

# Work shift and women's health in hotels in Ile-Ife, Osun State, Nigeria

## Abstract

The study examined the influence of work shift on women's health in the hospitality industry. A purposive sampling technique was employed to select 65 hotel workers, who were female and were working on shift. The study relied on primary data which was collected through self administered questionnaire. The questionnaire was carefully structured into three sections namely; socio-economic characteristics, current work shift, and influence of the current work shift on women's health. Data collected were summarized and described using frequency counts and percentages. The hypotheses were tested using correlation analysis to determine the significant relationship between work shift and women's health while ANOVA was also employed to determine the significant difference in the influence of work shift on women's health between day and night shifts. Findings revealed that most (70.8%) of the respondents were between the ages of 18 and 33 years while more than half (56.9%) were married. Half (50.8%) of the youngest dependent children were less than 10 years old. However, about 44% of the respondents belonged to the junior cadre earning less than N20,000. 58.5% of the respondents were on day shift while 41.5% were on Night shift. Respondents complained of back pains (70.7%), lack of sound sleep (96.9%), irritation (92.3%), fatigue or anxiety (89.2%), absenteeism (84.6%), reduction in speed and accuracy (87.7%), and health and safety risk (60.0%) while on shift. It was further revealed that work shifts had a significant relationship with women's health in the hospitality industry ( $r= 0.269$ ,  $p<0.05$ ). Also, there was a significant difference in the influence of work shifts on women's health ( $F=4.907$ ,  $p<0.05$ ) between day and night shifts. Based on the findings, the study recommended that the impact of work shift on health should be considered before placing women on shift in the hospitality industry.

**Keywords:** work shift; women's health; hospitality industry; night shift; day shift

## Introduction

In the recent years, the proportion of women in the paid labour force has increased dramatically.<sup>1</sup> According to International Labour Organization,<sup>2</sup> global female labour force participation rate was 49.6%. The number of Women's visible presence in paid employment has stimulated reflections on how their health should be protected, and, in turn, on how gender affects their health related to work.<sup>1</sup> Similarly, International Labour Organization<sup>3</sup> asserted that the increasing percentage of women in the labor force has led to a series of gender-related questions about the different effects of work-related risks on men and women. In the hospitality industry, shift and night work are common.<sup>4,5</sup> Different shift work systems have potentially different impacts on the health of the workforce by disturbing the circadian rhythm, an essential biological function, in different ways, and also inducing sleep deprivation.<sup>6</sup> In addition to shift-work schedules, other factors such as individual characteristics, family situation, social conditions, and working conditions can affect tolerance to shift work and night work.<sup>7-10</sup> Like most of the other types of work schedule, shift work encompasses a variety of different work patterns. Shift work refers to a system of working in which one group of workers replaces another during the workday so that the number of operating hours exceeds the work hours of any particular individual.<sup>11</sup> Shift systems that operate 24hours a day, 7days a week are known as continuous; those that stop at the weekend are semi-continuous; and those that stop for a period during weekdays as well as at the weekend are discontinuous. A distinction is also made between rotating systems in which workers periodically change from one shift (e.g., morning

shift) to another (e.g., night shift) and permanent systems in which workers only work one type of shift (e.g., a morning shift or a night shift).

Shift systems are known to be associated with a variety of psychosocial and physiological problems that can affect the health of workers. Although an ideal shift system does not exist, a holistic approach comprising education of managers, employees and their families can ameliorate some of the health consequences.<sup>10</sup> Kim et al.,<sup>12</sup> found that night and rotating shift work status was associated with health related quality of life of economically active women. Similarly, International Labour Organization (2009) stated that specific hazards and risks women face are associated with the working conditions of the economic sectors in which they are active. However, occupational safety and health (OSH) hazards affecting working women have been traditionally under-estimated<sup>13</sup> and focus is now on removing risks from workplaces rather than excluding women from hazardous occupations.<sup>2</sup> Psychological effects of longer work hours were shown to be greater than physiological effects. Van der Hulst<sup>14</sup> also found that there was evidence of a relationship between long work hours and adverse health. Although there was evidence of both physiological changes and changes in health behaviour resulting from long work hours, Van der Hulst concluded that there was greater support for a physiological recovery mechanism than a lifestyle mechanism. Akerstedt et al.,<sup>15</sup> interviewed a Swedish population sample of 58,000 individuals; and found that shift work was a predictor for sleep disturbance and overtime work was a predictor for fatigue. In a review of long working hours, White et al.,<sup>16</sup> reached the conclusion

