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Striking a Balance by Exploring the Impact of Duty Time on Life Harmony in Saudi Arabia's Manufacturing Sector

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Abstract

This study aimed to analyze the impact of duty time on the employees' life harmony in the Saudi Manufacturing Sector. Having a proper working time policy is vital to attract and retain talented individuals. However, the unfavorable increase in duty time creates a significant challenge to individual and family in this sector. In particular, the researcher observed the impact of duty time on employees' family needs and how it relates to the employee's satisfaction. In this context, quantitative and qualitative analyses approaches were used to address the research objectives. Accordingly, 578 employees from this sector had participated in the survey questionnaires. Moreover, 30 employees working in panel boards manufacturing factory were purposely selected to participate in face-to-face interviews for the qualitative part. Findings showed that majority of the participants believed that duty time and working hours policy are significantly impact their ability to satisfy their family needs. The increase in duty time is responsible for nearly 13.12 percent of the negative impact on employees' life harmony. Callously, increasing one-hour in daily working hours causes a negative impact on employee life harmony could reach to three hours daily which is roughly 37 percent from the employee's income. Moreover, the Company revenue might be impacted negatively by 11.152 percent. However, findings highlight the importance of balancing employee well-being with productivity and financial considerations within organizations.

Keywords: Duty time, working hour's policy, Life harmony, Work-life balance

1. Introduction

Manufacturing organizations encounter difficulty in preparing proper working time policy. Various factors need to be considered in the duty time setting strategy, like work-life balance, employee satisfaction, company operation requirement, and county regulation. Many manufacturing jobs involve physical and repetitive tasks, such as lifting heavy objects, operating machinery, or standing for long periods for assembly job. By understanding and addressing these factors, organizations can develop effective working time policy that can attract and retain talented individuals. Hence, manufacturing organizations require advance infrastructure and flexible workflow that helps firm's management in Saudi manufacturing sector to evaluate the duty time frequently and analyze its impact on employees' satisfaction and company operation.

1.1. Problem Statement

Organizations in the Saudi manufacturing sector are facing significant challenges to set the appropriate working hours that can satisfy employees but not impacting company operation. Physically demanding tasks in manufacturing operations typically follow strict schedules and production targets. That reduces employees' control over their work hours which causes challenges to balance personal and professional responsibilities. These challenges hamper the sector's ability to attract and retain talented individuals and affecting companies' affordability.

1.2. Research Objective

The main objective of this study is to analyze the impact of the duty time on employees' satisfaction and life harmony.

1.3. Research Questions

Based on the above problem statement, the following questions were raised:

1) Is there significant relationship between duty time and the employees' performance in Saudi manufacturing sector?
2) Dose the working time policy significantly impacts the employees' satisfaction in Saudi manufacturing sector?

2. Literature Review

2.1. Employees' Satisfaction

Hoppok & Spielgler (1938) had define the employees' satisfaction as the integrated set of psychological, physiological and environmental conditions that encourage employees to admit their gratifications and acceptance (Raziq and Maulabakhsh 2015).

Subsequently, employee's well-being, personal growth and organization's outcomes have significant impact on employees' satisfaction (Strauss and Parker 2014). Moreover, work life balance is significantly related to employees' job satisfaction (Mendis and Weerakkody 2017). Thus, employees' satisfaction considered as significant factors that noticeably impact individual performance.

2.2. Employees' performance

In the literature, employee performance is explained as the evaluation of employees job-related responsibilities and the degree to which they effectively fulfil them (Maina 2015). Accordingly, the prevailing corporations are focused on creating attainable and realistic objectives for appraising their employees (Strauss and Parker 2014).

2.3. Duty Time

The working hours can be defined as the period of time that a person spends for paid job (Siddiqui 2013). The impact of working hours on the employees' work-life balance and on employees' job satisfaction were analyzed by several researchers in the last decade. For instance, working hours has a significant impact on the employee's job satisfaction in the commercial banks sector in Sri Lanka (Adikaram and Jayatilake 2016). Similarly, working hours are negatively associated with the employee productivity (Ansari et al. 2015). Moreover, shifts timing and number of working hours are considered by organizations in Saudi Arabia that give more attention to work-life balance of their employees (Siddiqui 2013).

2.4. Life Harmony

Previous researchers had defined the life harmony and work-life balance as the appropriate separation of time and focus between work and family (Adikaram and Jayatilake 2016). For example, association between work-life balance and gender differences was noticed within the manufacturing sector in Mumbai, India (Kshirsagar 2015). Moreover, positive relationship between life harmony and employee productivity was noticed in Pakistani banking sector (Ansari et al. 2015). Parallelly in Nigeria, work-life balance practice is an important factor in increasing employees' performance in selected commercial banks in Lagos state (Obiageli, Uzochukwu, and Ngozi 2015). Similarly, work-life balance has a significant impact on employee job satisfaction in private sector commercial banks of Sri Lanka (Adikaram and Jayatilake 2016). Moreover, doctors' satisfaction in the Saudi Arabia southern area hospitals has negatively impacted by unstable doctors' life harmony which sometimes causing family conflicts (Al-shahrani 2015).

