COMM1190 T1 examplary report a

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

COMM1190 – Data, Insights & Decisions: Assessment Task 1

Contents

Introduction

Globex Pharma is a pharmaceutical company which has seen at least 460 employees throughout its time of operation. With a company this large, it is important that employees are satisfied, as this leads to the most productivity (Fogaça and Junior, 2016).

In this respect, Globex Pharma has reached out to my consulting firm to identify how to boost job satisfaction. This report will highlight three factors that impact satisfaction, as well as recommendations on how to proceed.

Summary Statistics and Data Exploration

In order to investigate the factors impacting job satisfaction, first the current status must be examined. Job satisfaction can be defined as the gratification an employee feels during and after carrying out work duties. 460 current and former employees were asked to rate their job satisfaction on a scale of 1-4, and the results were as follows.
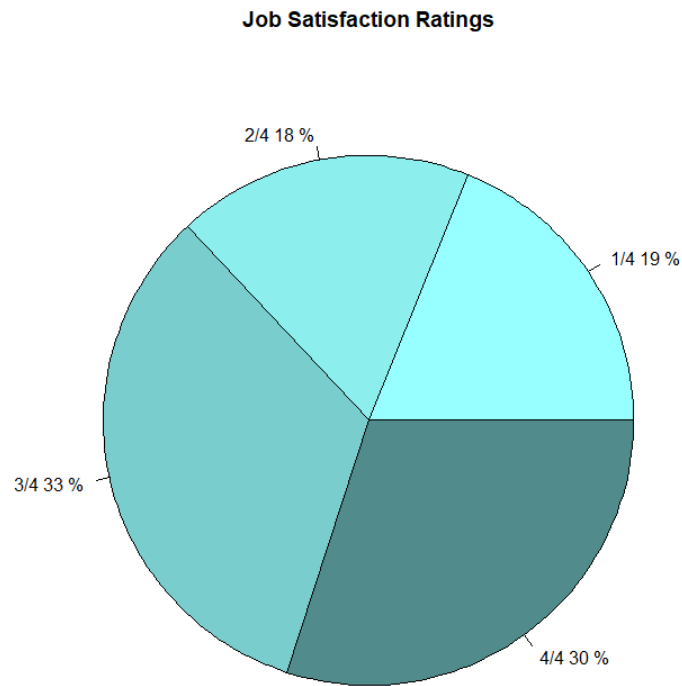
Job Satisfaction Ratings

Figure 1: Pie chart representing job satisfaction ratings on a scale of 1-4 at Globex Pharma

Figure 1 demonstrates that 30% of employees rate their satisfaction with a full score, and 63% make up the 3/4 and 4/4 brackets. While these scores are good, there is still potential for improvement.
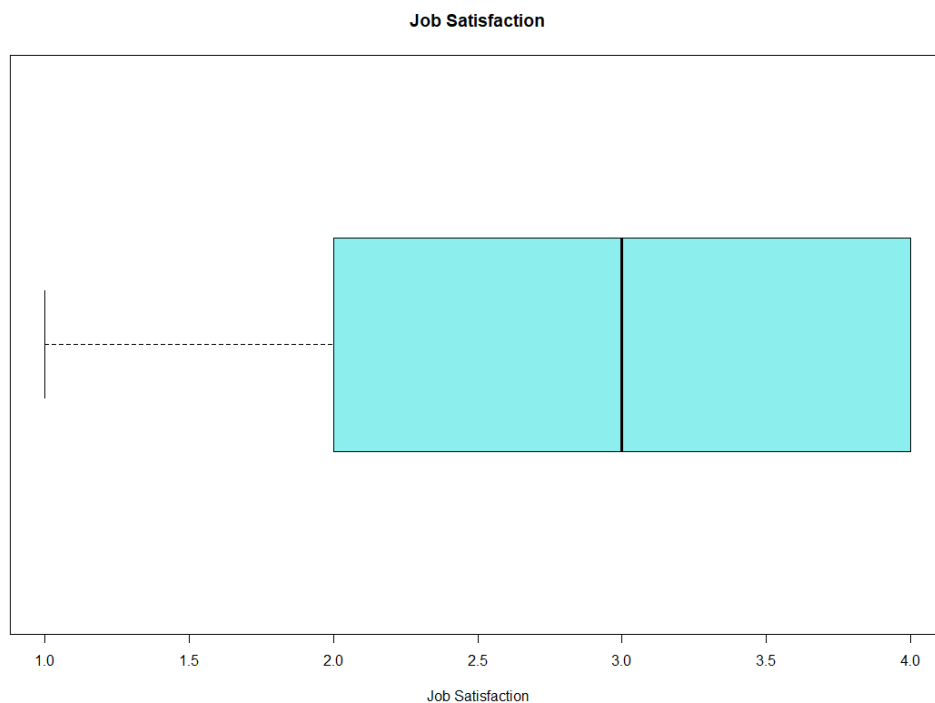
Job Satisfaction