that the evidence supports a link between long work hours and fatigue. Also, a number of studies have reported increased incidence of gastrointestinal disorders (including appetite disturbance, abdominal pains, and peptic ulcer) in shift workers.<sup>8</sup> There are a number of possible explanations including changes to neuroendocrine functions due to altered sleep patterns, changes to meal times (which can act as circadian synchronizers), and changed content of meals (including increased carbohydrate intake).

Shift work and long work hours have also been linked with increased risk of cardiovascular diseases.<sup>16,17</sup> Based on an assessment of 17 studies that have examined the risk for shift workers, Boggild et al.,<sup>18</sup> estimated that male and female shift workers have a 40% increase in cardiovascular disease risk. The risk may be further influenced by dietary differences and increased smoking in shift workers.<sup>18,19</sup> In relation to women's health, a number of studies have linked night work to increased risk of breast cancer<sup>20-22</sup> and colorectal cancer.<sup>23</sup> In relation to breast cancer, research has found that the increase in risk for night workers may be as high as 50 to 60% and that the risk depends on dosage of night work (in terms of both number of night shifts worked per week and years of employment on night work). The explanation for the link is thought to be that melatonin production is suppressed by exposure to light during night work, and the suppressed melatonin level enhances tumor development. Furthermore, shift work has been linked to higher rates of menstrual problems<sup>24</sup> and, in some but not all relevant studies, to higher risk of adverse pregnancy outcome such as preterm birth, low birth weight, and miscarriage.<sup>17,25,26</sup>

In Nigeria, subsection (1) of Section 55 of the Nigeria Labour Act states that "no woman shall be: employed on night work in a public or private industrial undertaking or in any branch thereof, or in any agricultural undertaking or any branch thereof" with the exception of health workers.<sup>27</sup> Contrarily, U.S. Congress<sup>28</sup> listed Nigeria among the six countries that have no national regulation of Night or Shift work. Currently, many employers engage the services of women in ways that contravene the Nigeria Labour Act. Women work different shifts, including night shifts, in the hospitality and tourism industry. Although there are a number of studies investigating women in various industries, there is currently little research devoted specifically to women in the hospitality sector.<sup>29</sup> Given the growing academic interest in the working conditions in the hospitality industry<sup>30</sup> and the fact that women have little influence over factors that govern their working lives which appears to influence their health, the study therefore seeks to investigate the influence of work shift on women's health in the hospitality industry.

### Objectives of the study

The main objective of the study is to assess the influence of work shift on women's health in the hospitality industry. The specific objectives are as to:

- Assess the various work shifts among top ranking hotels in Ife Central Local Government Area, Ile-Ife,
- Assess the perception of women's health among female hotel workers,
- Examine the effect of work shift on women's health.

### Hypotheses of the study

Therefore, the study was based on the following hypotheses:

- $H_{01}$ : There is no significant relationship between work shift and women's health in the hospitality industry.
- $H_{02}$ : There is no significant difference in the perception of women's health between shift workers in the hospitality industry.