2.5. Conceptual Model

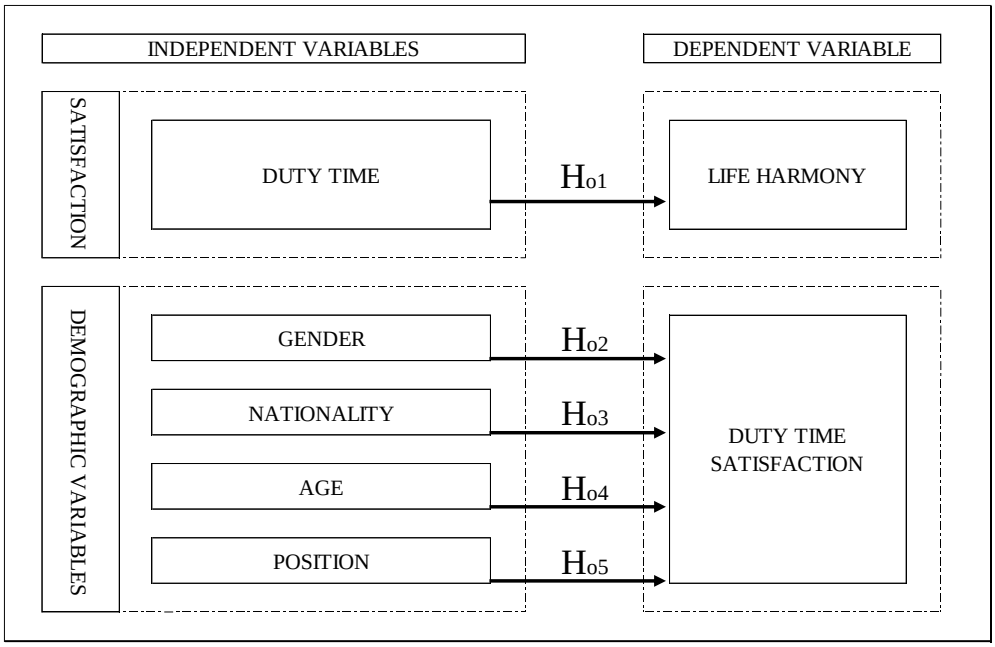

Figure 1: Conceptual diagram

2.5.1. Hypothesis Statement

- Hypothesis 1

  Null Hypothesis (H_{01}): Duty time is not significantly related to the employees' life harmony in Saudi Arabian manufacturing sector.

  Alternative Hypothesis (Ha_1): Duty time is significantly related to the employees' life harmony in Saudi Arabian manufacturing sector.

- Hypothesis 2

  Null Hypothesis (H_{02}): Employees' gender is not significantly moderating the duty time satisfaction in Saudi Arabian manufacturing sector.

  Alternative Hypothesis (Ha_2): Employees' gender is significantly moderating the duty time satisfaction in Saudi Arabian manufacturing sector.

- Hypothesis 3

  Null Hypothesis (H_{03}): There is no significant relationship between employees' nationality and duty time satisfaction in the Saudi manufacturing sector.

  Alternative Hypothesis (Ha_3): There is significant relationship between employees' nationality and duty time satisfaction in the Saudi manufacturing sector.

- Hypothesis 4

  Null Hypothesis (H_{04}): The association between employee's age and duty time satisfaction is not significant in Saudi Arabian manufacturing sector.

  Alternative Hypothesis (Ha_4): The association between employee's age and duty time satisfaction is significant in Saudi Arabian manufacturing sector.

- Hypothesis 5

  Null Hypothesis (H_{05}): Employees' position is not significantly moderating the duty time satisfaction in Saudi Arabian manufacturing sector.

  Alternative Hypothesis (Ha_5): Employees' position is not significantly moderating the duty time satisfaction in Saudi Arabian manufacturing sector.

3. Methodology

Both quantitative and qualitative research methods were used by the researcher who conducted independent observations and collected primary data randomly to test the hypotheses using a deductive research approach. Quantitative primary data was gathered through a survey questionnaire, while qualitative primary data was obtained through face-to-face interviews. The survey design was cross-sectional. The questionnaire survey collected data was analyzed statistically using a five-point Likert scale. The quantitative survey responses report was extracted from Surveymonky.com at the end of April 2019. While the face-to-face interviews were conducted at the end of May 2019.

3.1. Population and sample

Table 1: Saudi Arabian Manufacturing Sector Labour Force Summary

GOSI-Table (3-8)	**Nationality**		
Manufacturing	Saudi	Non-Saudi	Total
Male	210,562	851,315	1,061,877
Female	113,778	8,896	122,674
Total	324,340	860,211	1,184,551

Source: (GOSI 2023)

According to Saudi General Authority of Statistics (2023), there are 1,184,551 employees working in the manufacturing sector in Saudi Arabia as shown in Table (1). Moreover, this sector consists of diverse types of industries and multinational employees.

The industrial establishments in this sector covered different economic activities like manufacturing of food products, manufacturing of clothes, manufacturing of fabricated metal products, transformative industries, etc. (GOSI 2023).

Table 2: Collected Primary Data Summary

Total number of responders	Category		Frequency	Percentage
566	**Gender**	Female	36	6.36%
		Male	530	93.64%
574	**Nationality**	Saudi	476	82.93%
		Non-Saudi	98	17.07%
569	**Age**	Below 25 years	19	3.34%
		25-40 years	303	53.25%
		41-50 years	189	33.22%
		51-65 years	58	10.19%
564	**Position**	Production and Site Technicians	179	31.74%
		Administrations and Engineering	235	41.67%
		Middle Management	114	20.21%
		Top Management	36	6.38%
Total number of participants			**578**	**100%**

Source: Primary Data

The population for the quantitative phase is all employees who are working in Saudi Arabian Manufacturing Sector. Since population size is known, by using simple random sampling method, the sample size required for this study was estimated under confidence level of 95 percent and 5 percent margin of error as 384 participants as indicated in the sample size table issued by (The Research Advisors Web 2006). As shown in Table (2), the total participants in the shared questionnaire were 578 employees.

Additionally, for the qualitative phase, the selected Factory population is 200 employees. Specifically, purposive sampling technique was used to select the required employees for the face-to-face interviews.

The researcher selected this sampling method due to the respondents knowledgeable and experience in make to order manufacturing industry. This sampling technique was followed to ensure that all population categories had equal chance to provide their feedback. Moreover, as indicated by Fridlund and Hildingh (2000), one to thirty interviewees were common sample size in qualitative studies (Bengtsson 2016). Thus, 30 employees were selected to participate in this research face-to-face interviews.

The researcher used simple and clear English to design the interview questions. This made it possible for the respondents to provide their feedback comfortably. Furthermore, the researcher clarified the questions to the respondents for easy comprehension. The researcher also controlled the data collection through flexible dialogue and discussion sessions. Specifically, structured interview guide was provided by the researcher to enhance the discussion about the employee's retention. The following questions were used to evaluate the impact of duty time on employee's life harmony in that factory.

a) How can the management improve working time and breaktime?
b) How is factory working time policy impacting your work-life balance?

3.2. Analysis Techniques

In the quantitative analysis, statistical analysis was performed using Microsoft Excel 2016. Descriptive analysis was applied to analyze the collected primary data for demographic variables. Additionally, research questions and findings were evaluated using Regression test, Chi-Square Test, Spearman's r, Independent Sample t-test, and ANOVA test. In the qualitative analysis, the researcher utilized a content analysis approach to analyze the gathered data.

4. Analysis and Discussion

4.1. Hypothesis 1: Duty time effect

The objective of this study is to identify the impact of duty time on employees' satisfaction and life harmony in Saudi Arabian manufacturing sector. That was tested in the first null hypothesis which is (H_{01}) "Duty time is not significantly related to the employees' life harmony in Saudi Arabian manufacturing sector". In this section, researcher analyzed the employees' opinions for the five statements regarding the impact of duty time on their satisfaction.

