

Influence of work-life balance on the happiness quotient of doctors

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ABSTRACT

Background: An essential component in life is happiness, which is an excellent motivator of people's choices and actions. Health care professionals have had an arduous task in their hands, causing an increase in stress levels. Achieving a work-life balance is an important aspect of a doctor's life.

Aim and Objective: To assess the impact the work-life balance of doctors on their happiness quotient as they constantly undergo work-family conflict (WFC) and family-work conflict (FWC)

Methodology: The study included 300 clinical doctors to whom the surveys were sent. The response to the WFC (5-item), FWC (5-item) and subjective happiness (SH) (4-item) scale were measured using a 7-point Likert scale. Data was analyzed using SPSS and AMOS software, considering $p \leq 0.05$ as significant.

Results: Greater number of doctors were neither satisfied nor dissatisfied with the work (n=66, 32.0%), dissatisfied with the flexibility in working hours (n=80, 37.9%) and dissatisfied with the payment received for working overtime (n=47, 22.3%). Significant difference in mean scores of WFC2, WFC3, FWC2, SH1, SH2 and SH4 with the satisfaction level of respondents concerning the working hour schedule, flexibility in working hours and over time compensation was observed ($p < 0.05$). The statistical fitness of the construct was good.

Conclusion: The results indicate that FWC and WFC are related and cause a rise in stress levels in doctors. However, the SH stated majority were satisfied with their current situation.

Keywords: Family conflict, Happiness, Health personnel, Surveys and questionnaires, Work-life balance

INTRODUCTION

One of the most essential components in life is happiness and it is an excellent motivator of people's choices and actions.^[1] Happiness is characterized by experiencing positive emotions while it being simultaneously perceived as virtuous, meaningful and worthwhile in an individual's life.^[2] In addition to this, one important aspect in human life recognized by the United Nations is pursuit of happiness.^[3]

In 2017, the World Health Organization reported that heightened productivity and consistency at work is because of one's happiness.^[2] The core of every health system stands well-grounded due to the health workforce and healthcare professionals are a major part of it.^[4]

Resources like attention, energy and time cannot be extended beyond a certain point. However, certain professions do go beyond the stipulated schedule and extra demand of any or some of the above-mentioned resources, thereby causing stress. Optimal distribution of these resources leads to a balanced work-life. Regardless of one's profession, time is an essential factor which cannot be extended by any means.^[5]

With the ongoing coronavirus-2019 pandemic, health care professionals have had an arduous task in their hands namely longer working hours, unfavorable environmental conditions, heavy inflow of infected patients in the hospital, fear of infecting the virus themselves, looking at death daily, unsatisfactory work life affecting their personal lives etc. A doctor's life, in simple terms, is hectic with odd working hours along with tremendous work pressure having to deal with saving lives. However, with their chosen career, job satisfaction does not necessarily mean happiness.

A doctor's responsibility towards family is equally important, and it increases with additional number of dependents (spouse, children, parents) including unprecedented situations. This causes increase in stress levels. Achieving a work-life balance leads to satisfaction on part of one's life, thereby providing a satisfying experience in life.^[6]

Therefore, this study aimed to evaluate the impact the work-life balance of doctors on their happiness quotient as they constantly undergo work-family conflict (WFC) and family-work conflict (FWC) given their professional demands.

REVIEW OF LITERATURE

Since an individual is required to execute multiple responsibilities at work and in family, time has to be utilised optimally. If the work hours are fixed, one adjusts the multiple roles and creates a balance but if the work hours are varied and not fixed, it is likely to cause stress. Valcour (2007) studied the effect of three variables- out of which one was working hours- on the work life balance satisfaction and found that there is adverse impact of working hours on satisfaction which disturbs the work life balance.

On the contrary certain studies reported that more hours of working and over-time are not related to employee satisfaction. Holly and Mehnen (2012) reported that overtime and longer work hours have positive impact on employees' job satisfaction and on the contrary reduced working hours have a negative effect on life satisfaction and job and the total number of hours by which individuals intend to rationalise their work hours is especially guided two considerations viz, overtime compensation and working conditions.

Greenhaus and Beutell (1985) identified three types of conflicts viz: time based conflict, resulting out of the time required to fulfil the roles of both domains (work and family); strain-based conflict, resulting out of negative emotions and fatigue due to roles being performed in family and work domain and; behaviour-based conflict resulting from the expectations and required behaviour in one role which influences the other domain of an individual. Time based conflict has been the centre-point of research as the working hours interfere with the time left for family and leisure for an individual (Crompton & Lyonette, 2006).