### Methodology

The study was carried out on Top hotels in Ife Central Local Government Area of Ile-Ife, Osun State, Nigeria. The city of Ile-Ife is located on the longitude 4.6N and 7.5°N, surrounded by hills and is about fifty miles (80.467kms) to Ibadan and Osogbo. The city is being ruled by 'Ooni' and the people are referred to as 'Ife'. Ile-Ife has 4 local government areas but only Ife central is mainly within the city while Ife North, Ife South and Ife East are on the outskirt of the city. According to Top Ten Businesses.<sup>31</sup> Kris Court Hospitality Limited, Cameron hotel, Hotel De treasure, Omilaj International Hotel, Abike Guest House, Best friends Hotel, Emerald Hotel, and Hilton Hotel are the top eight hotels in Ile-Ife. However, from the list, the two top ranking hotels in Ife Central are Kris Court Hospitality Limited and Cameron hotel. The study employed a quantitative research design that commenced with hypotheses related to the phenomenon being researched and tested with data gathered by questionnaire. The questionnaire was divided into three sections; Section I dealt with respondents' socio-economic characteristics, Section II dealt with the current work shift in the hotel, Section III was designed to provide information on influence of the current work shift on women's health while each item response categories ranged from "strongly agree" to "strongly disagree" on the Likert scale of 1 to 4. The population for the study comprised female staff of the top two hotels in Ife Central Local Government Area of Ile-Ife, that is, Kris Court Hospitality Limited and Cameron Hotel as listed in Top Ten Businesses.<sup>31</sup> The two hotels were purposefully selected from a list of Top ten hotels in Ile-Ife based on local government area, luxury of facilities and work shift type. Kris Court and Cameron hotels run a two shift system namely; day and night shifts. This provided the sample size of female staff members required for the study. The hotels used for the study comprised a total female staff population of 65. Purposive sampling techniques based on sex and work shift of the hotels' staff were used to determine the sample for the study. The valid data collected were described using descriptive statistical tools such as frequency counts, percentages and mean. Also, the hypotheses were tested with the use of Correlation Analysis. Data were computed and analyzed with Statistical Package for Social Sciences (SPSS) version 16 for windows.

### Results and discussion

#### Socio-economic characteristics of respondents

The results in Table 1 indicated that a larger number (38.5%) of the respondents was within the age group of 18 and 25years while the age group above 41years ranked least with 9.2percent. Also, most (56.9%) of the respondents were married while others were either single (33.8%) or divorced (9.2%). The lastborn of about half(50.8%) of the total respondents was under than 10years while only one woman (1.5%) had a lastborn above 29 years. Majority (64.6%) of the respondents was Christian and had Diploma/OND/ NCE level of education (40.0%). Furthermore, the female hotel staff that participated in the survey were mainly (44.6%) in Junior Staff Position earning less than ₦20,000(43.1%). Lastly, 53.8 percent of the participating women were working at Kris Court Hospitality Limited while 46.2% were working at Cameron Hotels. According to the

results in Table 2, more than half (58.5%) of the respondents were on Day Shift while 41.5% were on Night Shift.

**Table 1** Demographic characteristics of respondents

Variables	Frequency	Percent(%)
<b>Age in Years</b>		
18 - 25	25	38.5
26 - 33	21	32.3
34 - 41	13	20
42 and above	6	9.2
<b>Marital Status</b>		
Single	22	33.8
Married	37	56.9
Others	6	9.2
<b>Religion</b>		
Christianity	42	64.6
Islamic	17	26.2
Others	6	9.2
<b>Age of the Youngest Dependent Child in Years</b>		
None	25	38.5
Less than 10	33	50.8
10 - 19	4	6.2
20 - 29	2	3.1
30 and above	1	1.5
<b>Highest Level of Education</b>		
SSCE/WAEC/GCE	12	18.5
Diploma/OND/NCE	26	40
HND/ First Degree	25	38.5
Postgraduate Degree	2	3.1
<b>Position</b>		
Junior Staff	29	44.6
Midlevel Staff	24	36.9
Senior Staff	12	18.5
<b>Monthly Salary in Naira</b>		
Less than N20,000	28	43.1
N20,000 - N40,000	23	35.4
N41,000 - N60,000	10	15.4
N61,000 and above	4	6.2
<b>Hotel</b>		
Kris Court Hospitality Limited	35	53.8
Cameron Hotels	30	46.2

**Table 2** Distribution of respondents according to current work shift

Work shift	Frequency	Percent(%)
Day Shift(Morning / Afternoon Shift)	38	59
Night Shift	27	42
Total	65	100

### Distribution of respondents on influence of current work shift on women's health

The results in Table 3 revealed that majority (70.7%) of the respondents agreed that they had back pains when they were on shift. 83.1% of the women disagreed with the statement "I have infections such as cold and flu when I am on shift". More so, majority (96.9%) of the respondents agreed that they were unable to have a sound sleep whenever they were on shift. Also, majority (92.3%) of the women agreed that they feel irritated whenever they were on shift. Majority (89.2%) of the women agreed that they experienced fatigue or anxiety when they were on shift. Majority (84.6%) of the women agreed that they were usually absent from work whenever they were on shift. Majority (72.4%) of the women disagreed with the statement "the death of some hotel workers must have been caused by working on shift". Furthermore, majority (87.7%) of the women agreed that working on shift reduced their speed and accuracy. 66.1% of the respondents disagreed with the statement "they or someone had been diagnosed of breast cancer while working on shift". Lastly, 60.0% of the respondents agreed that work shift affected their health and safety.