Table 1: Showing the results of working hours survey items

Items (37 to 41)		TR	SD	D	N	A	SA
37- My company working hours and duty timing are adequate.	F	467	49	55	88	205	70
	P	80.80	10.49	11.78	18.84	43.90	14.99
		M= 3.41		Mo= 4		Md= 4	
38- The flexible working time will Improve my life harmony.	F	467	4	20	41	222	180
	P	80.80	0.86	4.28	8.78	47.54	38.54
		M= 4.19		Mo= 4		Md= 4	
39- The current shift timing does not sufficiently support a healthy work-life balance.	F	466	17	34	89	229	97
	P	80.62	3.65	7.30	19.10	49.14	20.82
		M= 3.76		Mo= 4		Md= 4	
40- Additional break time Improves my performance.	F	465	12	55	100	191	107
	P	80.45	2.58	11.83	21.51	41.08	23.01
		M= 3.7		Mo= 4		Md= 4	
41- Increasing daily working hours is negatively impacting my family.	F	467	13	42	88	173	151
	P	80.80	2.78	8.99	18.84	37.04	32.33
		M= 3.87		Mo= 4		Md= 4	

NOTE: M=Mean, Mo=Mode, Md=Median, TR=Total number of responders per item, SD=Strongly Disagreed, D=Disagreed, N=Neutral, A=Agreed, SA=Strongly Agreed, F=Frequency and P=Percentage)

Source: Primary Data

The study findings in Table (3) show that the working hours is significantly related to the employees' performance (cumulative mean = 3.56) and to the employees' life harmony (cumulative mean = 3.94). A comparison on these items showed that the total participants' feedbacks are 2332. Namly, 301 of the were opposed, 406 of them were neutral and 1625 of them were believed in the impact of duty time on performance and life harmony.

The percentage of employees who opposed was 12.9 percent, while the percentage of those who were neutral was 17.4 percent. However, the percentage of those who concurred was 69.7 percent. Hence, the range of percentages of the opposed employees' group and the undecided employees' group were lower compared to the concurred employees' group.

Consequently, the respondents noted that they are not sure if the working hours are adequate (mean = 3.41). They also partially agreed that the shift time is not comfortable and not sufficient to have stable work-life balance (mean = 3.76). Moreover, they were barely expected negative impact on their family if company increase the working hours (mean = 3.87). In addition, to some extent, they anticipated that additional break time improves the employees' performance (mean = 3.70). However, they believed that their life harmony will be better if the company allow them to work under flexible working hours (mean = 4.19).

Table 2: Showing the results of working hours t-test

	Item 37	**Item 40**
Mean	3.4111	3.7011
Standard deviation	1.1874	1.0312
Variance	1.41	1.0634
Sample	467	465
Probability P-Value	7.46E-05	
t Stat	-3.980	
t Critical two-tail	1.9626	
(t[930]=-3.9803,p<0.05)		

Moreover, to test if there is significant difference between the means of the responses about the effect of duty time on the employees' performance, t-test was conducted as shown in Table (4). After comparing the responses between Item 37 and Item 40 about working hours timing, the P-Value from t-test was (7.46E-05) less than 0.05 and the absolute value of t-stat was (3.98) greater than t-Critical (1.9625); (t[930]= -3.9803, p<0.05). Hence, there was significant difference between the data collected in Item 37 and Item 40 which was most likely reflecting the real intrinsic differences in the population, and they were not by chance.

Table 3: Showing the results of working hours ANOVA test

	Item 38	Item 39	Item 41
Mean	4.1863	3.7618	3.8715
Standard deviation	0.8297	0.9822	1.0526
Variance	0.6884	0.9646	1.1079
Sample	467	466	467
Probability P-Value		3.10083E-11	
F Value		24.621	
F Critical		3.0022	
(F[2, 1397]=24.621, p<0.05)			

Additionally, ANOVA test was conducted to compare the differences between the means of Item 38, Item 39 and Item 41 as shown in Table (5) to test if there are significant difference between the means of the responses about the effect of duty time on the employees' life harmony. After comparing the responses, the P-Value from ANOVA test was almost zero (3.10083E-11) which is less than 0.05 and F-value was (24.621) greater than F-Critical (3.0022); (F[2, 1397]=24.621,p<0.05). Hence, there was significant difference between the data collected in Item 38, Item 39 and Item 41. The responses were most likely reflecting the real intrinsic differences in the population, and they were not by chance.

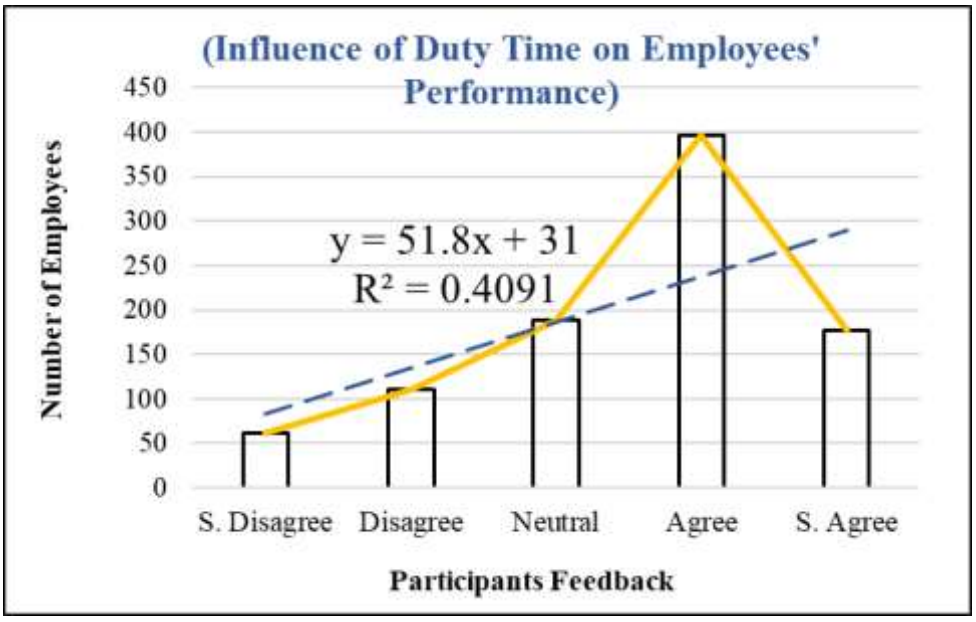

Figure 2: Responses analysis between duty time and employee's performance

Furthermore, to determine the influence of working hours on employee's performance and life harmony, several regression analyses were conducted. The first test was compering the relationship between the respondents' feedback about performance and number of respondents (items 37, 40). Clear trend was observed as shown in Figure (2). Specifically, when respondents' feedback changed from strongly disagree toward strongly agreed, number of employees who are considering the working hours as important factor that impact employees' performance were increased.

