

IMPACT OF NIGHT SHIFT ON WORKLIFE BALANCE OF DOCTORS

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Abstract

According to **Osterman**, organizations introduce family friendly policies to respond to the practical problems associated with the recruitment and retention of the employees. Work life balance plays a positive role in minimizing the dissatisfaction among employees with respect to their jobs (**Eikhof, Warhurst & Haunschild, 2007; Osterman, 1995**). Although there are many factors which effect work life balance of doctors but in this research the main factor which would be are “Turnover, Job Satisfaction, and Performance. Night work causes particular health and safety problems. All the adverse effects of working shifts are worse among night workers.

Problem: When a person devotes more time to work and less time to home, then it affects its family and marital life. So the research problem is to find out the results of night shift on work life balance of Doctors in relation with mental and physical health. Therefore the study is on **Impact of Night Shift on Work life Balance of Doctors in Jalandhar.**

Method: Questionnaire method was used for collecting data to find out the relation between shift and mental and physical health of doctors. Lottery method was used as a sampling technique.

Key words: Work life balance, shift, Job Satisfaction, Night Shift.

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INTRODUCTION

1.1 WORK LIFE BALANCE

Work life balance is defined as a situation in which workers feel that they are capable of balancing their work and non - work commitments. According to **Osterman**, organizations introduce family friendly policies to respond to the practical problems associated with the recruitment and retention of the employees. Work life balance plays a positive role in minimizing the dissatisfaction among employees with respect to their jobs (**Eikhof, Warhurst & Haunschild, 2007; Osterman, 1995**). The determined organizations provide Work life balance opportunities to their employees to manage work and life activities comfortably (**Eikhof, et.al, 2007**), that leads to increased job satisfaction of the employees and helps in reducing the turnover rate (**Burke, 2000**).

1.2 SHIFT WORK

Shift work is an employment practice designed to make use of, or provide service across, all 24 hours of the clock each day of the week .The practice typically sees the day divided into "shifts", set periods of time during which different groups of workers take up their posts. The term "shift work" includes both long-term night shifts and work schedules in which employees' changes or rotate shifts. Shift work is considered a risk factor for many health problems, and has many negative cognitive effects. In addition, shift work can contribute to strain of marital, family, and personal relationships. Research suggests that it affects the quality and quantity of sleep a person gets and Disrupts family and social life. This has found that shift work disrupts the body's circadian rhythms, that is, its daily cycle. It also affects the quality and quantity of sleep a person gets and Disrupts family and social life. This impact on the health of the shift worker can potentially cause: Tiredness, mental stress; cardio-vascular diseases; gastro-intestinal disorders; menstrual disorders; reproductive system dysfunction; poor performance; and increased accidents.

1.3 NIGHT SHIFT

A night shift is a group of workers who work during the night. It is considered a risk factor for many health problems, and has many negative cognitive effects. In addition, night work can

contribute to strain of marital, family, and personal relationships. Night work causes particular health and safety problems.. The Regulations limit night workers' normal hours (excluding overtime) to an average of 8 hours in every 24 hours. They also limit hazardous night work to an absolute maximum of 8 hours. Adult night workers have the right to a free health assessment before starting night work and at regular intervals thereafter.

1.4 WORK LIFE BALANCE OF DOCTORS AND PARAMEDICAL STAFF

The Topic “Impact of Night Shift on Work Life Balance of Doctors and Para Medical Staff in Punjab” focuses on how night shift affects the life of doctors and Para medical staff, and what are the consequences on their mental and physical health. Although there are many factors which effect work life balance of doctors and paramedical staff but in this research the main factor which would be are “Turnover, Job Satisfaction, and Performance. Night work causes particular health and safety problems. All the adverse effects of working shifts are worse among night workers.

2.2 REVIEWS RELATED TO MEDICAL PROFESSION

Sharma et al conducted a study on “Job satisfaction and work environment perception among doctors in a tertiary hospital in Delhi” (2009) had observed job satisfaction among doctors in a tertiary hospital in Delhi and the various factors related with it. 250 doctors were selected as sample size on tenure-based job, selected by stratified random sampling, in a teaching hospital in Delhi, by using a self-administered questionnaire. Statistical Analysis was Proportions and Chi-square tests were used. **Malik et al in their study “Examining the relationship of work life balance, job satisfaction, turnover in Pakistan” (2010)** had observed that employee turnover is one of the critical issues discussed in the organizational studies. The author examines the effect of work – life balance and job satisfaction on the turnover intentions of doctors. The results of the cross - sectional study show that the doctors who are better able to manage the work and the life activities are more satisfied with their jobs and have less intention to leave their jobs. Similar study took place by other researcher on similar topic as above. **Imran et al conducted study on “Work-Life Balance and Job Satisfaction among Doctors in Pakistan” (2010)** depicted that the doctors who are better able to manage their work and life responsibilities have low burnout level and experience more job satisfaction