In medical profession, time is especially important as the occurrence of a medical emergency is unpredictable. A patient might undergo labour pain during odd hours of the night and the doctor has to respond to the patient's call in case of a private clinic and in case of a job, the shift duties are specified which again call for night shifts atleast once in a week on rotation basis. Insufficient sleep due to untimely calls can have repercussions on the health of healthcare professionals and a person who is sleep deprived can also put others in danger (Caruso, 2014). There is an intensified risk of anxiety and depression among females as compared to males if put on long working hours (Virtanen et al., 2011).

The female doctors have to leave behind their children, may have to compromise with a number of roles in their family to meet the demand of their profession. Ghislieri et al. (2017); Lagerström (2010) studied the inconvenient working hours of nurses (which is also related to medical profession), which involves odd working hours, shifts, role strain and how the duration of their work hours affects their family life.

Working hours significantly influence work family conflict scale and Time-Based Work Interference with Family and confirmed that working hours have an interference with individual's time available for leisure and family (Gonnelli, 2018).

Uehata (1991) analyzed 203 reasons of demise among employees who received worker compensation and found that majority cases succumbed to stroke and later death due to long working hours.

METHODOLOGY

Study design

This survey based cross-sectional study was conducted at tertiary care centres in three private medical college hospitals of Uttar Pradesh, India. Approval from the Institutional Ethics Committee along with written informed consent from the patients participating in the study were acquired before the commencement of the study.

Study subjects

Through convenience sampling, this present study included 300 clinical doctors to whom the surveys were sent. The response rate was 68.7% (n=206). The study included doctors who had family responsibilities and had roles required to fulfil them. Doctors who did not meet the pre-established criteria of being married and having at least one dependent in the family were excluded from the study.

Study procedure

This survey-based study included the following particulars:

Measures

The FWC and WFC scale employed as per Netemeyer et al., where the responses to the following 10 items were assessed on a 7-point Likert scale (1 for extremely dissatisfied and 7 for extremely satisfied):^[7]

Work-Family Conflict Scale

- WFC 1: “The demands of my work interfere with my home and family life”
- WFC 2: “The amount of time my job takes up makes it difficult to fulfil family responsibilities”
- WFC 3: “Things I want to do at home do not get done because of the demands my job puts on me”
- WFC 4: “My job produces strain that makes it difficult to fulfil family duties”
- WFC 5: “Due to work-related duties, I have to make changes to my plans for family activities”

Family-Work Conflict Scale

- FWC 1: “The demands of my family or spouse/partner interfere with work-related activities”
- FWC 2: “I have to put off doing things at work because of demands on my time at home”
- FWC 3: “Things I want to do at work don't get done because of the demands of my family or spouse/partner”
- FWC 4: “My home life interferes with my responsibilities at work such as getting to work on time, accomplishing daily tasks and working overtime”
- FWC 5: “Family-related strain interferes with my ability to perform job-related duties”

Subjective Happiness (SH) Scale

This scale comprises of the following 4 items that were measured using a 7-point Likert scale (1 for extremely dissatisfied and 7 for extremely satisfied):^[8]

- SH 1: “In general, I consider myself a very happy person”
- SH 2: “Compared to most of my peers, I consider myself happier”
- SH 3: “Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?”
- SH 4: “Some people are generally not very happy. Although they are not depressed, they never seem as happy as they might be. To what extent does this characterization describe you?”

Statistical analysis

Data was analyzed using SPSS and AMOS software. Different perceptions of the doctors with different demographics was analyzed by one-way analysis of variance (ANOVA) test. The reliability and validity of the construct was assessed. Cronbach Alpha Statistic

ensured the presence of internal consistency reliability. The construct validity was measured by average variance extracted (AVE), average shared variance (ASV), composite reliability (CR) and maximum shared variance (MSV). $p \leq 0.05$ was considered as significant.

RESULTS

Of the 206 respondents, majority of them belonged to the age group 35-45 years ($n=89$, 43.2%), followed by >45 years ($n=60$, 29.1%) and 25-35 years ($n=57$, 27.7%). There were 118 (57.3%) females and 88 males (42.7%) in this study. Greater number of doctors were neither satisfied nor dissatisfied with the work ($n=66$, 32.0%), dissatisfied with the flexibility in working hours ($n=80$, 37.9%) and dissatisfied with the payment received for working overtime ($n=47$, 22.3%) (Table 1).