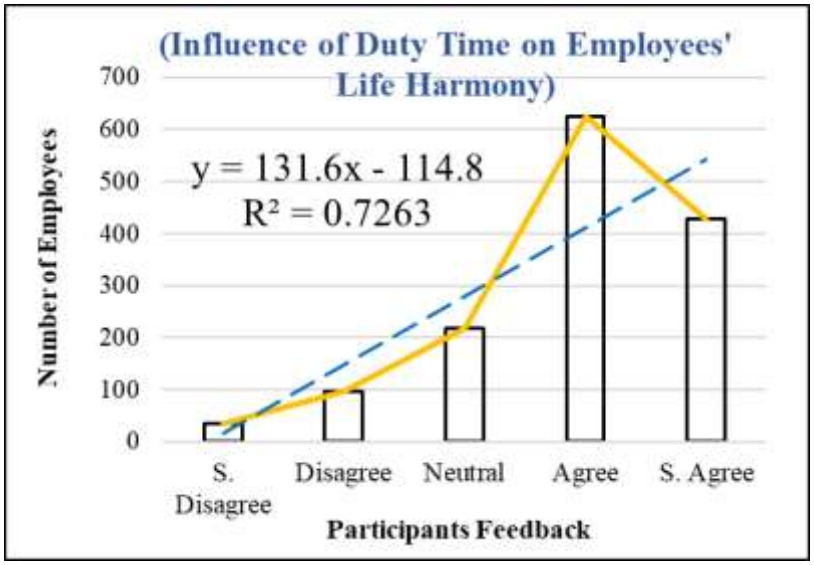

Figure 3: Responses analysis between duty time and employees' life harmony

The second regression test was compering the association between the respondents' feedback about life harmony and number of respondents (items 38, 39, 41). Clear trend was observed as shown in Figure (3). Specifically, when respondents' feedback changed from strongly disagree toward strongly agreed, number of employees who are considering the working hours as important factor that impact their life harmony were increased.

Table 6: Showing the results of duty time and life harmony regression test

Duty time and Life Harmony Regression Statistics (Means)			
Multiple R	0.3622	t-Stat	8.3792
R Square	0.1312	F-Value	70.2118
P-value	6.36319E-16	Lower 95%	0.2158
Observations	467	Upper 95%	0.3479
Linear Equation		Y = 0.2819 X + 2.9376	
(r=0.3622, F[1, 465]=70.2118,p<0.05)			

The third regression test was conducted to evaluate the relationship between the increase in duty time and the negative impact on employees' life harmony. That was tested by comparing the relationship between the mean of the respondents' feedback about Duty time (items 37, 40) and the mean of their feedback about life harmony (items 38, 39, 41). According to the regression test results summarized in Table (6), researcher noticed that duty time had significant effect on employees' life harmony. The p-value (6.36E-16) is smaller than 0.05 which presents solid evidence to reject the null hypothesis and indicates the existence of significant relationship. The multiple correlation coefficient (R= 0.3622) represents positive direction correlation. Moreover, the coefficient of determination (R Square = 0.1312) explains that nearly 13.12 percent of the variability in the negative impact on life harmony can be explained by the increase in duty time. The remaining 86.88 percent may be influenced by other factors not included in this regression model. Hence, when duty time increases, the negative impact on life harmony tends to increase as well.

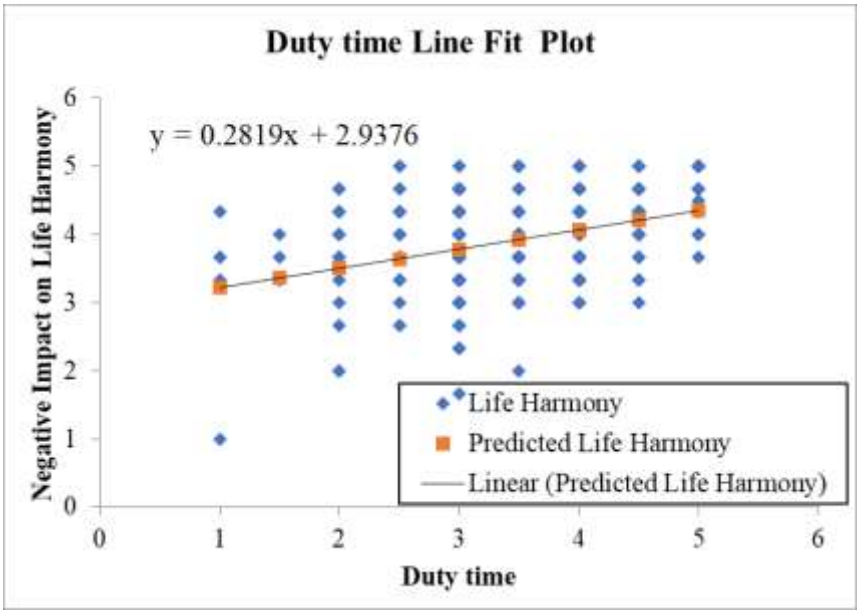

Figure 4: Regression analysis – Duty Time Line Fit Plot

Accordingly, the relationship plot is shown in Figure (4) indicates linear relationship between duty time and the negative impact on employees' life harmony. That is explained by the linear equation (Y = 0.2819X + 2.9376) which represents the estimated relationship between duty time (X) and the negative impact on life harmony (Y). For every unit increase in duty time, the negative impact on life harmony is expected to increase by 0.2819 units. The intercept term (2.9376) represents the estimated impact on life harmony value when the increase in duty time is zero.

Therefore, the null hypothesis (H_{01}) "Duty time is not significantly related to the employees' life harmony in Saudi Arabian manufacturing sector." was rejected.