and ultimately result in less turnover. To analyze the data t-test and regression were used. **Yoshikawa et al conducted research on “National survey of the association of depressive symptoms with the number of off duty and on-call, and sleep hours among physicians working in Japanese hospitals: a cross sectional study” (2010)** had observed that physicians' mental health may be adversely affected by the number of days of work and time spent on-call, and improved by sleep and days-off. Depressive state was positively associated with being on-call more than 5 days per month for men, and more than 8 days per month for women, and was negatively associated with being off-duty more than 8 days per month for men. **Christine et al in their study “Correlation of work-life balance decisions of different generations of physicians” (2010)** had concluded that over the past decade, based on the generation of the person, the values and beliefs of physicians had changed with regard to work-life balance choices. Generation X physicians had strong values about finding balance between their chosen professions in medicine and enjoying their personal lives. The baby boomer physicians believe their careers are their first priority and often place career obligations above family commitments. **Rohini et al conducted research on “Social responsibility of hospitals: an Indian context” (2010)** had explored the perceived responsibilities of five not-for-profit hospitals in Bangalore, India, towards society. It was found that the hospitals must take into account the social, cultural and financial characteristics of the patients while fulfilling societal obligations. **Susi and Jawaharrani conducted research on “Work-Life Balance: The key driver of employee engagement” (2012)** had examined some of the literature on employee engagement, explore workplace culture and work life balance policies and practices followed in industries in order to promote employee engagement in their organization to increase their employee productivity and retain them. Work life balance was a key driver of job satisfaction. **Tariq et al conducted research on “Work-Life Balance as a Best Practice Model of Human Resource Management: A Win-Win Situational Tool for the Employees and Organizations” (2012)** examined that work-life balance was both important for the organization and for its employees particularly in dynamic organizational scenarios. It helps the organization to improve productivity, efficiency, competitiveness, morale and hence gain a competitive edge. **Lakshmi et al conducted research on “Analysis Of Work Life Balance Of Female Nurses In Hospitals - Comparative Study Between Government And Private Hospital In Chennai, India” (2012)** state that majority of women are working through-out week and 53% were struggling to achieve

work-life balance. Women reported that their life had become a juggling act as they had to shoulder multiple responsibilities at work and home.

PROBLEM FORMULATION

3.1 NEED AND SIGNIFICANCE OF STUDY

The need of this research was to fill the research gap that existed between the previous researches and the present research. In the present scenario, high demands of excelling in their respective fields and high workload in form of night shifts amongst skilled professionals creates mental stress and job dissatisfaction affecting their professional and personal lives.

This study will assess the stress factors and its effect on the proficiency and efficiency of professionals especially doctors and paramedical staff. This study will be beneficial in striking balance between their work as well as family life. The results of this study can also be extrapolated to other professions with similar working hours.

3.1.1 Research Problem

There had been extensive research on the effects of shift work on job satisfaction, performance, health and family life. Previous Researches suggest that it affects the quality and quantity of sleep a person gets and disrupts family and social life. When a person devotes more time to work and less time to home, then it affects its family and marital life. So the research problem is to find out the results of night shift on work life balance of Doctors and Para medical staff in relation with job satisfaction, performance, health, etc . Therefore the study is on **Impact of Night Shift on Work life Balance of Doctors in Jalandhar.**

3.1.2 Research Methodology

Research Methodology is a way to systematically solve the research problem. The Research Methodology includes the various methods and techniques for conducting a Research