Table 1: Doctor's perception towards working schedule

Category	Response – No. of Doctors (%)						
	Extremely dissatisfied	Highly dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Highly satisfied	Extremely satisfied
Work hours	2 (1)	8 (3.9)	19 (9.2)	66 (32.0)	62 (30.1)	35 (17.0)	14 (6.8)
Flexibility in working hours	26 (12.3)	54 (25.6)	80 (37.9)	26 (12.3)	12 (5.7)	4 (1.9)	4 (1.9)
Paid overtime	4 (1.9)	31 (14.7)	47 (22.3)	42 (19.9)	43 (20.4)	30 (14.2)	9 (4.3)

Descriptive statistics concerning WFC, FWC and SH inferred that the level of skewness and kurtosis was within acceptable limits (Table 2).

Table 2: Descriptive statistics for the study measures

Variables	Score (Mean±SD)	Skewness	Kurtosis
WFC 1	4.646±1.23	-0.198	-0.106
WFC 2	4.704±1.04	0.091	0.547
WFC 3	3.947±0.79	0.271	0.627
WFC 4	5.053±0.98	-0.046	-0.184
WFC 5	0.501±1.01	-0.125	-0.060
FWC 1	5.29±1.07	-0.33	-0.09
FWC 2	4.82±1.16	-0.06	-0.59
FWC 3	4.77±1.19	-0.20	0.24
FWC 4	4.26±1.54	-0.02	-0.70
FWC 5	4.50±1.26	-0.417	-0.098
SH 1	4.966±1.26	-0.309	0.337
SH 2	4.228±0.973	0.553	0.587
SH 3	3.665±1.01	0.084	-0.779
SH 4	4.495±1.071	0.085	-0.695

FWC – Family Work Conflict; WFC – Work Family Conflict; SH – Subjective Happiness.

The difference in the mean scores of WFC2, WFC3, FWC2, SH1, SH2 and SH4 with the satisfaction level of respondents concerning the working hours and over time compensation was significant ($p<0.05$). The different perceptions of doctors concerning the study measures with regards to working hours and over time compensation is listed in Table 3.

Table 3: One-way ANOVA for the study measures with respect to working hours and over time compensation

Variables	Response – Score (Mean±SD)							p value
	Extremely dissatisfied	Highly dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Highly satisfied	Extremely satisfied	
WFC 1	4.75±1.50	4.87±0.99	4.98±1.07	4.67±1.28	4.21±1.35	4.47±1.41	4.67±0.71	0.101
WFC 2	5.0±0.82	4.64±0.84	4.62±1.03	4.69±0.92	4.7±1.18	5.2±1.06	3.67±0.71	0.009*
WFC 3	4.0±0.81	3.71±0.78	4.21±0.86	4.17±0.76	3.73±0.65	3.9±0.84	3.44±0.53	0.006*
WFC 4	4.75±0.50	4.81±0.91	5.21±0.86	5.05±1.06	4.97±1.14	5.13±1.01	5.33±0.71	0.580
WFC 5	4.75±0.50	4.87±1.08	5.19±0.87	5.12±1.02	5.0±1.07	4.67±1.15	5.22±0.44	0.349
FWC 1	5.50±1.00	5.52±0.85	5.40±1.41	5.29±1.09	5.3±0.96	5.07±0.74	4.44±0.73	0.171
FWC 2	5.75±0.63	4.87±0.25	4.49±0.13	4.67±0.15	5.05±0.16	5.40±0.24	3.67±0.23	0.000*
FWC 3	4.75±1.71	4.77±1.14	4.87±1.07	4.88±1.02	4.77±1.51	4.60±1.22	4.22±0.67	0.785
FWC 4	5.25±1.50	4.06±1.73	4.11±1.68	4.38±1.48	4.28±1.40	4.30±1.49	4.44±1.24	0.807
FWC 5	4.50±1.00	4.1±1.11	4.68±1.04	4.31±1.38	4.91±1.41	4.43±1.33	4.22±0.67	0.115
SH 1	5.00±0.0	5.19±0.65	5.17±0.89	4.67±1.03	4.95±0.81	5.00±0.79	4.44±0.53	0.035*
SH 2	3.75±0.95	4.45±0.77	4.70±1.08	4.14±0.97	4.00±0.95	3.96±0.81	3.55±0.53	0.001*
SH 3	3.25±0.96	3.58±1.02	3.81±0.95	3.93±1.11	3.39±0.93	3.43±0.44	4.22±1.02	0.058
SH 4	3.50±0.57	3.97±1.02	4.36±0.96	4.95±1.21	4.55±1.0	4.77±0.86	4.11±1.16	0.001*

*Significant ($p<0.05$). FWC – Family Work Conflict; WFC – Work Family Conflict; SH – Subjective Happiness.