4.2. The employees' demography impact

In this section, the author evaluated the possibility if employees' demography moderates the employees' satisfaction about duty time. Firstly, researcher compares between the mean of the respondents' feedback about the duty time and the specific respondent's demography (Gender, Nationality, Age and Position). Secondly, Chi Square test was conducted to test if this demography is moderating the duty time satisfaction.

4.2.1. Hypothesis 3: Employees' gender effect

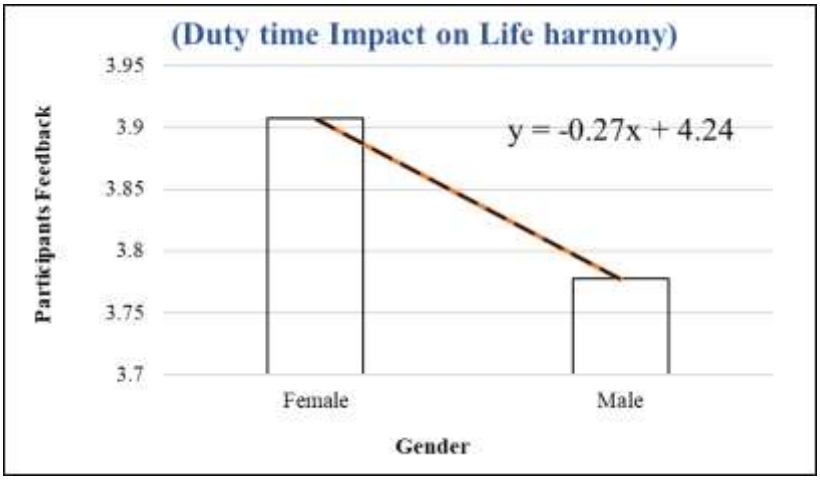

Figure 5: Responses analysis by Gender

As depicted in Figure (5), after analyzing the gender distribution of the participants, it is evident that all feedbacks are consistently expressed average responses ranging from 3.77 to 3.91. This indicates an agreement among the participants regarding the correlation between duty time and their life harmony. Hence, gender is not moderating the duty time satisfaction.

Table 7: Observation data to test if Employee's gender moderates the relationship between Duty time and Employees' life harmony

Gender	Opposed Employees	Undecided Employees	Concurred Employees	SUM
Female	12	24	65	***101***
Male	285	378	952	***1615***
SUM	***297***	***402***	***1017***	***1716***

Furthermore, Chi Square test was conducted to test if Employee's Gender is significantly moderate the relationship between Duty time and Employees' life harmony. Using the observed data in Table (7), the calculated X^2 value was 2.3003 which is less than the critical value which is 5.991 (X^2=[2,N=1716]=2.3003,p<0.05). Hence, Employee's Gender is not significantly moderate the relationship between Duty time and Employees' life harmony. Therefore, the null hypothesis (H_{02}) "Employees' gender is not significantly moderating the duty time satisfaction in Saudi Arabian manufacturing sector" shall be NOT rejected.

4.2.2. Hypothesis 4: Nationality effect

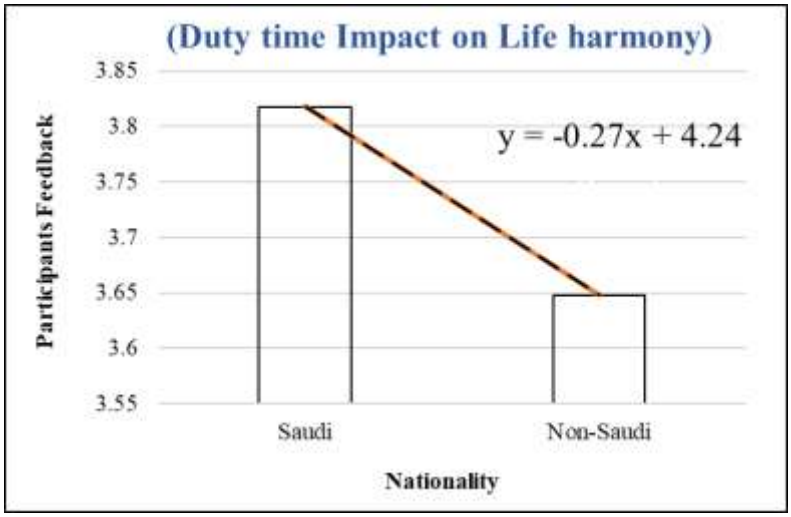

Figure 6: Responses analysis by Nationality

As showed in Figure (6), after evaluating the nationality distribution of the participants, it is evident that all feedbacks are consistently expressed average responses ranging from 3.65 to 3.82. This indicates an agreement among the participants regarding the correlation between duty time and their life harmony. Hence, nationality is not moderating the duty time satisfaction.

Table 8: Observation data to test if Employee's gender moderates the relationship between Duty time and Employees' life harmony

Nationality	Opposed Employees	Undecided Employees	Concurred Employees	SUM
Saudi	237	318	855	***1410***
Non-Saudi	62	84	165	***311***
SUM	***299***	***402***	***1020***	***1721***

Additionally, Chi Square test was conducted to test if Employee's Nationality is significantly moderate the relationship between Duty time and Employees' life harmony. Using the studied data in Table (8), the calculated X^2 value was 6.0731 which is greater than the critical value which is 5.991 (X^2=[2,N=1721]=6.0731,p<0.05). Hence, Employee's Nationality is significantly moderate the relationship between Duty time and Employees' life harmony. Therefore, the null hypothesis (H_{03}) "There is no significant relationship between employees' nationality and duty time satisfaction in the Saudi manufacturing sector" shall be rejected.

4.2.3. Hypothesis 5: Employees' age effect

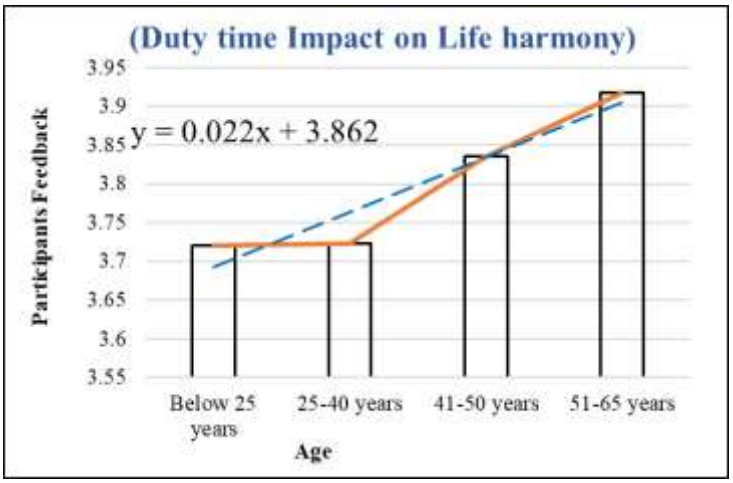

Figure 7: Responses analysis by Age

As represented in Figure (7), after examining the age distribution of the participants, it is evident that all feedbacks are consistently expressed average responses ranging from 3.72 to 3.92. This indicates an agreement among the participants regarding the correlation between duty time and their life harmony. Hence, age is not moderating the duty time satisfaction.