3.2 SAMPLING DESIGN

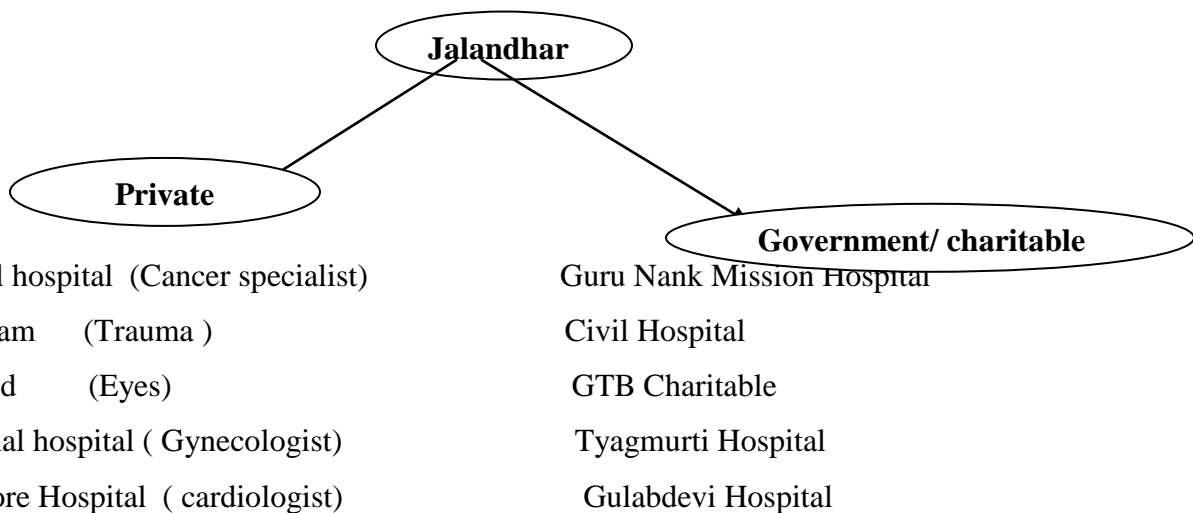
Sampling can be defined as the section of some part of an aggregate or totality on the basis of which judgments or an inference about aggregate or totality is made. The sampling design helps in decision making in the following areas:

3.2.1 Universe of the study – The universe comprises of two parts as theoretical universe and accessible universe.

- **Theoretical universe-** It included all the Hospitals throughout the universe.
- **Accessible universe-** It included hospitals of Jalandhar

3.2.2 Sampling Unit: It indicates who is to be surveyed. In this project, sampling unit consisted of Doctors and Para –Medical staff working in hospitals of Jalandhar. The hospitals covered will include General, Multi specialty, orthopedic, ENT, Gynecologist, Cardiologist, Pediatrician etc.

3.2.3 Sample size: It refers to the elements to be included in the study. So In order to have conceptualized view of all types of respondents in our study, we will cover 10 major hospitals in the city. **Fig no 3.1 showing the selected hospitals from city**



As far as sample size is concerned, it would be 50 doctors working in day and night shift of Hospitals.

3.2.4 SAMPLING TECHNIQUE

Lottery Method will be used to collect the data from the respondents.

3.3 DATA COLLECTION

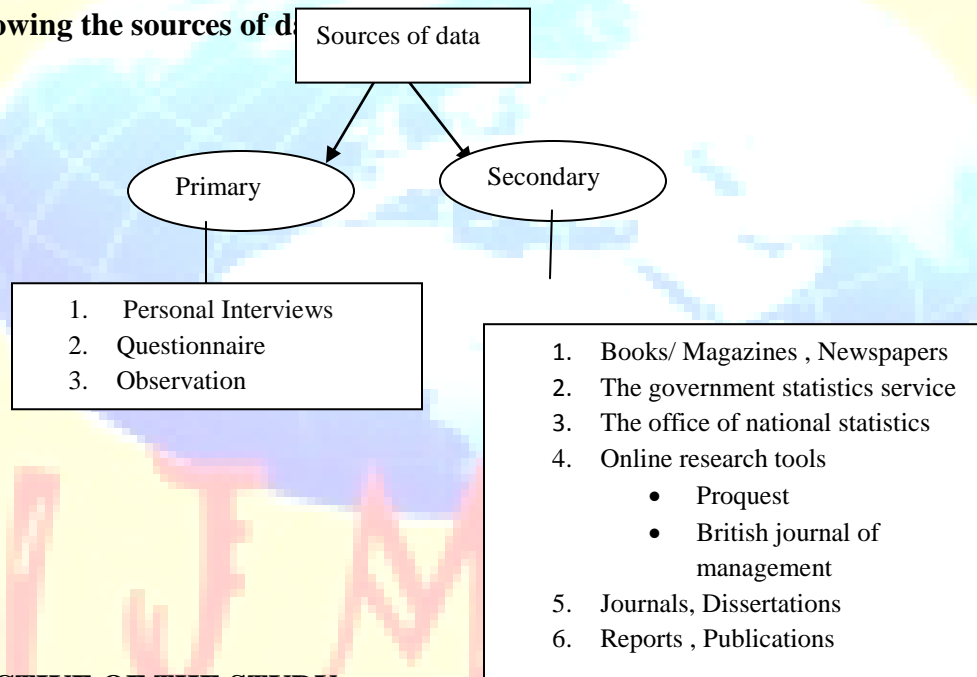
Both primary and secondary methods will be used for collection of data.