Job Satisfaction

Figure 2: Boxplot representing job satisfaction scores

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We can see that the median job satisfaction score was 3, once again indicating a high average. 50% of employees are above this high median, indicating generally positive job satisfaction in the workforce. This boxplot is skewed to the left, again showing high frequency in higher scores.

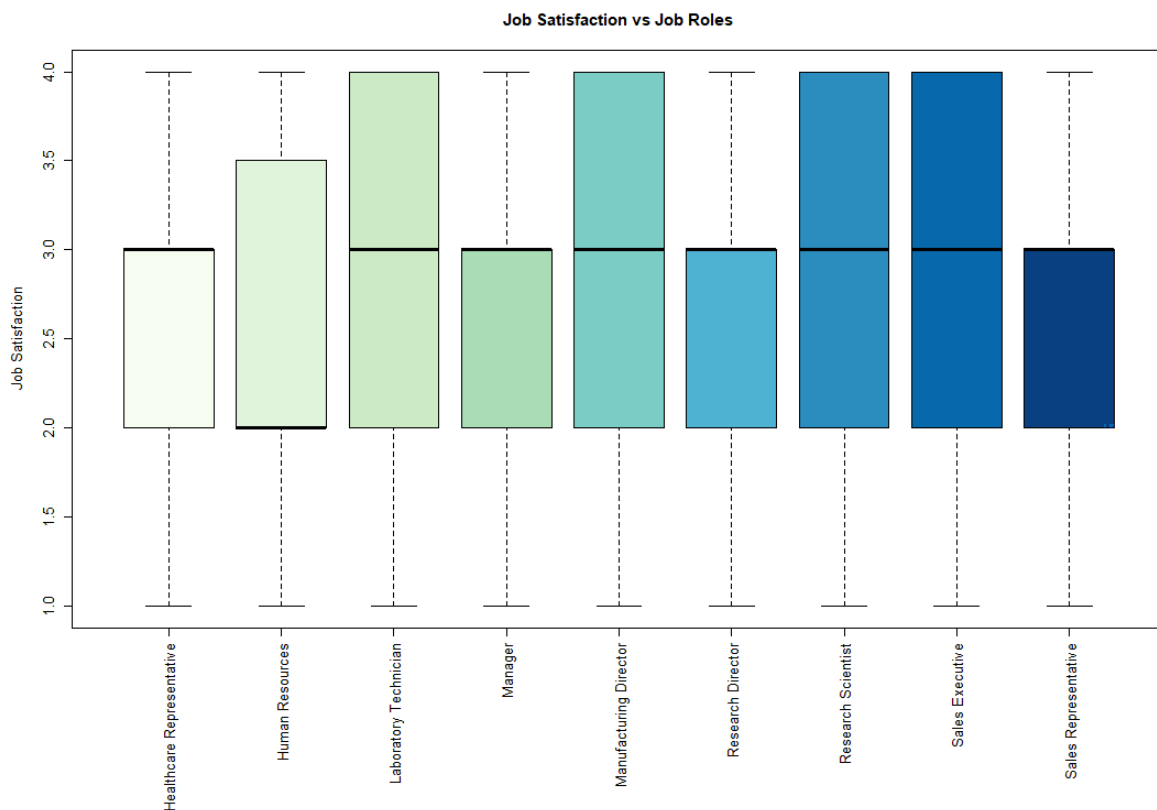If we split this by job role, we see slight changes.