### Test of hypothesis I

i.  $H_{01}$ : There is no significant relationship between work shift and women's health in the hospitality industry (Table 4).

### Relationship between work shifts and women's health

Table 5 reveals that correlation between work shifts and women's health was 0.269, and was significant at  $p<0.05$ . Considering the positive relationship, the findings therefore revealed that a comfortable work shift would have a positive impact on the woman's health and vice versa. This implies that work shift influences women's health in the hospitality industry. The result was in support of the observations made by authors such as<sup>6,10,20-23</sup> that shift system or shift work affects women's health in one way or the other.

### Test of hypothesis II

i.  $H_{02}$ : There is no significant difference in the perception of women's health between shift workers in the hospitality industry.

Analysis of variance (ANOVA) showing mean difference in the influence of work shift on women's health between work shifts in the hospitality industry. The results of ANOVA in Table 5 showed that there was a significant difference ( $F=4.907$ ) in the influence of work shift on women's health between day shift (mean= 1.84) and night shift (mean=2.00). Therefore, both day and night shifts have different influence on women's health in the hospitality industry. The results support the assertion made by IARC<sup>6</sup> that different shift work systems had potentially different impacts on the health of the workforce.

**Table 3** Distribution of respondents on influence of current work shift on women's health

Statements	Strongly Agreed	Agreed	Disagreed	Strongly Disagreed
I have back pains when I am on shift	22(33.8)	24(36.9)	15(23.1)	4(6.2)
I have infections such as colds and flu when I am on shift	2(3.1)	9(13.8)	29(44.6)	25(38.5)
I am unable to have a sound sleep whenever I am on shift	26(40.0)	37(56.9)	1(1.5)	1(1.5)
I feel irritated whenever I am on shift	27(41.5)	33(50.8)	4(6.2)	1(1.5)
I experience fatigue or anxiety when I am on shift.	24(36.9)	34(52.3)	7(10.8)	0(0.0)
I am usually absent from work whenever I am on shift	24(36.9)	31(47.7)	10(15.4)	0(0.0)
The death of some hotel workers must have been caused by working on shift.	10(15.4)	8(12.3)	17(26.2)	30(46.2)
This shift reduces my speed and accuracy	33(50.8)	24(36.9)	7(10.8)	1(1.5)
I or someone had been diagnosed of breast cancer while working on shift	5(7.7)	17(26.2)	19(29.2)	24(36.9)
This work shift affects my health and safety	13(20.0)	26(40.0)	19(29.2)	7(10.8)

**Table 4** Correlation analysis showing relationship between work shifts and women's health

Variables	R	r2	P-Value	Decision
Work Shifts	0.269	0.072	0.03	Significant

**Table 5** Analysis of variance(ANOVA) showing mean difference in the influence of work shift on women's health between work shifts in the hospitality industry

	Sum of Squares	Df	Mean square	F	Sig.
Between Groups	0.394	2	0.394	4.907	0.03
Within Groups	5.053	63	0.08		
Total	5.446	64			

## Conclusion

The study was conducted among women in the hospitality industry, specifically at the two (2) top ranking hotels in Ife central Local Government Area of Ile-Ife, Osun State, Nigeria. Also, information was collected with the aid of questionnaires on the socioeconomic characteristics of the respondents, current work shift and influence of the work shift on their health. The findings revealed that there was a significant relationship between work shifts and women's health in the hospitality industry; also, the influence of work shifts on women's health differed between work shifts in the hospitality industry. This shows that indeed, work shifts influence women's health in the hospitality industry and the nature of the influence depends on the type of the work shift (day or night shift).<sup>32</sup>

## Recommendations

Based on the findings, it is recommended that the impact of work shift on health should be considered before placing a woman on shift in the hospitality industry. Hospitality organizations should increase

the number of work shifts to enhance flexibility thereby reducing the number of hours spent on shift. In addition, management of hospitality outfits should endeavor to carryout risk assessment and implement control measures to minimise any possible adverse effects arising from a particular work shift. Also, shift workers themselves have a big role to play in promoting and maintaining their own health.