Table 9: Observation data to test if Employee's age moderates the relationship between Duty time and Employees' life harmony

Age	Opposed Employees	Undecided Employees	Concurred Employees	SUM
Below 25 years	14	11	37	***62***
25-40 years	190	195	511	***896***
41-50 years	81	147	349	***577***
51-65 years	14	48	114	***176***
SUM	***299***	***401***	***1011***	***1711***

Likewise, Chi Square test was conducted to test if Employee's Age is significantly moderate the relationship between Duty time and Employees' life harmony. Using the observed data in Table (9), the calculated X^2 value was 26.9448 which is greater than the critical value which is 12.592 (X^2=[6,N=1711]=26.9448,p<0.05). Hence, Employee's Age is significantly moderate the relationship between Duty time and Employees' life harmony. Therefore, the null hypothesis (H_{04}) "The association between employee's age and duty time satisfaction is not significant in Saudi Arabian manufacturing sector" shall be rejected.

4.2.4. Hypothesis 5: Employees' position effect

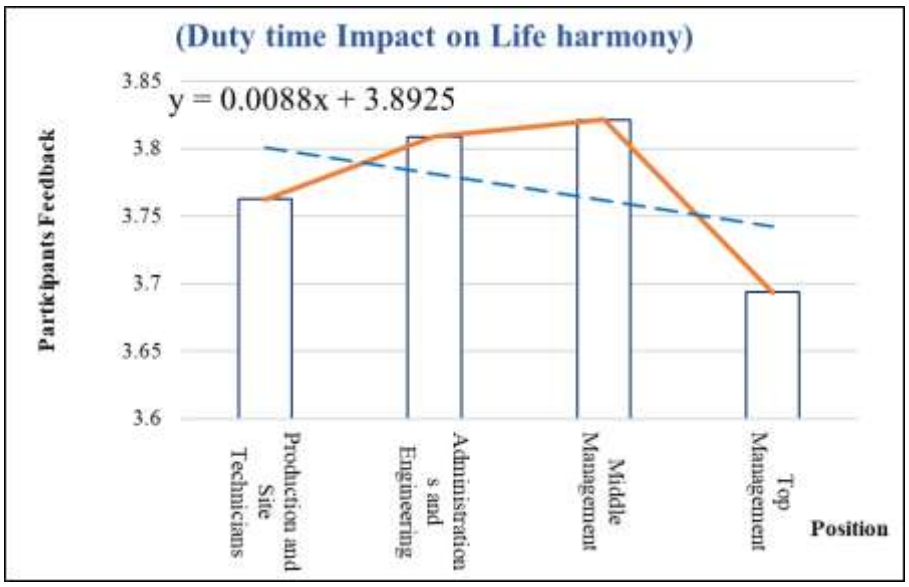

Figure 8: Responses analysis by Position

As illustrated in Figure (8), after investigating the position distribution of the participants, it is evident that all feedbacks are consistently expressed average responses ranging from 3.69 to 3.82. This indicates an agreement among the participants regarding the correlation between duty time and their life harmony. Hence, position is not moderating the duty time satisfaction.

Table 10: Observation data to test if Employee's position moderates the relationship between Duty time and Employees' life harmony

Position	Opposed Employees	Undecided Employees	Concurred Employees	SUM
Production and Site Technicians	88	116	293	***497***
Administrations and Engineering	128	172	436	***736***
Middle Management	59	77	216	***352***

Top Management	22	32	71	***125***
SUM	***297***	***397***	***1016***	***1710***

Finally, Chi Square test was conducted to test if Employee's Position is significantly moderate the relationship between Duty time and Employees' life harmony. Using the observed data in Table (10), the calculated X^2 value was 1.0913 which is less than the critical value which is 12.592 ($X^2=[6,N=1710]=1.0913,p<0.05$). Hence, Employee's Position is not significantly moderate the relationship between Duty time and Employees' life harmony. Hence, the null hypothesis (H05) "Employees' position is not significantly moderating the duty time satisfaction in Saudi Arabian manufacturing sector" should be rejected.

4.3. Findings

Author tested the null hypotheses to analyze the correlation between the impact of increasing the daily working hours on the employees' life harmony in the Saudi Arabia's manufacturing sector. The study found that when respondents' feedback changed from strongly disagree toward strongly agreed, number of employees who are believing in this relationship were increased. Moreover, the working hours is significantly related to the employees' performance and satisfaction even though they are not sure if the current working hours in their organizations are adequate. Considerably, they anticipated that additional break time might positively impact their performance. They also partially agreed that the shift time is not comfortable and not sufficient to have stable work-life balance and barely expected negative impact on their family if company increase the working hours. However, they believed that their life harmony will be better if the company allow them to work under flexible working hours. Furthermore, the conducted regression test result showed significant relationship between duty time and life harmony (P-value = 6.36E-16). The increase in daily working hours held to be 13.12 percent of the changeability in the negative impact on life harmony.

Obviously, the research interrogated to investigate whether there is a meaningful connection between the duration of working hours and the performance and satisfaction of employees in the manufacturing sector of Saudi Arabia. That is evident with the existence of significant relationship between the duty time and both. Additionally, findings show that the relationship between the increase of daily working hours and the negative impact on the employees' life harmony is moderated by Age and nationality but neither by gender nor position.

4.4. Example and calculation

This is practical example that represents how this research findings can be used to estimate the potential financial impact of increasing daily working hours on employee life harmony. Let us assume that an employee named Zahra working at ABC Company. The example considers Zahra's job satisfaction, performance, and the financial implications for both Zahra and the ABC Company. Below are key assumptions:

- Zahra's monthly salary: SAR 10,000.
- Zahra's satisfaction with her duty time was reported to be 80 percent.
- Zahra's performance was rated at 85 percent.
- ABC Company's daily revenue: SAR 500,000.
- Total production staff, including Zahra: 50 employees.
- Production output: 500 pieces per day.
- Sales price per product: SAR 1,000.
- ABC works 8 hours daily for 22 days monthly.
- The study's researcher discovered a linear correlation between increased daily working hours and the negative impact on employee life harmony. The correlation equation derived was Y = 0.2819 X + 2.9376, where Y represents the negative impact and X represents the increased units in daily duty time.
- Additionally, the researcher found that increasing one unit of daily working hours led to a 13.12 percent negative impact on employee life harmony.