Figure 3: Boxplot representing job satisfaction against job roles

Figure 3 indicates that whilst the median for most job roles remains at three, it is lower for Human Resources at 2. Other roles that do not maintain 50% of scores between 3 and 4 are Healthcare Representatives, Managers, Research Directors and Sales Representatives.

I will continue research throughout this study to investigate which factors are most greatly affecting this.

Factor Analysis

Factor 1: Environment Satisfaction

Environment satisfaction is a key factor in determining job satisfaction. As shown in Figure 4, the two are correlational, as they indicate incredibly similar results.
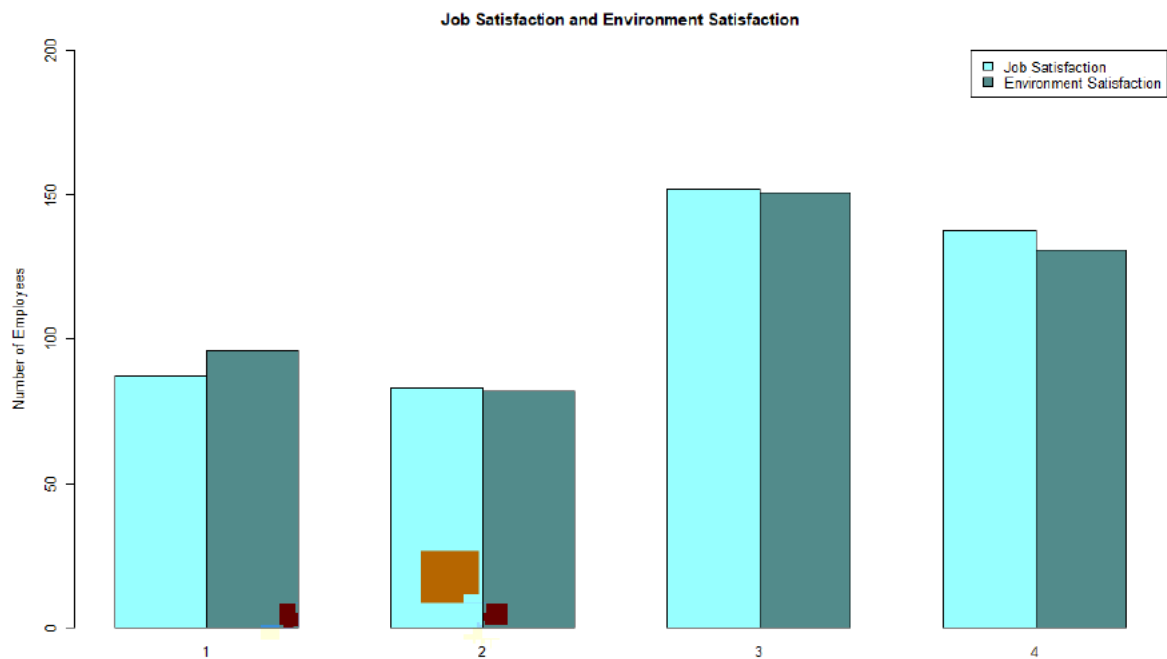

Figure 4: Grouped barchart showing job satisfaction and environment satisfaction

This indicates that environment satisfaction plays a key role in job satisfaction. The mean is approximately 2.7, with a standard deviation of 1.1, indicating the spread of results.

