

Work-Life Balance in Women Engineers

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Abstract

Work-life balance is essential in Strategic Human Resources Management. This study focused on the evaluation of work-life balance factors: effect of job stress on employees' well-being, effect of role overload on employee job satisfaction, effect of long working hours on employee morale and effect of work-family on job commitment. The study therefore proposed a statement of problem to look at and identify those irregularities that may come up as a result of poor balance between work and life. The scope of the study was restricted to Zimbabwe Institute of Engineers registered women engineers while the importance was given in line with the benefits to be anticipated by the stakeholders involved in the study. The study was based on the Work-Life Border Theory. The methodology adopted was an online Google Form questionnaire with a Likert 6 scale. A random sample with 92 women engineers was used for this study. Kruskal-Wallis Chi-squared test at 95% confidence interval was adopted for the statistical data analysis. Statistically it was concluded that: job stress has an effect on women engineers' well-being, role overload affects women engineers' job satisfaction, as well as that work-life conflict affects job commitment for women engineers. However, long working hours do not influence women engineers' morale as long as they are motivated and well resourced. The work-life balance of women engineers must be prioritized.

Keywords: Strategic Human Resources Management, women engineers, work-life balance

1. Introduction

Worldwide, less than 50% of working-age women are in the work market and less than 25% of these are women engineers (Manyuchi et al., 2021; Engineering UK, 2019). The character of working women has changed all over the world due to social demands and economic conditions. This has caused a development whereby working women have incredible burden to advance a career as strong as their male colleagues while supporting lively engagement in their personal lives (Desai et al., 2011). The continually increasing work pressure is taking a toll on the working women leaving them with less time for themselves (Adisa et al., 2014). This affects the women's physical, emotional and social well-being. Thus, achieving work-life balance is a basic requirement for working women to have a good quality of life (Manyuchi et al., 2021). This research work explored the tough challenges faced by working women engineers in maintaining a work-balance between their personal and professional life.

Work-life balance has more and more become an alarm to both employers and employees of most organizations (Sharma, 2016). There has also been an increase in the consideration of the burdens that work has on family as well as life of employees. This has kindled research concentrating on work-life balance on women (Kelliher et al., 2019). In an environment where there is high level of competitive forces coming from efforts to deliver excellence service, the burden of this on women employees are massive (Kelliher et al., 2019). Work-life balance deals with an employee's ability to properly prioritize between work and lifestyle, social life, well-being and family. Work is normally considered as a part of life. Although disconnected by certain physical, psychological and temporal boundaries, the two concepts are operationalized within the same background of time and space (Manyuchi et al., 2021). Where there is proper balance between work and life, employees tend to put in their best efforts at work, because their family is happy and they are also happy as individuals.

The importance of work-family balance to the organizations and employees cannot be ignored (Manyuchi et al., 2021). This is because when employees struggle to balance their work and family lives, their families and work will be adversely affected. The most common approach is to view work-life balance practices seriously: that is, by offering these practices, organizations reduce levels of work-life conflict among existing ones, and this reduced work-life conflict enhances organizational effectiveness. This study examined the various ways in which the interlink between work-life balance practices may influence practicing women engineers who are members of the ZIE.

2. Methods

2.1 Research Aim, Main Study Objective, Major Question and Hypotheses

This study focused on the evaluation of selected factors of work-life balance for women engineers. This was focused at practicing women engineers registered with ZIE.

2.1.1 Research Aim

The research aim for this work is to study selected factors on work-life balance and how these can affect women engineers. The selected factors included effect of job stress on women engineers' well-being, effect of role overload on employee job satisfaction, effect of long working hours on employee morale and effect of work-family on job commitment respectively.

2.1.2 Main Research Objective

The main objective of this study is to evaluate work-life balance in women engineers' productivity and to identify which factors of work-life balance have more influence on their performance.

2.1.3 Main Research Question

The main research question is that what is the status of work-life balance in women engineers.

2.1.4 Research Hypotheses

The null hypotheses (H_0) and the alternative hypotheses (H_1) to be tested for this study on work-life balance and women engineers' productivity and engagement were:

H_{01} : Job stress has no effect on women engineers' well-being.

H_{11} : Job stress has effect on women engineers' well-being.

H_{02} : Role overload does not affect women engineers' job satisfaction.