The difference in the mean scores of WFC2, WFC3, FWC2, SH1, SH2 and SH4 with the satisfaction level of respondents concerning the flexibility in working hours was significant ($p<0.05$). The different perceptions of doctors concerning the study measures and flexibility in working hours is listed in Table 4.

Table 4: One-way ANOVA for the study measures and flexibility in working hours

Variables	Response – Mean±SD							p value
	Extremely dissatisfied	Highly dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Highly satisfied	Extremely satisfied	
WFC 1	4.12±1.21	4.23±1.91	4.20±1.76	4.23±1.23	4.11±1.12	4.65±1.40	4.67±0.71	0.101
WFC 2	5.20±0.82	4.21±0.81	4.81±1.03	4.32±0.93	4.69±1.18	5.22±1.03	3.34±0.71	0.009*
WFC 3	4.45±0.82	3.56±0.72	4.21±0.86	4.17±0.76	4.0±0.66	3.67±0.83	3.23±0.53	0.006*
WFC 4	4.34±0.50	4.46±0.90	5.21±0.89	5.04±1.34	4.97±1.35	5.13±1.18	5.33±0.82	0.580
WFC 5	4.75±0.50	4.87±1.08	5.19±0.87	5.12±1.02	5.23±1.06	4.67±1.15	5.32±0.43	0.349
FWC 1	4.50±1.0	4.72±0.85	5.57±1.40	5.19±1.08	5.45±0.96	5.09±0.74	4.45±0.73	0.171
FWC 2	5.98±0.55	4.67±1.20	4.49±1.82	4.67±0.15	5.05±0.16	5.40±0.24	3.67±0.23	0.000*
FWC 3	4.23±1.71	4.56±1.15	4.87±1.07	4.98±1.02	4.10±1.51	4.89±1.22	4.0±0.56	0.530
FWC 4	5.25±1.5	4.06±1.73	4.11±1.68	4.38±1.48	4.28±1.4	4.3±1.49	4.44±1.24	0.807
FWC 5	4.50±1.0	4.1±1.11	4.68±1.04	4.31±1.39	4.91±1.41	4.43±1.33	4.46±0.56	0.115
SH 1	5.00±0.52	5.17±0.68	5.17±0.89	4.44±1.13	4.23±0.85	5.12±0.78	4.23±0.52	0.035*
SH 2	3.73±0.95	4.43±0.76	4.79±1.08	4.14±0.97	4.00±0.95	3.97±0.81	3.55±0.53	0.001*
SH 3	3.25±0.96	3.58±1.02	3.81±0.95	3.51±1.10	5.39±0.93	4.11±0.44	4.22±1.05	0.058
SH 4	3.50±0.57	3.97±1.02	4.30±0.86	4.01±1.27	4.04±1.52	4.77±0.86	4.11±1.17	0.001*

*Significant ($p < 0.05$). FWC – Family Work Conflict; WFC – Work Family Conflict; SH – Subjective Happiness.

Cronbach Alpha concerning the study measures ensured that internal consistency reliability exists in the constructs. Convergent validity was confirmed by CR and AVE measures. Since the AVE is higher than MSV and ASV, discriminant validity of the construct is present (Table 5).

Table 5: Analysis for reliability and validity of the construct

Measures	Cronbach Alpha	CR	AVE	MSV	ASV
Work-family conflict	0.945	0.946	0.636	0.008	0.003
Family-work conflict	0.956	0.942	0.638	0.007	0.005
Subjective happiness	0.913	0.927	0.618	0.006	0.002

AVE - Average Variance Extracted; ASV - Average Shared Variance; CR - Composite Reliability; MSV - Maximum Shared Variance.

Effects of the constructs concerning the study measures are depicted in **Figure 1**.