Primary data: Primary data are the information collected firsthand from sources such as historical documents, literary texts, artistic works, experiments, surveys, and interviews. The primary data for present study will be collected from structured questionnaire and Interviews from doctors and Para- medical staff and through observation.

Secondary Data: Secondary data, is data collected by someone other than the user. Common sources of secondary data for social science include censuses, organizational records and data collected through qualitative methodologies or qualitative research.

Structured questionnaire comprising different parts will be used for as primary source for collection of data whereas library research (journals, dissertations books, etc.) will be used as secondary source for collecting data.

Fig 3.2 showing the sources of data



3.4 OBJECTIVE OF THE STUDY

The following will be the objective of my study:

- To study the impact of night shift on personal and professional life of doctors
- To study the impact of shift work on marital status of doctors.

3.5 HYPOTHESIS

Ho: There is no difference on personal and professional life of doctors working in day and night shifts.

H1: There is significant difference on personal and professional life of doctors working in day and night shifts..

Ho: There is no significant impact of shift on marital status of doctors.

H2: There is significant impact of shift on marital status of doctors.

3.6 Interpretation

Gender * shift

Crosstab

			shift		Total
			Night	Day	
Gender	F	Count	9	24	33
		% within Gender	27.3%	72.7%	100.0%
		% within shift	36.0%	96.0%	66.0%
M		Count	16	1	17
		% within Gender	94.1%	5.9%	100.0%
		% within shift	64.0%	4.0%	34.0%
Total		Count	25	25	50
		% within Gender	50.0%	50.0%	100.0%
		% within shift	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	20.053 ^a	1	.000		
Continuity Correction ^b	17.469	1	.000		
Likelihood Ratio	23.035	1	.000		
Fisher's Exact Test				.000	.000

N of Valid Cases	50			
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- a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.50.
- b. Computed only for a 2x2 table

Interpretation: under this it is observed that p value comes to be 20.053 which is more than .001 alpha levels so for this reason we fail to accept null hypothesis so there is significant relation between doctors working in shift and gender.

Marital Status * shift

Crosstab

			shift		Total
			Night	Day	
Marital Status	Married	Count	15	20	35
		% within Marital Status	42.9%	57.1%	100.0%
		% within shift	60.0%	80.0%	70.0%
unmarried	unmarried	Count	10	5	15
		% within Marital Status	66.7%	33.3%	100.0%
		% within shift	40.0%	20.0%	30.0%
Total	Total	Count	25	25	50
		% within Marital Status	50.0%	50.0%	100.0%
		% within shift	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.381 ^a	1	.123		
Continuity Correction ^b	1.524	1	.217		
Likelihood Ratio	2.416	1	.120		
Fisher's Exact Test				.217	.108
N of Valid Cases	50				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.50.

b. Computed only for a 2x2 table

Interpretation: under this it is observed that p value comes to be 2.381 which is more than .001 alpha levels so for this reason we fail to accept null hypothesis so there is significant relation between doctors working in shift and their marital status.

Personall * shift

Child care by : Parents, servants(Personal 1)

Crosstab

			shift		Total
			Night	Day	
Personall	1	Count	5	25	30
		% within Personall	16.7%	83.3%	100.0%
		% within shift	20.0%	100.0%	60.0%
	2	Count	20	0	20
		% within Personall	100.0%	.0%	100.0%

	% within shift	80.0%	.0%	40.0%
Total	Count	25	25	50
	% within Personal1	50.0%	50.0%	100.0%
	% within shift	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	33.333 ^a	1	.000		
Continuity Correction ^b	30.083	1	.000		
Likelihood Ratio	42.281	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	32.667	1	.000		
N of Valid Cases	50				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.00.

b. Computed only for a 2x2 table

Interpretation: under this it is observed that p value comes to be 33.333 which is more than .001 alpha levels so for this reason we fail to accept null hypothesis so there is significant relation between doctors working in shift and their care for their child.