H_{12} : Role overload does affect women engineers' job satisfaction.

H_{03} : Long working hours does not influence women engineers' morale.

H_{13} : Long working hours does influence women engineers' morale.

H_{04} : Work-family conflict does not affect women engineers' job commitment.

H_{14} : Work-family conflict does affect women engineers' job commitment.

2.2 Research Design

Research design as a broad plan about what the researcher will do in order to answer the research questions and this can either be descriptive, exploratory or explanatory. Important components of research design include research strategies and methods related to data collection and analysis. For this study, the exploratory design method was chosen. In this study, ZIE registered and practicing women engineers were chosen as respondents because of its high involvement in the success of the engineering sector organizations in Zimbabwe. The questionnaire research design was implemented for this study, this is so because the study will make use of measuring instrument which is the questionnaire to produce responses from the random samples that will be selected for this study and their correlation studied.

2.3 Research Strategies

The research strategy adopted for this study was the quantitative strategy. A defined sample from the ZIE women engineers was used to answer the questionnaire on work-life balance on selected factors: effect of job stress on women engineers' well-being, effect of role overload on employee job satisfaction, effect of long working hours on employee morale and effect of work-family on job commitment. Furthermore, how these can affect their productivity in terms of employees' well-being, job satisfaction, employee morale and job commitment. The data collected from the online Google Form questionnaire was then tested statistically to check the statistical significance of the data collected. A conceptual model as indicated in Figure 1 was developed for this study. The independent variables for work-life balance (X) were job stress, role overload, long working hours and work-life conflict. On the other hand, the dependent variables which are assumed to result in job engagement (Y) were job commitment, women engineers' well-being, job satisfaction and women engineers' morale. In essence, there are variables that will be used to test the relationship between work-life balance and women engineers' productivity and engagement whereby:

X = Work-Life Balance for Practicing Women Engineers

X = x_1, x_2, x_3, x_4

Where the X variables are:

x_1 = Job stress
 x_2 = Role overload
 x_3 = Long working hours
 x_4 = Work-life conflict
 Y = Job Engagement.
 $Y = y_1, y_2, y_3, y_4$
 Where the Y determinants are:
 y_1 = Women engineers' well being
 y_2 = Job satisfaction
 y_3 = Women engineers' morale
 y_4 = Job commitment

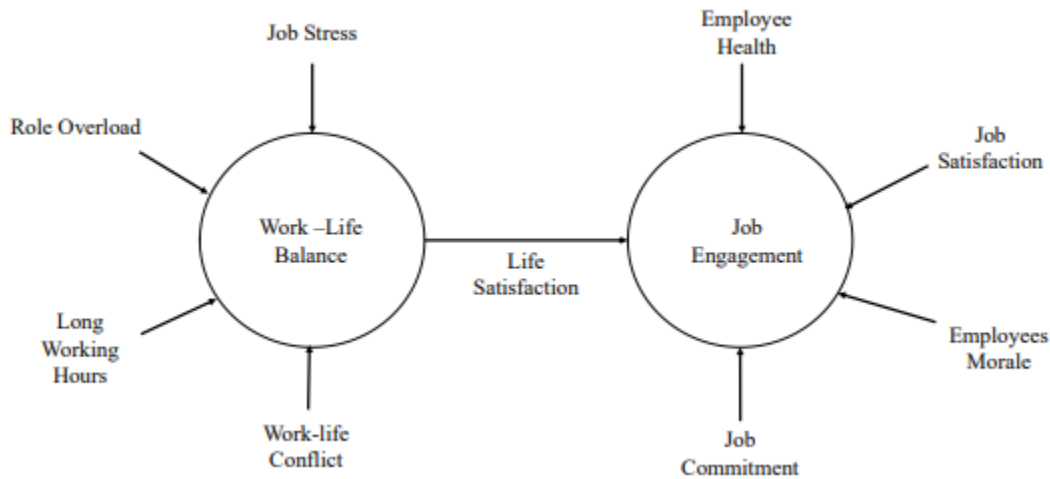


Figure 1. Conceptual model for work-life balance in women engineers

2.4 Methodology and Data Collection Methods

Data collection is a method of collecting information from all the relevant sources to find a solution to the research problem. Data collection helps to evaluate the outcome of the problem and also make a conclusion on the pertinent research questions. For this study both primary and secondary methods of data collection were used. For this study, internal sources of secondary used included mission and vision statements for ZIE, organizational structure and the executive summaries. The external sources used included journals and the internet publications on studies previously done on work-life balance with a focus on women. For this study, the quantitative data collection method was used to collect the information on work-life balance on women engineers though an online Google Form questionnaire.