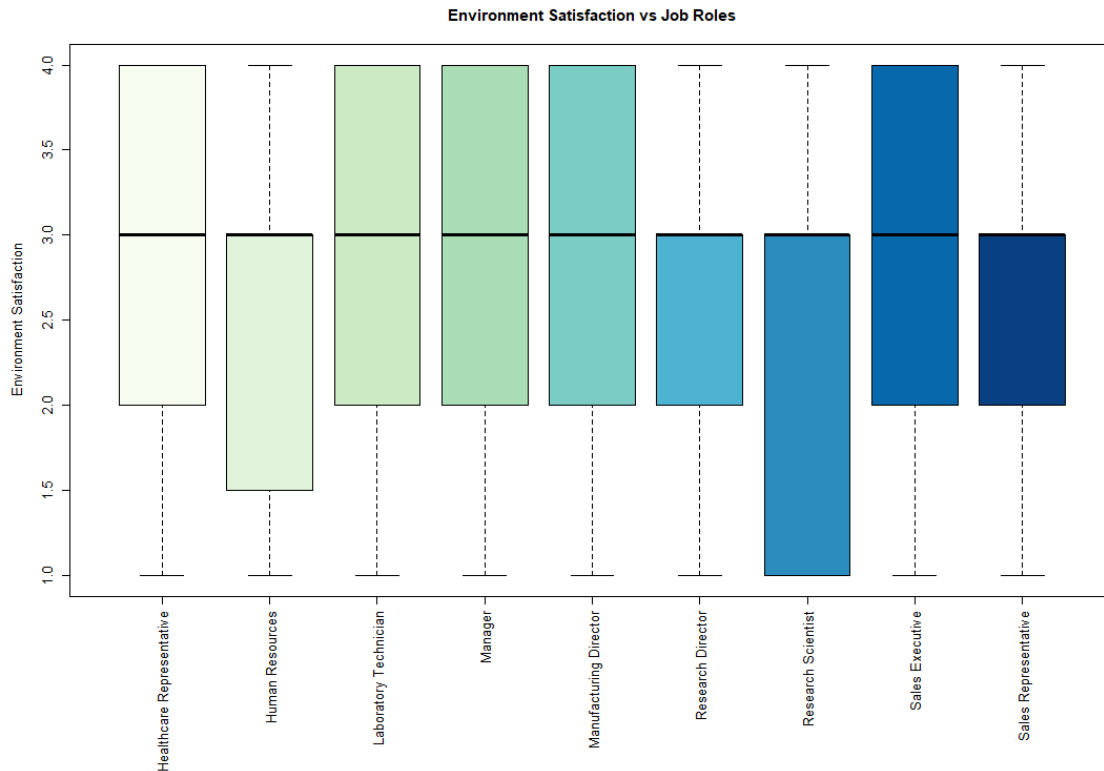This can be compared to the individual job roles.

Figure 5: Box plot showing Environment Satisfaction against Job Roles

Environment satisfaction has a constant median of 3 throughout job roles as shown in Figure 5. However, in job roles such as Human Resources and Research Scientist once again show lower scores. It is important to recognise that Human Resources also did not score as high in preliminary examination.

Factor 2: Work Life Balance

As all employees have a life outside of work, it is important to consider it as a factor. In this case, the balance between everyday life and work.