Personal2 * shift

Hours spend with child? (Personal 2)

Crosstab

			shift		Total
			Night	Day	
Personal2	1	Count	0	24	24
		% within Personal2	.0%	100.0%	100.0%
		% within shift	.0%	96.0%	48.0%
2	Count	25	1	26	
	% within Personal2	96.2%	3.8%	100.0%	
	% within shift	100.0%	4.0%	52.0%	
Total	Count	25	25	50	
	% within Personal2	50.0%	50.0%	100.0%	
	% within shift	100.0%	100.0%	100.0%	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	46.154 ^a	1	.000		
Continuity Correction ^b	42.388	1	.000		
Likelihood Ratio	60.837	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	45.231	1	.000		
N of Valid Cases	50				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.00.

b. Computed only for a 2x2 table

Interpretation: under this it is observed that p value comes to be 46.154 which is more than .001 alpha levels so for this reason we fail to accept null hypothesis so there is significant relation between doctors working in shift and hours spend with child .

Personal3 * shift

Do you regularly meet teachers? (Personal 3)

Crosstab

			shift		Total
			Night	Day	
Personal3	1	Count	9	0	9
		% within Personal3	100.0%	.0%	100.0%
		% within shift	36.0%	.0%	18.0%
2	2	Count	16	25	41
		% within Personal3	39.0%	61.0%	100.0%
		% within shift	64.0%	100.0%	82.0%
Total		Count	25	25	50
		% within Personal3	50.0%	50.0%	100.0%
		% within shift	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	10.976 ^a	1	.001		

Continuity Correction ^b	8.672	1	.003		
Likelihood Ratio	14.468	1	.000		
Fisher's Exact Test				.002	.001
Linear-by-Linear Association	10.756	1	.001		
N of Valid Cases	50				

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 4.50.

b. Computed only for a 2x2 table

Interpretation: under this it is observed that p value comes to be 10.976 which is more than .001 alpha levels so for this reason we fail to accept null hypothesis so there is significant relation between doctors working in shift and regularity in meeting teachers.

Professional variables

Professional1 * shift

How often do you worry about work ? (Professional 1)

Crosstab

			shift		Total
			Night	Day	
Professional1	always	Count	16	20	36
		% within Professional1	44.4%	55.6%	100.0%
		% within shift	64.0%	80.0%	72.0%
	never think	Count	0	4	4
		% within Professional1	.0%	100.0%	100.0%
		% within shift	.0%	16.0%	8.0%

often	Count	9	0	9
	% within Professional1	100.0%	.0%	100.0%
	% within shift	36.0%	.0%	18.0%
rarely	Count	0	1	1
	% within Professional1	.0%	100.0%	100.0%
	% within shift	.0%	4.0%	2.0%
Total	Count	25	25	50
	% within Professional1	50.0%	50.0%	100.0%
	% within shift	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.444 ^a	3	.002
Likelihood Ratio	19.853	3	.000
N of Valid Cases	50		

a. 6 cells (75.0%) have expected count less than 5. The minimum expected count is .50.

Interpretation: under this it is observed that p value comes to be 14.444 which are more than .001 alpha levels so for this reason we fail to accept null hypothesis so there is significant relation between doctors working in shift and worry about work.

Professional2 * shift

How do you feel about the amount of time you spend at work? (Professional 2)

Crosstab

			shift		Total
			Night	Day	
Professional2	happy	Count	9	0	9
		% within Professional2	100.0%	.0%	100.0%
		% within shift	36.0%	.0%	18.0%
	indifferent	Count	0	5	5
		% within Professional2	.0%	100.0%	100.0%
		% within shift	.0%	20.0%	10.0%
	unhappy	Count	16	20	36
		% within Professional2	44.4%	55.6%	100.0%
		% within shift	64.0%	80.0%	72.0%
Total		Count	25	25	50
		% within Professional2	50.0%	50.0%	100.0%
		% within shift	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.444 ^a	2	.001
Likelihood Ratio	19.853	2	.000
N of Valid Cases	50		

a. 4 cells (66.7%) have expected count less than 5. The minimum expected count is 2.50.

Interpretation: under this it is observed that p value comes to be 14.444 which are more than .001 alpha levels so for this reason we fail to accept null hypothesis so there is significant relation between doctors working in shift and time spend at work.