2.4.1 Questionnaire Development

A questionnaire is a method for gathering data in which a respondent provides responses to a series of questions. The respondents are required to answer based on their knowledge and experience with the issue concerned. In this study an online questionnaire through Google Forms was developed to evaluate work-life balance in women engineers with a focus on job stress, role overload, long working hours, work-family conflict as selected factors and how these affect the women engineers' 'wellbeing, job satisfaction, morale and job commitment. A set of four questions for each factor were identified. The first part of the questionnaire focused on the women engineer's demographics: name, age, and number of children, qualifications, engineering discipline and the years of experience. The second part of the questionnaire questions were on work-life balance and developed with a Likert 6 scale with strongly agree (SA), agree (A), fairly agree (FA), fairly disagree (FD), disagree (D) and strongly disagree (D) as the responses. After completing the online questionnaire, the responses were automatically recorded through Google Forms. The Google Form was then locked to stop recording responses when the total sample size required was achieved.

2.4.2 Population and Sampling Techniques

2.4.2.1 Population

The cumulative of the elements in a part makes up the population. In this case, our population includes all registered and practicing women engineers of Zimbabwe Institute of Engineers. The women engineers who are in total 928 whilst the total number of registered engineers is 10 376. ZIE registered women engineers was chosen because of it high involvement in the success of the engineering sector.

2.4.2.2 Sampling Size and Sample Size Determination

The word sampling element refers to a singular value in a sample database. The reason why ZIE registered women engineers was chosen because of it high involvement in the success of the engineering sector in Zimbabwe. The sampling unit in this study is Zimbabwe Institute of Engineers Women Engineers. Sampling frame consist of the Zimbabwe Institute of Engineers Women Engineers headquarters in Harare, Zimbabwe. Sample size (n) is a commonly used word in statistics,

and one that unavoidably comes up whenever you are measuring a big population of respondents. Sample size narrates to the way research is conducted on huge populations. The sample size for this study was determined at 90% confidence interval and a margin error of 10%. For a population size of 928 registered women engineers, the ideal minimum sample size was 64.

This was calculated in accordance to Equation 1 and values obtained are in Table 1. However, a maximum size of 94 respondents was used.

$$n = N * [Z^2 * p * (1-p)/e^2] / [N - 1 + (Z^2 * p * (1-p)/e^2)] \dots\dots\dots [Equation 1]$$

Where: N = Population size, Z = Critical value of the normal distribution at the required confidence level, p

= Sample proportion and e = Margin of error

Table 1. Minimum sample size determination for practicing women engineers for use in this study

Parameter	Value
Confidence level	90%
Registered women engineers population size	928
Margin error	10%
Minimum ideal sample size	64

2.4.2.3 Sampling Method

Sampling is a method of choosing different members of the population to make statistical inferences from them and make an approximation of the characteristics of the whole population. Diverse sampling procedures are widely used by researchers so that they do not need to research the entire population to collect actionable insights. Simple random sampling was used in this study. In the simple random sampling method, each unit included in the sample has equivalent chance of inclusion in the sample. This method provides the balanced and better estimate of the parameters if the population is standardized.

2.5 Questionnaire Administration

The method of data collection that was used by the researcher on this topic is the online Google Form questionnaire. Questionnaire management is a proper way and to choose the sample from population is important and it assists the researcher in incurring actual data. Management of questionnaire involves two critical steps: consent from the respective respondents and administration of questionnaire using proper method. In this study, authority was sought from ZIE Chief Executive Officer and Secretariat after sharing the proposed online Google Form questionnaire with them and the proposed study objective. The link to the Google Form questionnaire was then distributed on line through email to all women engineers by the ZIE Secretariat and after the respondents filed in the form they send it back. The online Google Form link was as presented: [EVALUATION OF WORK-LIFE BALANCE FOR WOMEN ENGINEERS BALANCE AND IMPACT ON THEIR WORK ENGAGEMENT - Google Forms](#).

