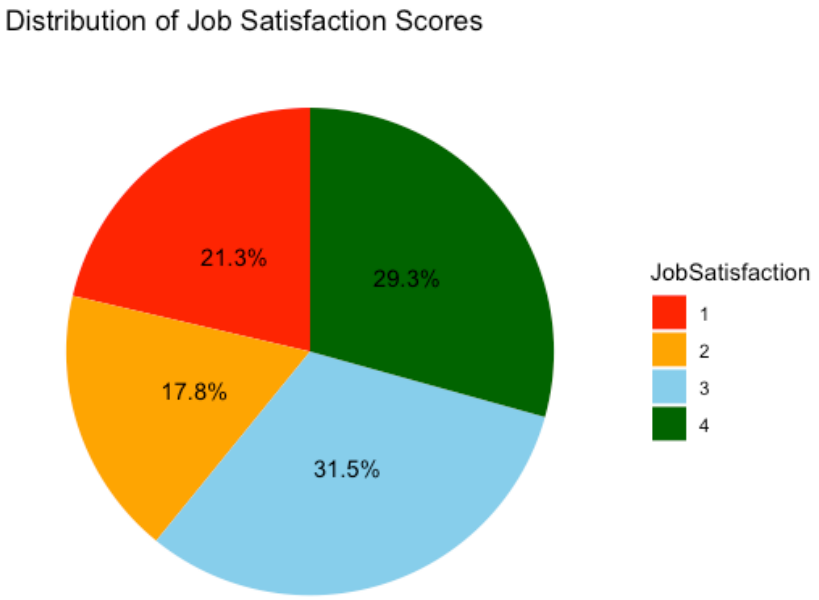
A key strength for all organisations is their workforce because organisations would not exist without them. As such, organisations must become increasingly aware of job satisfaction, its importance in retaining staff and organisational performance. Eskildesen and Hammer (2004) stated that employers must limit the desire of employees to leave the organisation due to the high turnover costs. Therefore, the best way to retain employees is to facilitate job satisfaction. This report will analyse the various attributes of employee job satisfaction to understand and outline three key driving factors. Furthermore, we will provide tangible recommendations to enhance employee job satisfaction and resulting performance at Globex Pharma.

Discussion

The data set consists of thirty-six variables and four hundred and sixty observations. The variables include job attributes and employee demographics. This report aims to find three variables of interest that affect job satisfaction. To summarise the data, we will use averages as a reliable technique to recognise basic information.

Findings

Job satisfaction is ranked numerically in this data set: 1=Low, 2=Medium, 3=High and 4=Very high. We found that the average job satisfaction of all employees was 2.69 out of a possible 4. Indicating that, on average, employees at Globex Pharma rated their satisfaction as between medium and high. This average score is a key indicator when comparing variables to job satisfaction.



Graph 1. Pie Chart – Distribution of Job Satisfaction Scores

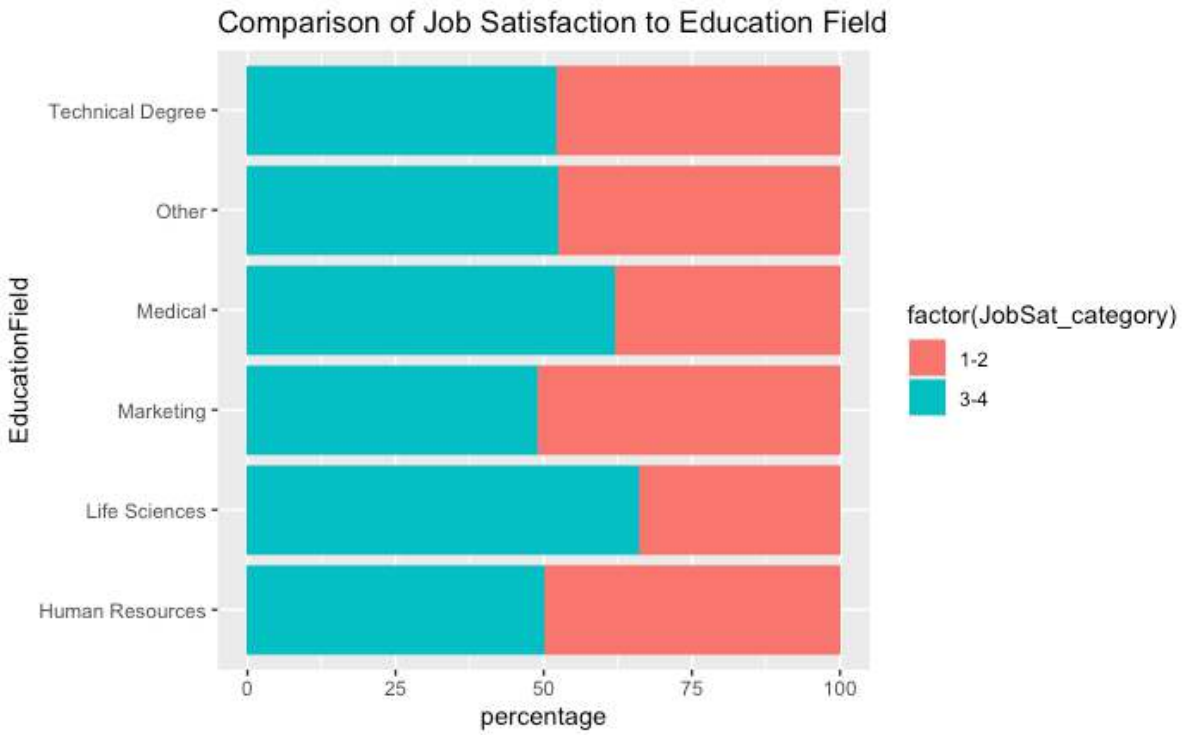
We found that 'years since last promotion' was a driving factor of job satisfaction. On average, employee job satisfaction was 2.73, from the promotion to four years later. Moreover, after four years and up to eight years since the promotion, the average employee satisfaction fell below the total average to 2.50. This trend indicates a decrease in average job satisfaction after four years since the last promotion. A cause of this result can be associated with research that found that employees gradually lose interest in their economic and employment circumstances (Kosteas 2011).