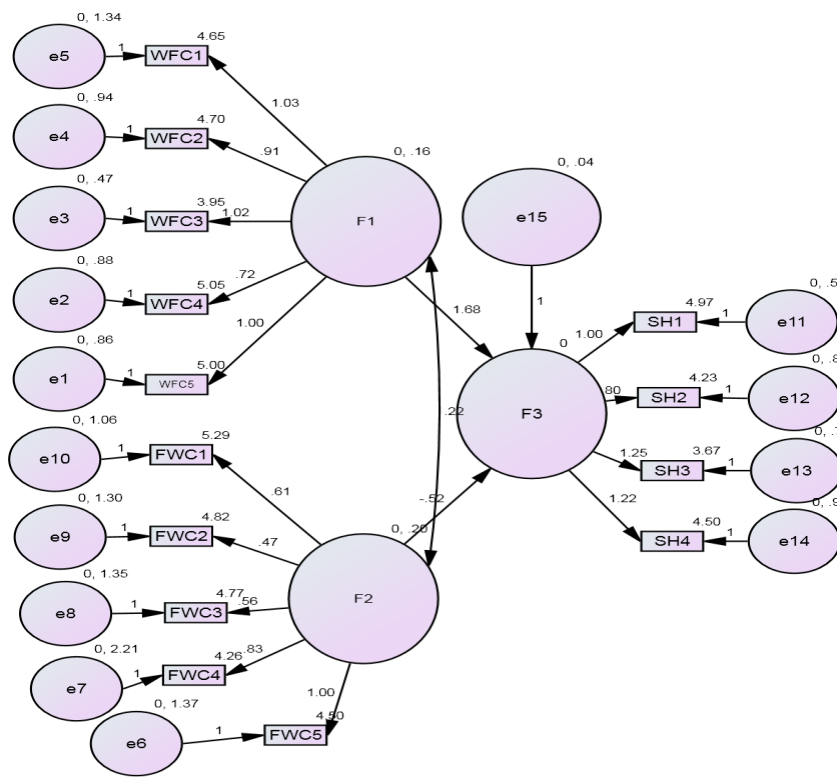


Figure 1: Confirmatory Factor Analysis

FWC – Family Work Conflict; WFC – Work Family Conflict; SH – Subjective Happiness.

In this study, the standardized regression weight of all the variables was >0.7, proving that each item of the construct significantly represented the part of WFC. The standardized regression weights represent the correlation between the measured variable and the construct. In the WFC, conflict the standardized β of the variable “WFC2” was the highest, whereas in FWC, “FWC2” and in SH, “SH4” was the highest (Table 6).

Table 6:Regression coefficients of the study measures

Variables	Standardized Regression Weight	Unstandardized Regression Weight	CR	pvalue*	Multiple Correlation (%)
WFC1	0.334	1.031	3.153	0.002	55.7
WFC 2	0.348	0.905	3.235	0.001	73.5
WFC 3	0.512	1.023	3.936	0.000	67.6
WFC 4	0.292	0.720	2.883	0.004	61.9
WFC 5	0.395	1.000	-	0.000	67.1
FWC 1	0.256	0.610	3.638	0.000	75.7
FWC 2	0.181	0.467	2.776	0.006	82.5
FWC 3	0.213	0.564	3.167	0.002	67.6
FWC 4	0.243	0.467	3.505	0.000	73.3
FWC 5	0.357	0.610	-	0.000	77.2
SH 1	0.450	1.000	-	0.000	67.3
SH 2	0.319	0.804	3.583	0.000	65.7

SH 3	0.476	1.249	4.699	0.000	67.6
SH 4	0.438	1.217	4.469	0.000	61.2

*Significant. FWC – Family Work Conflict; WFC – Work Family Conflict; SH – Subjective Happiness.

The statistical fitness of the construct was analyzed with the help of Goodness and Badness of Fit indices (Table 7).

Table 7: Model fitness indices

Goodness of Fit Indices				Badness of Fit Indices		
CFI	GFI	AGFI	NFI	RMSEA	LO 90	HI 90
0.96	0.95	0.95	0.98	0.08	0.111	0.139

AGFI, Adjusted Goodness of Fit Index; CFI, Comparative Fit Index; GFI, Goodness of Fit Index; NFI, Normed Fit Index; RMSEA, Root Mean Square Error of Approximation.

One way ANOVA analysis with respect to the participants' age and gender and gender in relation to the study measures is depicted in Table 8.