2.6 Method of Data Analysis

Data analysis is a method of putting facts and figures to answer the research problem. Data analysis is vital to finding the answers to the research question. One more important part of the research is the interpretation of the data, which is taken from the analysis of the data and makes inferences and draws assumptions. In this study, data was analyzed through descriptive statistics and inferential statistics. Inferential statistics is a form of statistics that emphasizes on drawing conclusions about the population, on the basis of sample analysis and observation. Inferential statistics compares, test and predicts data through probability and tries to reach the conclusion to learn about the population that extends beyond the data available. For this study, the Kreskas-Wallis Chi-squared using the Social Sciences Statistical Software (SPSS) Statistics determine the relationship between the selected factors that affect work-life balance in women engineers and how this can affect their performance was used. This was done at 95% confidence interval and a probability value (p-value) of 0.05. The Kruskal-Wallis H test is a rank-based nonparametric test that can be used to determine if there are statistically significant differences between two or more groups of an independent variable on a continuous dependent variable. The various responses for the work-life balance responses were assigned the following codes strongly agree (SA)-1, agree (A)-2, fairly agree (FA)-3, fairly disagree (FD)-4, disagree (D)-5 and strongly disagree (SD)-6.

3. Findings and Arguments

3.1 Overview of the Respondents

All the 92 targeted responses for the registered practicing women engineers responded to the questions that were presented to them through the online Google Form. A 100% response rate was achieved on the entire question on selected factors for work-life balance in women engineers.

3.2 Data Framing and Analysis on Demographic Factors

The demographic factors that were considered for this study were the engineering discipline, marital status of the engineers, number of children, educational qualifications and years of experience in their various engineering organizations.

3.2.1 Characteristics of the Respondents Engineering Disciplines

Various women engineers from various engineering disciplines responded to the online questionnaire on selected factors for work-life balance. The various engineering disciplines included: Environmental, Civil and Water, Chemical, Electronic and Telecommunications, Industrial and Manufacturing, Agriculture, Geology, Electrical, Metallurgical and Mechanical. The contributions per discipline are indicated by Figure 2 and it is evident that various engineering clusters were involved.

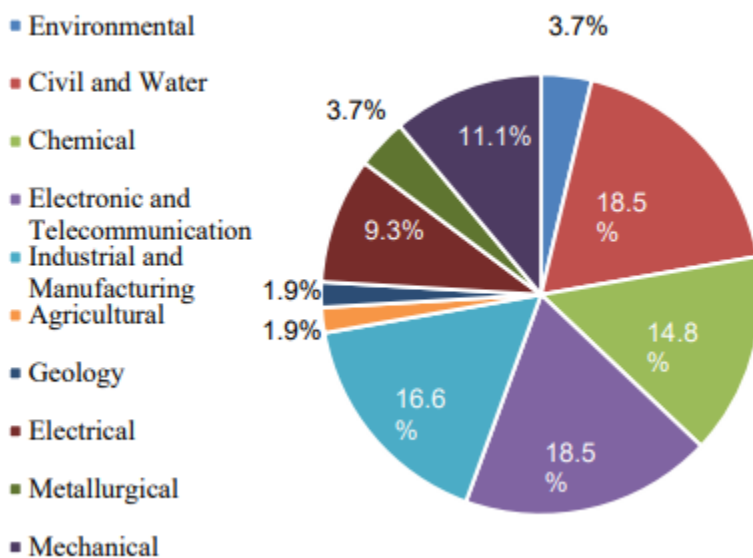


Figure 2. Engineering disciplines for women who participated in this study

3.2.2 Marital Status

In this study, 65% of the women engineers indicated that they were married, 30% indicated that they were single and 5% indicated that they are divorced. A summary of the responses is shown in Figure 3. Married give more priority to their personal lives (Martins et al., 2002). Md-Sidin et al. (2008) stated that individuals who are married experience more work-life conflict than those who are unmarried as they have additional family demands from their spouses.