Average Job Satisfaction Split by Years Since Last Promotion (0-4 & 5-9)

Years Since Last Promotion	Average Job Satisfaction Score
0-4	2.73
5-9	2.50

Table 1. Average Job Satisfaction Split by Years Since Last Promotion (0-4 & 5-9)

Additionally, we found that, on average, the marketing department was the least satisfied when combining scores of low/medium and comparing them with high/very high. For example, 51.2% of the marketing department rated their job satisfaction as low and medium. This result may be associated with research indicating that marketers have less job satisfaction when not contributing enough to the organisation's marketing capital (Nguyen & Nguyen 2011).



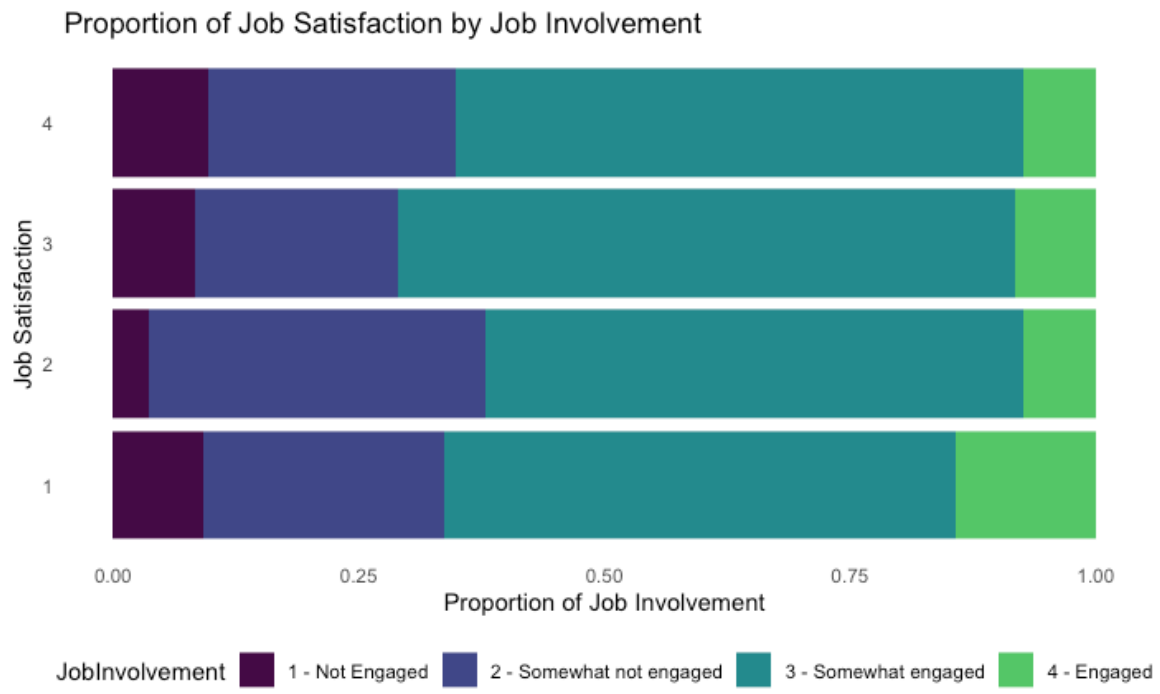
Graph 2. Graph – Comparison of Job Satisfaction to Education Field

Education Field (Marketing) Job Satisfaction Score 1-2 vs 3-4

EducationField	JobSat_category	percentage
Marketing	1-2	51.2
Marketing	3-4	48.8

Table 2. Education Field (Marketing) Job Satisfaction Score 1-2 vs 3-4

Finally, we found that, on average, employees who were the most engaged rated their satisfaction and dissatisfaction almost equally. Additionally, employees who rated job satisfaction as high and very high also scored low and medium for engagement. This figure is concerning as it indicates that employees are satisfied being less engaged.