Table 8: One way ANOVA- Demographic variables with respect to study measures

Variables	WFC Mean±SD	F statistic	FWC Mean±SD	F statistic	SH Mean±SD	F statistic
Gender		1.214		1.121		1.100
Male	6.51±1.0		6.51±1.0		6.51±1.03	
Female	4.73±1.21		4.73±1.56		4.73±1.14	
Respondents' Age		1.200		1.001		1.021
25-35	3.35±1.13		3.35±1.13		3.35±1.02	
35-45	4.44±1.34		4.44±1.78		4.34±1.34	
45 and above	4.43±1.14		4.43±1.14		4.03±1.0	

DISCUSSION

Maintaining the right balance between family and work is a vital task, regardless of one's profession. However, it takes a major toll on professionals in the health care sector due to their hectic work schedule. Hence, this study aimed at exploring the effect of various factors on the work life of balance of doctors tertiary care centres in Dehradun, Moradabad and Kanpur, in the states of Uttarakhand and Uttar Pradesh.

In this study, majority of the doctors were neither satisfied nor dissatisfied with the working hours and were dissatisfied with both working hour flexibility and for the payment received for working overtime. However, these responses are subjective depending upon the psychological impact the job has in one's life. Few doctors are very determined to their job right and could have a well-balanced family life alongside. However, there are still a few who would still take time to adapt to their busy schedule. The age distribution observed in the study could be one other reason for this subjectivity.

On a 7-point Likert scale, highest scores for the responses received from the doctors were for the statements "WFC 4", "FWC 1" and "SH 1". The responses are again subjective as

explained earlier, however, they are in alignment with previously conducted research stating that quantitative job demands *i.e.*, high workload and working under constant pressure are significant predictors of WFC and are also positively related.^[9-13] Razak et al. also reported a significant interference from families with work-related activities which underlines the pertinence of negative work-life balance as an existing stress factor for doctors.^[14]

The stress the doctors undergo due to their demanding profession, along with the incompatibility between family and work life is likely to affect their work accomplishment, and more importantly the overall quality of medical care.^[15-17] However, in spite of the responses received with respect to FWC and WFC in this study, majority of the doctors expressed being a happy person in general, suggesting an optimal work-life balance ensuring that both family and work are given equal attention and more importantly their joyful experience allying the two.

A significant difference was observed in the mean scores between the doctors' perception towards working schedule and WFC, FWC, SH variables for responses such as "*WFC 2*", "*WFC 3*", "*FWC 2*", "*SH 1*" and "*SH 4*".

The responses received in this study might not be very surprising in terms of medical professional settings. It is mainly because of the intensification of workload over time to provide a better healthcare system to the society.^[13] In few instances, negativity within oneself affects the WFC, FWC and SH, playing a stronger role in connection with strain-based conflict. Negative affect was also reported as a strong predictor of conflict, which finally impacts work and family life in a negative manner.^[18]

Cronbach Alpha (>0.9) concerning the study measures ensured a good internal consistency reliability for this construct, with similar observations reported in a study conducted by Fuss et al. aimed at evaluating working conditions and WFC in German hospital physicians and Nübling et al. aimed to evaluate psychological stress and strain at work.^[17,19] Also, a high (>0.9) goodness fit index and low (<0.15) badness fit index were observed, inferring that the model used is a good fit.

Longer unpaid working hours take a toll on the physical and mental health of employees that is directly related to frustration and stress.^[20] Therefore, longer working hours, especially if doctors are not compensated rationally, can become a major factor in promoting physical and mental stress thereby affecting the work-life balance.

Few limitations of the study are smaller sample size, single-centred study, psychological impact of stress factors was not studied extensively and could not follow-up on the responses regularly in few cases. Future studies overcoming these limitations must focus on concentrating on one variable that rises stress levels amongst majority of the physicians. However, a general awareness about this issue must be raised to warrant the happiness quotient of doctors.

CONCLUSION

Our findings suggest that FWC and WFC are related and cause a rise in stress levels in doctors. However, the SH stated majority were satisfied with their current situation. Majority of the doctors were neither satisfied nor dissatisfied with the working hours and were dissatisfied with both the working hour flexibility and for the payment received for working overtime. Results of one-way ANOVA indicated that 6 out of 14 variables have a significant impact on WFC, FWC and SH of doctors. The model employed for the study was also a good fit.

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