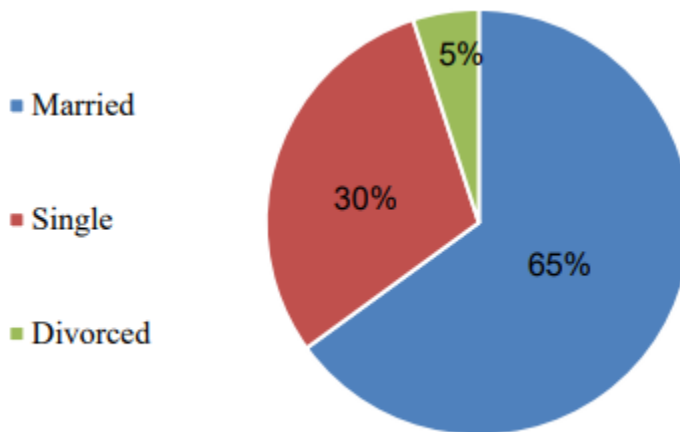


Figure 3. Responses to marital status by the women engineers

3.2.3 Number of Children

From the responses obtained, 31.5% of the women engineers indicated that they have no children, 17.4% indicated they have one child, 21.7% indicated they have two children, 20.7% indicated that they have 3 children and 8.7% indicated that they have four children. These responses are shown in Figure 4. In previous studies, the presence or absence of children in the family continues to make a significant difference in the degree of balance that individuals experience (Tausig and Fenwick, 2001). Parental status has been found to be a determinant of parents placing increased importance on the role of family (Blau et al. 1998). Family responsibilities such as household time demands, family responsibility level, household income, spousal support and life course stage have been found to be causes of work-life stress (Jennings and McDougald, 2007).

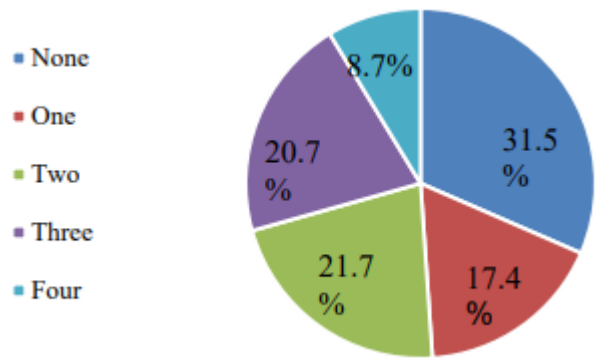


Figure 4. Responses to number of children

3.2.4 Education Qualifications

From this study, 55.4% of the respondents had a first degree in Engineering or a Higher National Diploma, followed by those with a Master’s degree with 40.2% in respondents, then lastly 4.4% with Doctorates in Engineering (Figure 5). It has been found that higher education and more work experience might introduce additional confidence in that individual and increased self-efficacy (Chong and Ma, 2010). Work-life balance demands are greater among those with a maximum of a high school degree; while it is lower among those with a minimum of an undergraduate degree (Tausig and Fenwick, 2001).

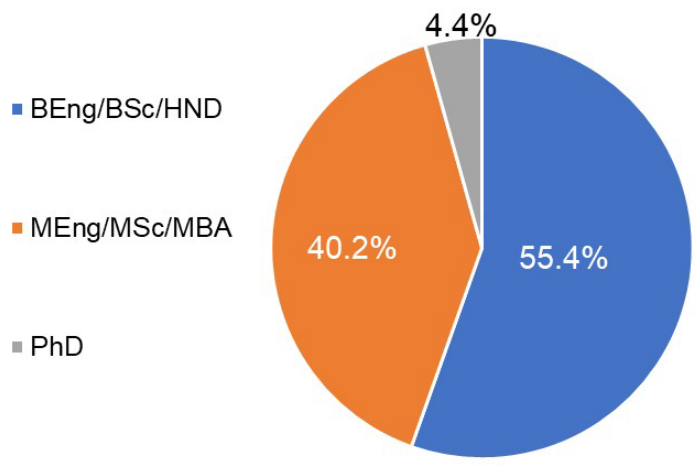


Figure 5. Responses to level of education by women engineers

3.2.5 Years in Organization

In this study, 41.3% of the women engineers indicated that they had more than 16 years of experience in the profession whilst 20.6% indicated that their experience was between 5-10 years (Figure 6). The more experienced the women engineers are, the more they will get used to the challenges associated with their profession and the more they will be able to deal with work-life balance issues (Chong and Ma, 2010).