Graph 3. The proportion of Job Involvement by Job Satisfaction

Average Difference in Job Satisfaction Scores of Job Involvement

Job Involvement	Average Difference Scores
1	2.27
2	1.99
3	1.99
4	2.15

Table 3. Average Difference in Job Satisfaction Scores of Job Involvement

Recommendations

Employees who have been recently promoted (0 to 4 years since last promotion) have a higher job satisfaction than employees who have not received a recent promotion (5 to 9 years since last promotion). We, therefore, recommend that Globex Pharma conduct half-yearly meetings to aid employee upskilling and sustain small, regular promotions.

Studies have shown that job satisfaction does not necessarily decrease if employees have not recently been promoted. For instance, Kosteas (2011) found that job satisfaction remains high if employees believe promotion is imminent. Therefore, we recommend that Globex Pharma initiates critical performance indicators and guarantees promotions if employees are performant.

Appreciation, recognition and quality relationships increase marketers' investment in the organisation's marketing capital (Elanain 2009). Furthermore, when marketers invest in the organisation's marketing capital, they find their jobs more enjoyable, resulting in higher job satisfaction and productivity. Therefore, we recommend that the organisation presents staff rewards internal recognition awards and develop employee-employer relationships through social events.

Employee disengagement is associated with high levels of fatigue, stress, and burnout in the workplace (Theofilou et al. 2021), (Rahme et al. 2020), (Lan et al. 2020). Additional evidence has confirmed that work stress and burnout lead to low engagement and decreased performance (Ali & Kakakhel 2013), (Theofilou et al. 2021), (Tan & Akhtar 1998). Therefore, we recommend that Globex Pharma join the Corporate Mental Health Alliance Australia (CMHAA) to improve employee engagement. This non-profit group enables collaboration between some of Australia's top-tier organisations to gain insight and employee wellbeing knowledge. Organisations' ideas have resulted in some providing employees with free educational videos focused on yoga, mindfulness, nutrition, and mental health support. Ultimately, many Australian organisations involved with CMHAA have reported increased employee wellbeing and productivity (LaFrenz 2020), (Wesfarmers 2020), (Corporate Mental Health Alliance Australia).

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Appendix

Measurement Scales

Job Satisfaction
1=Low, 2=Medium, 3=High, 4=Very high

Years Since Last Promotion
0 – 15=Number of years since last promotion

Job Involvement
1=Not engaged, 2=Somewhat not engaged, 3=Somewhat engaged, 4=Engaged

Education Field
Human Resources, Life Sciences, Marketing, Medical Other, Technical Degree

R-Studio Coding

Graph 1. Distribution of Job Satisfaction Scores

```
df_4 = df %>% group_by(JobSatisfaction) %>%
  summarise( cnt = n()) %>%
  mutate(n = round(cnt*100/sum(cnt), 1))
df_4$JobSatisfaction = as.factor(df_4$JobSatisfaction)
#creating a pie chart
ggplot(data = df_4, aes(x = "", y = n, fill = JobSatisfaction)) +
  geom_bar(stat = "identity", width = 1) +
  coord_polar("y", start=0) +
  geom_text(aes(label = paste0(n, "%")), position = position_stack(vjust=0.5)) +
  labs(title = 'Distribution of Job Satisfaction Scores', x=NULL, y =NULL) +
  theme_classic() +
  theme(axis.line = element_blank(),
        axis.text = element_blank(),
        axis.ticks = element_blank()) +
  scale_fill_manual(values=c("red", "orange", "skyblue", "darkgreen"))
```

Graph 2. Graph – Comparison of Job Satisfaction to Education Field

```
df_1b_agg1 = df %>%
        group_by(EducationField, JobSatisfaction) %>%
        summarise(n=n()) %>%
        mutate(JobSat_category = ifelse((JobSatisfaction == 1) | (JobSatisfaction == 2), '1-2',
'3-4')) %>%
        group_by(EducationField, JobSat_category) %>%
          summarise(count= sum(n))
df_1b_agg2 = df %>%
        group_by(EducationField) %>%
        summarise(n=n())
df_1b_merged = merge(df_1b_agg1, df_1b_agg2, by = 'EducationField')
df_1b_merged$percentage = df_1b_merged$count*100/df_1b_merged$n
ggplot(data = df_1b_merged, aes(x = EducationField, y = percentage, fill =
factor(JobSat_category))) +
   geom_bar(stat = "identity") + coord_flip() +   ggtitle("Comparison of Job Satisfaction to
Education Field")
```