Professional3 * shift

Have you ever miss out any quality time with your family or your friends because of pressure of work? (Professional 3)

Crosstab

			shift		Total
			Night	Day	
Professional3	often	Count	11	25	36
		% within Professional3	30.6%	69.4%	100.0%
		% within shift	44.0%	100.0%	72.0%
	sometimes	Count	14	0	14
		% within Professional3	100.0%	.0%	100.0%
		% within shift	56.0%	.0%	28.0%
Total	Count		25	25	50
	% within Professional3		50.0%	50.0%	100.0%
	% within shift		100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	19.444 ^a	1	.000		
Continuity Correction ^b	16.766	1	.000		

Likelihood Ratio	24.999	1	.000		
Fisher's Exact Test				.000	.000
N of Valid Cases	50				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.00.

b. Computed only for a 2x2 table

Interpretation: under this it is observed that p value comes to be 19.444 which are more than .001 alpha levels so for this reason we fail to accept null hypothesis so there is significant relation between doctors working in shift and pressure of work.

Findings:

- There is significant difference on personal and professional life of doctors working in day and night shifts.
- There is significant impact of shift on marital status of doctors.

Conclusion:

There was a time when the boundaries between work and home were fairly clear. Today, however, work is likely to invade your personal life — and maintaining work-life balance is no simple task. This might be especially true if you're concerned about losing your job due to restructuring, layoffs or other factors. Work and home life are both necessary, but they should be fulfilling and satisfying. To achieve not only balance but also peace, fulfillment, and happiness in your life, know yourself, take action, and maintain as much control over both work and home as possible.

REFERENCES

➤ BOOKS

- Drafke , Michael.,(2008), “ The Human Side Of Organization”, 9th Edition , Pronticle Hall Of India Pvt Ltd , New Delhi,pp . 304
- Krishnaswamy, K.N.,Shivakumar,Eyer,Appa.,(2006), “Management Research Methodology”, Dorling Kindersley India Pvt Ltd, New Delhi,pp.76,110

- Gupta, C.B., Gupta, Vijay.,(2010), “An Introduction To Statistical Method”, Vikas Publication House Pvt Ltd , New Delhi,pp.32-34

➤ **JOURNALS**

- Atkinson,M., Turkel,M. & Cashy,J. (2008) Overcoming Barriers to Research in a Magnet Community Hospital. Journal of Nursing Care Quality,Volume 23, Issue Number 4 ,Pages 362 – 368
- Bakker, A.B., Demerouti,E., Burke,R (2009) Workaholism and Relationship Quality: A Spillover–Crossover Perspective. Journal of Occupational Health Psychology 2009, Vol. 14,Issue No. 1, 23–33
- Brough,P., Holt,J., Bauld,R., Biggs,A., & Ryan,C. (2008) The ability of work–life balance policies to influence key social/organisational issues.
- Buddeberg,B., Fischer, Stamm,M., Buddeberg,C., Bauer,G., Hämmig,O.,Knecht,M ., & Klaghofer,R. (2010) The impact of gender and parenthood on physicians’ careers - professional and personal situation seven years after graduation.Buddeberg-Fischer . BMC Health Services Research 2010, 10:40
- Duvendack, Christine (2010)Correlation of work-life balance decisions of different generations of physicians. Source: DAI-B 71/05, p, Nov 2010 Source Type: Ph.D. Subjects: Management; Organizational behavior; Health care management Publication Number: 3403222
- Felstead,A., Jewson,N., Phizacklea.A., Walters,S. (2006) Opportunities to work at home in the context of work-life balance. Human Resource Management Journal, Volume 12, Issue 1, pages 54–76, January 2002.
- Gangadhar,Ashwin. Dash, Mchis.(2012), Perception of work life balance among Professionals. The IUP Journal of Organizational Behavior ,Volume 11, Issue1, Page 51, January 2012.
- Girard,M. (2010) Effects of Non-standard Work on the Work-family Balance.McGill Sociological Review, Volume 1 ,(January 2010): 46–58
- Malik,M.I., Zaheer,A., Khan,A. & Ahmed,M. (2010), Developing and Testing a Model of Burnout at Work and Turnover Intensions among Doctors in Pakistan. International Journal of Business and Management Vol. 5, No. 10; October 2010 234
- Mayala,kumar,Ramesh. Chiluka,Nagapriya.(2012), Worklife balance among teachers. The IUP Journal of Organizational Behavior ,Volume 11, Issue1, Page 37, January 2012.

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