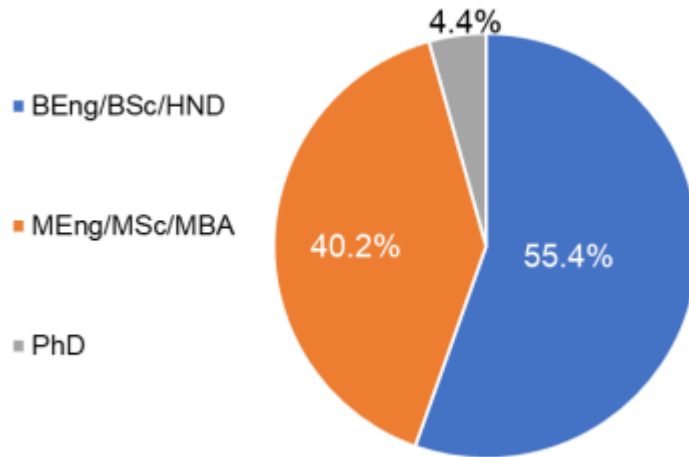


Figure 6. Responses on level of education by the women engineers

3.3 Data Framing and Analyses on Selected Work-Life Balance Factors for Women Engineers

The data framework and analyses on the work-life balance for this study was based on the hypotheses developed from the selected factors for women engineers which are the effect of job stress on women engineers’ well-being, effect of role overload on employee job satisfaction, effect of long working hours on employee morale and effect of work-family on job commitment. The summary of the responses received are on this link: [EVALUATION OF WORK-LIFE BALANCE FOR WOMEN ENGINEERS BALANCE AND IMPACT ON THEIR WORK ENGAGEMENT - Google Forms](#).

3.3.1 Effect of Job Stress on Women Engineers’ Well-being (X_1, Y_1)

3.3.1.1 Responses on Job Stress (X_1)

In this study, 35.9% of the women engineers strongly agreed that they experience a lot of fatigue at work. In addition, 42.4% of the women strongly agreed that they are allowed to make decisions on the job they will take. Furthermore, 16.3% of the women engineers strongly that their supervisor assists in relieving the stress associated with their jobs. Lastly, 46.7% of the women engineers agreed that they work as a team to make the job easy.

3.3.1.2 Responses on Women Engineers ‘Well-Being (Y_1)

From the study, 34.8% of the women engineers strongly agreed that they experience a lot of stress at work. In addition, 43.5% of the women engineers strongly agreed that their well-being is a result of their work- family balance. Furthermore, 14.1% of the women engineers strongly agreed that they rarely break down due to work-family demands. Lastly, 37.0% of the women strongly agreed that they fail to carry out house chores due to a stressful day at work.

3.3.1.3 Statistical Analysis on Effect of Job Stress on Women Engineers’ Well-Being

Using the Kruskal Wallis Chi-squared test to test difference in means of X_1 and Y_1 at 95% confidence interval.

H_{01} : Medians are equal.

H_{11} : Medians are not equal.

Kruskal-Wallis rank sum test

Data: List (x_1, y_1)

From the Kruskal-Wallis chi-squared = 0.67671, $df = 1$, p-value = 0.4107.

The p-value is greater than 0.05, therefore we cannot reject the null hypothesis; there is not enough evidence that the medians are not equal. Hence it can be concluded that:

Job stress has effect on women engineers’ well-being.

3.3.1.4 Discussion of Key Findings: Effect of Job Stress on Women Engineers’ Well-Being

Stress results in physical disorders because the internal body coordination changes to try to cope with stress when stress becomes excessive. Employees develop various symptoms of stress that can threat their job performance and well-being and even threaten their ability to cope with the environment. According to the theory developed by Hansel (1976), the human body cannot instantly have rebuilt its capability to handle with stress when it is exhausted. Stress is associated with physiological problems such as increased blood pressure, heart and breathing problems, headaches and induced heart attacks. Stress shows itself psychological states such as anxiety, irritability, boredom, tension and procrastination (Robbins. 2009). The most popular types of psychological distress are: burnout, depression and psychosomatic disorders. Behavior-related symptoms due to job stress include: changes in productivity, absence and turnover, as well as changes in eating habits, increased consumption of alcohol, increasing smoking, rapid speech, fidgeting and sleep disorders (De Croon et al., 2004). Women engineers can cushion these ill effects of work-life stress by enhancing coping strategies such as seeking work and social support systems, exercising regularly, eating well-being diet and taking time to relax. Engineering organizations such as ZIE can help by establishing a supportive professional climate, having

well designed jobs that cut across the sector and reducing role conflict and role ambiguity by having clear engineering disciplines. In this observation it can be concluded that job stress has a serious impact on the women engineers' well-being.