Using above assumptions and findings, the impact on Zahra's Satisfaction, Performance and life harmony can be estimated as follows:

First: Impact on Zahra's Satisfaction:

If Zahra's satisfaction with her ABC company duty time was initially 80 percent, we can calculate the expected impact as follows:

Expected decrease in satisfaction = 80% * 13.12% = 10.496%

Therefore, Zahra's satisfaction is expected to decrease by approximately 10.496 percent due to the increase in daily duty time.

New satisfaction level = 80% - 10.496% = 69.504%

Second: Impact on Zahra's Performance:

New performance level considering Zahra's initial performance of 85 percent is:

Expected decrease in performance = 85% * 13.12% = 11.152%

Therefore, Zahra's performance is expected to decrease by approximately 11.152 percent due to the increase in daily duty time.

New performance level = 85% - 11.152% = 73.848%

Hence, after increasing the daily duty time, Zahra's expected performance level would be approximately 73.848 percent.

Third: Negative Impact on Life Harmony (Y):

Using the correlation equation and the research findings, we can calculate the negative impact on Zahra's life harmony.

X = 1 hour * (13.12% / 100) = 0.1312 hour

Y = 0.2819 * 0.1312 + 2.9376 ≈ 2.9746 hours

That means, after increasing the daily duty time by one hour, Zahra's life harmony is expected to be impacted by approximately three hours.

Fourth: Daily Financial Impact on Zahra (F):

Considering Zahra's monthly salary, performance, and the estimated negative impact on life harmony, we can calculate the daily financial impact on Zahra, assuming 8 hours daily duty time for 22 working days in a month.

F = (Zahra's monthly salary / Total working hours in a month) * (Y)

F ≈ (SAR 10,000 / (8 * 22)) * (2.9746) ≈ SAR 169

Hence, Zahra is estimated to be impacted financially with SAR 169 daily (SAR 3,718.25 monthly) if ABC Company increase the daily working hours by one hours. That will devalue Zahra monthly salary by 37.18 percent.

Fifth: Daily Financial Impact on ABC Company (D):

Considering the decrease in production output due to the negative impact caused by the decrease in employees' performance, we can calculate the daily financial impact on ABC Company (D).

Decrease in production output = Decrease percentage in employees Performance * Current daily production output = (11.152% / 100) * 500 pieces = 55.76 pieces

D = Decrease in production output * Sales price per product

= 55.76 pieces * SAR 1000 = SAR 55,760

Clearly, the Daily revenue of ABC Company will be impacted negatively by SAR 55,760 if the company increased the daily working hours by one hour.

In conclusion, based on the research findings and the example calculations, it is estimated that increasing daily working hours by one-hour results in a negative impact on employee life harmony could reach to three hours. In the case of Zahra, the impact was estimated to be approximately 37.18 percent from her salary. Moreover, the Company revenue is estimated to be impacted negatively by 11.152 percent. These figures highlight the importance of balancing employee well-being with productivity and financial considerations within organizations. **Please note** that the calculations and estimations provided are based on the given information, research findings, and assumptions made. The actual impact may vary depending on specific factors and circumstances within each company.

5. Case Study and Implications

The case study was conducted in one of the panel board manufacturing factories in Dammam second industrial city. The factory population was 200 multinational employees, and the selected sample was 30 employees from deferent career level. The researcher analyzed the face-to-face interviews data using content analysis and regression test. The following questions were used to evaluate the impact of increasing duty time on employee's life harmony in that factory.

a) How can the management improve working time and break time?
b) How is factory working time policy impacting your work-life balance?

To evaluate the relationship between working time and employees' performance, the interviewee's feedback about "How can the management improve working time and breaks during it?" was analyzed using content analysis. In addition, the association between working time and employees' performance which impacted the Factory revenue execution was tested using regression test.