Figure 6 indicates that work life balance impacts job satisfaction. Those who scored work life balance with a one were more likely to have lower job satisfaction (median of 2) than those who scored it higher (median of 3). As there are 29 workers in this bracket, with no outliers, it should be considered as relevant information.
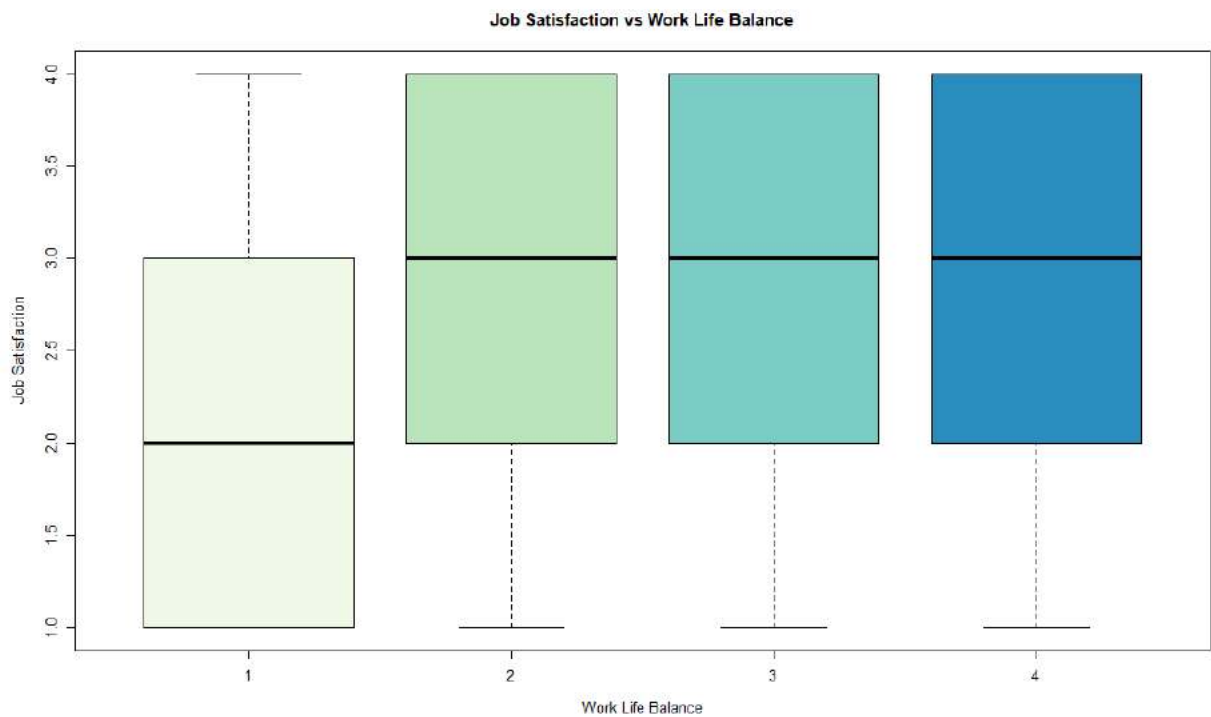
Figure 6: Box plot showing work life balance against job satisfaction