3.3.2 Effect of Role Overload on Women Engineers' Job Satisfaction (X_2 , Y_2)

3.3.2.1 Responses on Role Overload (X_2)

In this study, 31.5% of the women engineers strongly agreed that their jobs at work are overwhelming. The study showed that 33.7% of the women engineers strongly agreed that time allocated to a specific role determines the output. However, 3.3% of the women engineers strongly agreed that the jobs they handle are incompatible with each other. In addition, 38.0% of the women engineers strongly agreed that job incompatibility affects overall performance.

3.3.2.2 Responses on Job Satisfaction (Y_2)

From the study, 35.9% of the women engineers strongly agreed that they are happy with their current performance at work. A total of 40.2% of the women engineers strongly agreed that their outputs contributed to their overall performance at work. However, only 4.3% of the women engineers strongly agreed that they are provided with all the resources they need to deliver. In addition, only 7.6% strongly agreed that their organizations motivate them through rewards and recognition.

3.3.2.3 Statistical Analysis on Effect of Role Overload on Women Engineers' Job Satisfaction

Using the Kruskal Wallis Chi-squared test to test difference in means of X_2 and Y_2 at 95% confidence interval:

H_{02} : Medians are equal.

H_{12} : Medians are not equal.

Kruskal-Wallis rank sum test

Data: List (x_2 , y_2)

Kruskal-Wallis Chi-squared = 1.8646, df = 1, p-value = 0.1721

The p-value is greater than 0.05, we cannot reject the null hypothesis; there is not enough evidence that the medians are not equal. It is therefore concluded that:

Role overload affects women engineers' job satisfaction.

3.3.2.4 Discussion of Key Findings: Effect of Role Overload on Women Engineers' Job Satisfaction

Role overload and work to family conflict also cause job dissatisfaction (Casper et al., 2017). Job satisfaction in women has been negatively affected by role overload (Martins et al., 2002). According to Wang et al. (2010) job satisfaction has considerable negative correlation with work to family interference and family to work interference. Job satisfaction is an attitude that people have about their jobs and the organizations in which they perform these jobs (Casper et al., 2017). Overall job satisfaction is determined by the change between all those things a person feels she should receive from her job and all those things she actually does receive. When women employees perceive that management is genuinely concerned for their well-being, they experience higher levels of job engagement. In interpretation of findings from this study, role over load has an effect on women engineers' job satisfaction.

3.3.3 Effect of Long Working Hours on Women Engineers' Morale (X_3 , Y_3)

3.3.3.1 Responses to Long Working Hours (X_3)

In the study, 6.5% of the women engineers strongly agreed that they take longer times to complete work jobs. In addition, 6.5% of the women engineers strongly agreed that the time allocated to complete the jobs at hand is always not enough. Furthermore, 23.9% of the women engineers strongly agreed that job time must be shared between related and unrelated jobs. Lastly, 37.0% of the women engineers strongly agreed that working hours are depended on the job at hand.

3.3.3.2 Responses to Women Engineers' Morale (Y_3)

In this study, 21.7% of the women engineers strongly agreed that they have good working conditions and relationships at their workplace. In addition, 38.0% of the women engineers strongly agreed that they are given a reasonable level of responsibility. Furthermore, 7.6% of the women engineers strongly agreed that there is enough time at work for them to take care of their family needs. Lastly, 29.3% of the women engineers strongly agreed that their job gives them a sense of belonging and ownership.

3.3.3.3 Statistical analyses on Effect of Long Working Hours on Women Engineers' Morale

Using the Kruskal Wallis Chi-squared test to test difference in means of X_3 and Y_3 at 95% confidence interval:

H_{03} : Medians are equal.

H_{13} : Medians are not equal.