Graph 3. Proportion of Job Involvement by Job Satisfaction

```
ggplot(df1,
      aes(y = reorder(JobSatisfaction,JobInvolvement))) +
  geom_bar(aes(fill = JobInvolvement),
           position = position_fill(reverse = TRUE)) +
  scale_fill_manual(values=c("#440145FF", "#404788FF", "#238A8DFF", "#55C667FF"),
                    breaks=c("1", "2", "3", "4"),
                    labels=c("1 - Not Engaged", "2 - Somewhat not engaged", "3 - Somewhat
engaged", "4 - Engaged")) +
  labs(title = "Proportion of Job Satisfaction by Job Involvement",
       x = "Proportion of Job Involvement",
       y = "Job Satisfaction") +
  theme_minimal() +
  theme(legend.position = "bottom",
        panel.grid.major = element_blank(),
        panel.grid.minor = element_blank())
```

Table 1. Average Job Satisfaction Split by Years Since Last Promotion (0-4 & 5-9)

```
#Subsetting the table for years since last promotion < 5
df_2b_1 = df %>% filter(YearsSinceLastPromotion < 5)
#Subsetting the table for years since last promotion > 5
df_2b_2 = df %>% filter(YearsSinceLastPromotion >= 5)
df_2b_1_agg = df_2b_1 %>%
        summarise(job_sat_avg = mean(JobSatisfaction))
df_2b_1_agg$YearsSinceLastPromotion_str = '0-4'
df_2b_2_agg = df_2b_2 %>%
        summarise(job_sat_avg = mean(JobSatisfaction))
df_2b_2_agg$YearsSinceLastPromotion_str = '5-9'
#Appending both the dataframes
df_2b = rbind(df_2b_1_agg, df_2b_2_agg)
#Reordering columns
col_order <- c("YearsSinceLastPromotion_str", "job_sat_avg")
df_2b <- df_2b[, col_order]
#Renaming columns
colnames(df_2b) <- c("Years Since Last Promotion", "Average Job Satisfaction Score")
kable(df_2b, caption = '<center>Average Job Satisfaction Split by Years Since Last
Promotion (0-4 & 5-9)</center>', digits=2 ) %>%
kable_styling(bootstrap_options = c("striped", "hover"))
```

Table 2. Education Field (Marketing) Job Satisfaction score 1-2 vs 3-4

```
df_1b_agg1 = df %>%
        group_by(EducationField, JobSatisfaction) %>%
        summarise(n=n()) %>%
        mutate(JobSat_category = ifelse((JobSatisfaction == 1) | (JobSatisfaction == 2), '1-2',
'3-4')) %>%
        group_by(EducationField, JobSat_category) %>%
          summarise(count= sum(n))
df_1b_agg2 = df %>%
        group_by(EducationField) %>%
        summarise(n=n())
df_1b_merged = merge(df_1b_agg1, df_1b_agg2, by = 'EducationField')
df_1b_merged$percentage = df_1b_merged$count*100/df_1b_merged$n
df_1b = df_1b_merged %>% filter(EducationField == "Marketing") %>%
select(EducationField, JobSat_category, percentage)
#Creating a table
kable(df_1b, caption = '<center>Education Field (Marketing) Job Satisfaction Score 1-2 vs 3-
4</center>', digits=1 ) %>%
kable_styling(bootstrap_options = c("striped", "hover"))
```

Table 3. Average Difference in Job Satisfaction Scores of Job Involvement

```
#Subsetting the table for Job Satisfaction 1 or 2
df_3_1 = df %>% filter(JobSatisfaction < 3)
#Subsetting the table for Job Satisfaction 3 or 4
df_3_2 = df %>% filter(JobSatisfaction >= 3)
df_3_1_agg = df_3_1 %>%
        group_by(JobInvolvement) %>%
        summarise(job_sat_avg1 = mean(JobSatisfaction))
df_3_2_agg = df_3_2 %>%
        group_by(JobInvolvement) %>%
        summarise(job_sat_avg2 = mean(JobSatisfaction))
df_3 = merge(df_3_1_agg, df_3_2_agg, by = 'JobInvolvement')
df_3$diff = df_3$job_sat_avg2 - df_3$job_sat_avg1
df_3 = df_3 %>% select(JobInvolvement, diff)
#Renaming columns
colnames(df_3) <- c("Job Involvement", "Average Difference Scores")
kable(df_3, caption = '<center>Average Difference in Job Satisfaction Scores of Job
Involvement', digits=2 ) %>%
kable_styling(bootstrap_options = c("striped", "hover"))
```