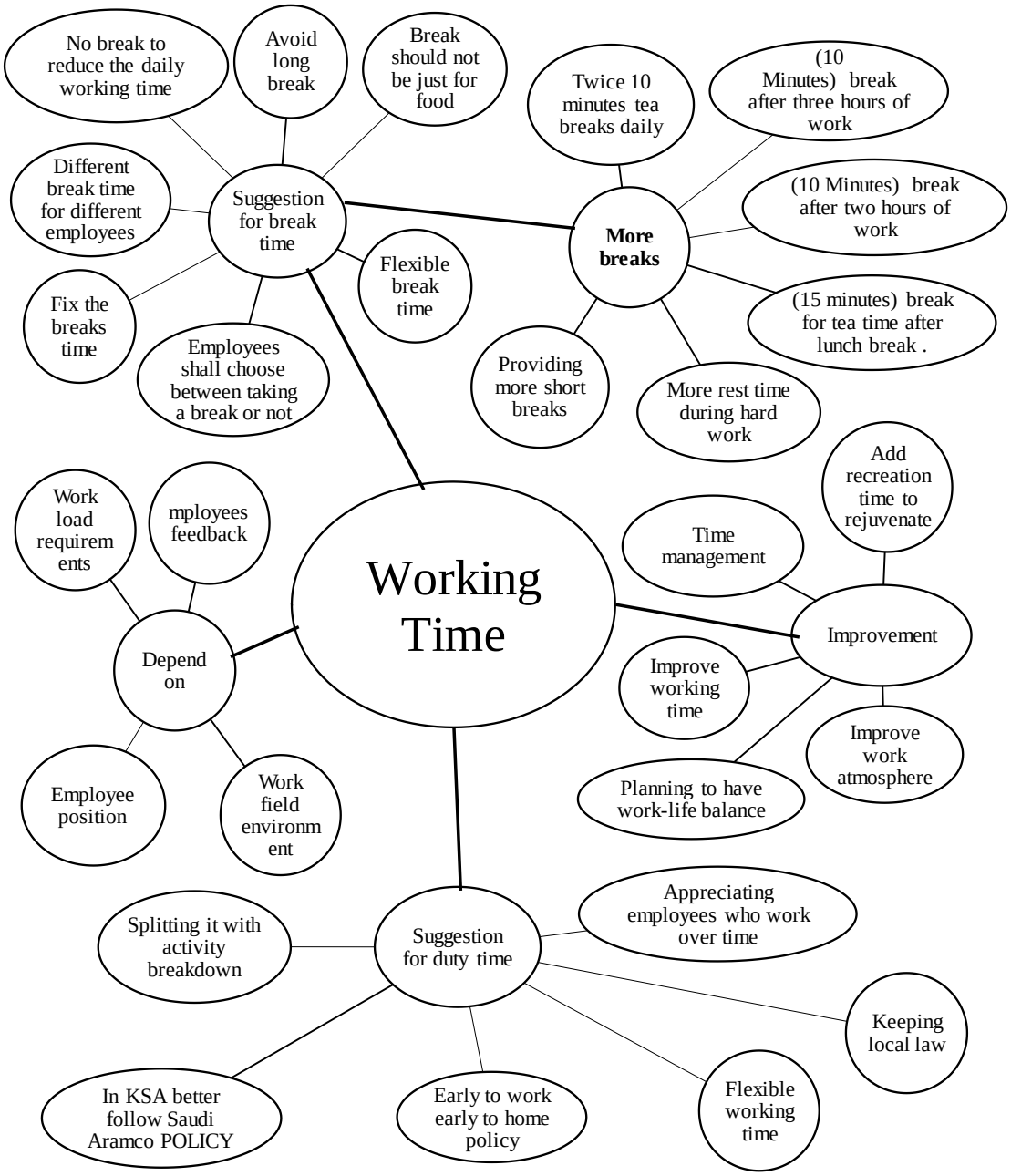

Figure 9: Code and categories conceptual map from interviewees' feedback about working time effect on employees' performance

After analyzing the participants' feedback about working time impact on their performance, codes and categories were grouped as shown the conceptual map in Figure (9). Respondents stated that flexible working time enhances target achievement and help employees to focus on strategic goals. In addition, interviewees advised to improve break time allocations by adding more breaks and adding recreation time for refreshment.

Table 11: Categories and themes from interviewees' feedback about working time effect on employees' performance

	Category	Frequency	Percentage	Themes
1	Suggestion for break time	14	39%	More breaks time are required to improve employee's performance and productivity.
2	Suggestion for duty time	13	36%	Flexible working time influences employee's life harmony.
3	Improvement	5	14%	Adding recreation time improves the work atmosphere and influence employees to rejuvenate.
4	Depend on	4	11%	Working time is dependable on employee position and type of job executed.

In addition, the results shown in Table (11) indicate that the considerable theme from interviewee's feedback was related to the significant effect of working time on employees' performance. Specifically, 39 percent of the participants believed that more breaks time are required to improve their performance and productivity. In addition, 36 percent of the interviewees stated that flexible working time influences their life harmony. Moreover, 14 percent of the participants needed recreation time to improve the work atmosphere and help employees to rejuvenate. While eleven percent of them believed that working time allocation depends on employee's position and type of job executed.

In conclusion, the researcher used content analysis to analyze the open-ended interview questions about the relationship between duty time, performance, and life harmony. Data showed that employees' performance and life harmony are significantly impacted by unfavorable working hours. Hence, case study findings were matching the descriptive and inferential analysis in section 4 of this study.

6. Conclusion

From the organizational behavior side, researcher analyzed the relationship of the duty time and employees' life harmony. Hence, to answer the research questions " 1) Is there significant relationship between duty time and the employees' performance in Saudi manufacturing sector?

And 2) Dose the working time policy significantly impacts the employees' satisfaction in Saudi manufacturing sector?", the researcher analyzed the null hypotheses which stated no significant relationships.

Accordingly, the study found significant association between duty time and life harmony. Findings showed that majority of the participants believed that duty time and working hours policy are significantly impact their ability to satisfy their family needs. The increase in duty time is responsible for nearly 13.12 percent of the negative impact on employees' life harmony. Callously, increasing one-hour in daily working hours causes a negative impact on employee life harmony could reach to three hours which is approximately 37.18 percent from the employee's income. Moreover, the Company revenue will be impacted negatively by 11.152 percent. Additionally, findings show that the relationship between the increase of daily working hours and the negative impact on the employees' life harmony is moderated by Age and nationality but neither by gender nor position.

Here are some possible impacts caused by longer working hours:

- Employees may not be able to allocate time for family, friends, hobbies, and self-care activities. That can cause stress and diminished the sense of well-being.
- Lack of time for exercise, sleep, and relaxation can lead to physical ailments such as fatigue, obesity, and increased risk of cardiovascular diseases.
- Mental strain of prolonged work hours can result in anxiety, depression, and burnout.
- As employees become fatigued, their productivity and focus tend to decline. This can result in lower quality work, increased errors, and decreased overall efficiency.
- When employees are consistently overworked, they may feel undervalued, unappreciated, and disconnected from their work, which can lead to decreased motivation and commitment.
- Employees may have less time to pursue additional education, training, or participate in activities that enhance their skills and knowledge.

In conclusion, extending daily working hours without considering the negative impacts on employees' life harmony can lead to decreased well-being, productivity, and overall job satisfaction. It is important for organizations to prioritize work-life balance and ensure that employees have sufficient time for rest, personal relationships, and self-care.

7. Recommendations

To establish a balance between work and personal life in a manufacturing facility while meeting operational requirements, here are some recommendations for duty time and working hours:

1. Establish standard working hours that are reasonable and aligned with industry norms. In many countries, the standard is around 40 hours per week.
2. Avoid excessive overtime and ensure that employees have adequate time for rest and personal activities.
3. Consider introducing flexible work schedules, such as compressed workweeks or flexible start and end times. This allows employees to adjust their work hours to better accommodate personal commitments and preferences, fostering a better work-life balance.
4. Ensure that breaks and rest periods are provided to promote relaxation and rejuvenation.
5. Limit the duration of individual shifts to prevent fatigue and burnout.
6. Implement a fair and balanced shift rotation system to distribute workload. This prevents employees from consistently working undesirable shifts, such as night shifts or weekends.
7. Encourage employees to utilize vacation days and engage in wellness activities.
8. Continuously monitor and assess the impact of working hours on employee satisfaction, productivity, and overall well-being. Collect feedback from employees through surveys or focus groups and adjust as needed to further improve work-life balance.

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