Kruskal-Wallis rank sum test

Data: List (x_3 , y_3)

Kruskal-Wallis Chi-squared = 42.488, df = 1, p-value = 7.113e-11

The p-value is less than 0.05, we reject the null hypothesis, and there is enough evidence that the medians are not equal. It is therefore concluded that:

Long working hours do not influence women engineers' morale

3.3.3.4 Discussion of Key Findings: Effect of Long Working Hours on Women Engineers' Morale

The results from this study show that long working hours and overtime in general do not lead to decreased satisfaction and employee morale of the women engineers' morale. Although Sparks et al. (1997) specified that if people spend too many hours at work, it could lead to a deteriorating well-being on the side of the workers thereby affecting the delivery of work of the employee, which has a direct relationship with the performance of the organization. Somewhat, increasing working hours and overtime have positive effects on life and job satisfaction as this usually results in monetary compensation. Understanding work-family culture improves the psychological resource base for employees by increasing a sense of self-acceptance and flexibility which can help employees develop positive affect towards work (Baral and Bhargava, 2010). Also, if an employee can better manage their time in one area, the spillover of loads to another area is decreased, thus increasing entire efficiency (Porter and Alman, 2010). In addition, if the women engineers are motivated and have access to financial resource they can perform irrespective of the working hours as long as the job give them the flexibility to meet their work-family needs.

3.3.4 Effect of Work-Family Conflict on Women Engineers' Job Commitment (X_4, Y_4)

3.3.4.1 Responses to Work-Family Conflict (X_4)

In the study, 31.5% of the women strongly agreed that their work-family demands collide. In addition, 39.1% of the women engineers strongly agreed that they divide their time between work and family. Furthermore, 37.0% of the women strongly agreed that their families understood that they have demanding jobs. Lastly, 14.1% of the women engineers strongly agreed that their organizations understand the importance of meeting family demands.

3.3.4.2 Responses to Women Engineers' Job Commitment (Y_4)

The responses to women engineers' job commitment are shown in Table 4-8. These are indicated in both the frequencies and total percentage (%) of the responses. In this study, 27.2% of the women engineers strongly agreed that they love telling people about their job. However, 13.0% strongly agreed that they will find it very difficult to leave their job. Moreover, 37.0% of the women strongly agreed that they are forever loyal to the work they do. Lastly, 66.3% of the women engineers indicated that they always give the best to the jobs they are given.

3.3.4.3 Statistical Analysis on Effect of Long Working Hours on Women Engineers' Morale

Using the Kruskal Wallis test Chi-squared to test difference in means of X_3 and Y_3 and 95% confidence interval:

H_{04} : Medians are equal.

H_{14} : Medians are not equal.

Kruskal-Wallis rank sum test

Data: List (x_4, y_4)

Kruskal-Wallis Chi-squared = 1.76, df = 1, p-value = 0.1846

The p-value is greater than 0.05, we cannot reject the null hypothesis; there is not enough evidence that the medians are not equal. It is therefore concluded that:

Work-family conflict affects job commitment for women engineers.

3.3.4.4 Discussion of Key Findings: Effect of Work-Family Conflict on Women Engineers' Job Commitment

In this study; it was found that the life pressures and demands of work in practicing women engineers affect their job commitment. Anila and Krishnaveni (2019) revealed that job commitment is influenced through work-life balance in the nursing profession. Kelliner et al. (2019) indicated that a discrepancy is created among work and family life due to work-family interfering, such that work influences family life and family life deters outcomes of any organization and delays the commitment and satisfaction level of workers. Sullivan (2019) indicated that excessive work demands increase work-family conflict and negative family outcomes, while family stresses increase family-work conflict. Work-life imbalance has been linked to reduced organizational commitment, job dissatisfaction, life dissatisfaction and increased stress and turnover intentions (Porter and Alman, 2010). As a result of this study, it is important to note the important role of work-life balance in increasing women engineers' emotional well-being and the influence of this psychological well-being on organizational performance improvement premised on the Work-Family Border Theory.

4. Conclusion

From the key study objectives on selected work-life balance for women engineers, the study therefore concludes that: Job stress has an effect on women engineer's well-being. This is alluded to the high demands of the profession which results in work-life imbalance. Role overload affects women engineers' job satisfaction. Too much work which the women engineers are not in control of makes them lose job satisfaction. Long working hours do not influence women engineer's morale as well. The presence of flexible working hours in an organization significantly influenced women engineer's job performance by enabling a balance between personal commitments and responsibilities and organizational roles and their duties. Flexibility in working hours improved women engineer's motivation and commitment to the organization. Work-life conflict affects job commitment for women engineers. For women engineers to perform optimally they also need a job that caters for their life demands.

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