Factor 3: Education Field

As different employees enter the workforce with differing skills and experiences, it is important to gauge how this affects their job satisfaction.
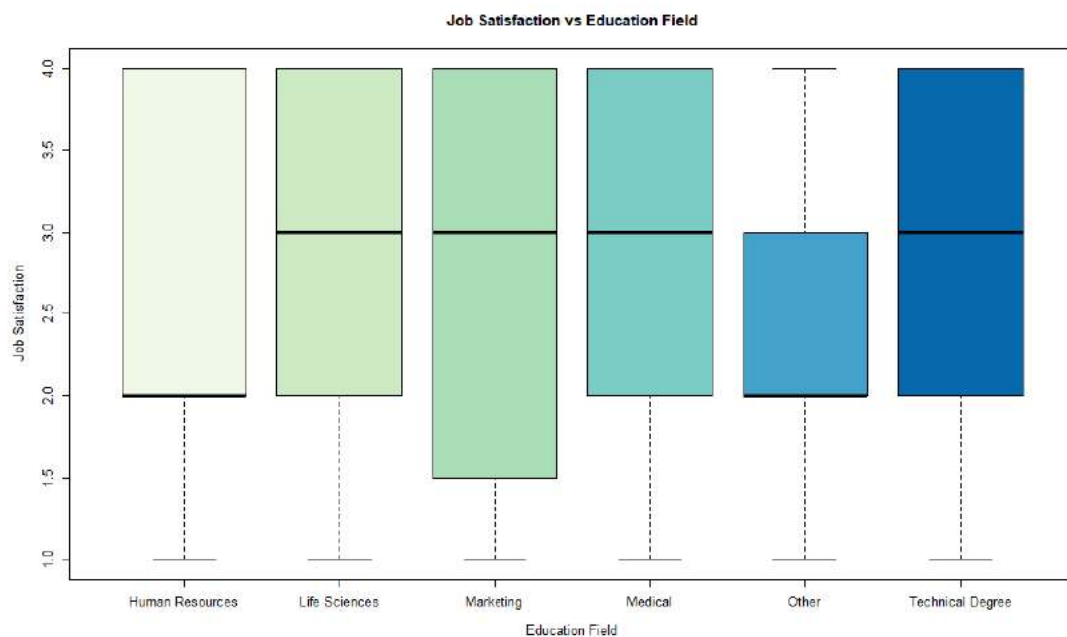

Figure 7: Box plot showing education field against job satisfaction

Disregarding the "other" category as it is too unspecific, we again notice that the most common median amongst the groups is 3, with the exception of Human Resources at 2.

Human Resources	13
Life Sciences	178
Marketing	44
Medical	150
Other	25
Technical Degree	50

Figure 8: Table of number of employees per education field

Even though Human Resources makes up the smallest group of employees as shown in Figure 8, it seems to be making the largest impact on job satisfaction.

Recommendations

Many recommendations can be made to Globex Pharma upon conclusion of my investigation.

As investigated in factor 1, environment plays a large role in job satisfaction. This has been proven by experts (De Greef et al., 2004), and verified by this investigation. Workers in job roles such as Human Resources and Research Scientist report the lowest environment satisfaction, and hence require the most immediate attention.

Following this, work life balance was investigated. As this is also known to impact productivity (Bloom and Van Reenen, 2006), it is suggested that Globex Pharma incorporate policy that encourages work life balance, to raise the lowest threshold.

Finally, education field was examined. This further highlighted the disparity between other departments and Human Resources, which has a lower median amongst all factors examined. If Globex wishes to increase job satisfaction, it is encouraged that they begin with the Human Resources department, as this seems to maintain the lowest scores.

Overall, as job satisfaction is important for overall productivity for the company (Fogaça and Junior, 2016), it is encouraging that their average satisfaction was a three. However, to further increase productivity, Globex Pharma should take the necessary steps recommended.

Reference List

Bloom, N. and Van Reenen, J., 2006. Management Practices, Work—L ife Balance, and Productivity: A Review of Some Recent Evidence. *Oxford review of economic policy*, 22(4), pp.457-482.

De Greef, M., Van den Broek, K., Jongkind, R., Kenny, L., Shechtman, O. and Kuhn, K., 2004. Quality of the working environment and productivity: Research findings and case studies.

Fogaça, N. and Junior, F.A.C., 2016. Is "happy worker" more productive. *Management Studies*, 4(4), pp.149-160

Appendix

```
library(readr)
download.file("https █████████████████████████
████████████████████████████████████)
assignmentdata <- ███████████████
assignmentdata
```

```
#Colour Installation
```

```
if (!require("RColorBrewer")) install.packages("RColorBrewer")
library(RColorBrewer)
brewer.pal.info
```

```
# Make a pie chart for job satisfaction
```

```
sum(assignmentdata$JobSatisfaction == "1")
sum(assignmentdata$JobSatisfaction == "2")
sum(assignmentdata$JobSatisfaction == "3")
sum(assignmentdata$JobSatisfaction == "4")
```