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## Conflict of interest

The author declares no conflict of interest.

## References

1. *Gender, Health and Work*. Switzerland: World Health Organisation; 2004.
2. *Providing safe and healthy workplaces for both women and men*. Switzerland: International Labour Organization; 2009. p. 1–8.

3. *Women at Work: Trends 2016*. Switzerland: International Labour Organization; 2016. p. 1–138.
4. *Guidance for Employers and Employees on Night and Shift Work*. USA: Health and Safety Authority; 2012. p. 1–48.
5. *Occupational Outlook Handbook*. US Bureau of Labor Statistics , USA: Department of Labor; 2005.
6. Shift Work. *IARC Monographs*. 2011;98:2.
7. Costa G, Lievore F, Casaletti G, et al. Circadian characteristics influencing interindividual differences in tolerance and adjustment to shift work. *Ergonomic*. 1989;32(4):373–385.
8. Costa G. The impact of shift and night work on health. *Applied Ergonomics*. 1996;27(1):9–16.
9. Knauth P. Designing better shift systems. *Applied Ergonomics*. 1996;27(1):39–44.
10. Knauth P, Hornberger S. Preventive and compensatory measures for shift workers. *Occup Med (Lond)*. 2003;53(2):109–116.
11. Totterdell P. *Work Schedules*. Source of work stress; 2004. p. 1–28.
12. Kim W, Kim TH, Lee TH, et al. The impact of shift and night work on health related quality of life of working women: findings from the Korea Health Panel. *Health Qual Life Outcomes*. 2016;14(1):162.
13. Forastieri V. *Information Note on Women Workers and Gender Issues on Occupational Safety and Health*. Switzerland; 2000.
14. Van der Hulst M. Long workhours and health. *Scand J Work Environ Health*. 2003;29(3):171–188.
15. Akerstedt T, Fredlund P, Gillberg M, et al. Work load and work hours in relation to disturbed sleep and fatigue in a large representative sample. *J Psychosom Res*. 2002;53(1):585–588.
16. White J, Beswick J. *Working long hours (WPS/02/10)*. UK: Health and Safety Laboratory; 2003.
17. Costa G. Factors influencing health of workers and tolerance to shift work. *Theoretical Issues in Ergonomics Science*. 2003;4(3-4):263–288.
18. Bøggild H, Knutsson A. Shift work, risk factors and cardiovascular disease. *Scand J Work Environ Health*. 1999;25(2):85–99.
19. Kivimaki M, Kuisma P, Virtanen M, et al. Does shift work lead to poorer health habits? A comparison between women who had always done shift work with those who had never done shift work. *Work & Stress*. 2001;15(1):3–13.
20. Davis S, Mirick DK, Stevens RG. Night shift work, light at night, and risk of breast cancer. *J Natl Cancer Inst*. 2001;93(20):1557–1562.
21. Hansen J. Increased breast cancer risk among women who work predominantly at night. *Epidemiology*. 2001;12(1):74–77.
22. Schernhammer ES, Laden F, Speizer FE, et al. Rotating night shifts and risk of breast cancer in women participating in the Nurses' Health Study. *J Natl Cancer Inst*. 2001;93(20):1563–1568.
23. Schernhammer ES, Laden F, Speizer FE, et al. Night-shift work and risk of colorectal cancer in the Nurses' Health Study. *J Natl Cancer Inst*. 2003;95(11):825–828.
24. Uehata T, Sasakawa N. The fatigue and maternity disturbances of night work women. *J Hum Ergol (Tokyo)*. 1982;11 Suppl:465–474.
25. Infante-Rivard C, David M, Gauthier R, et al. Pregnancy loss and work schedule during pregnancy. *Epidemiology*. 1993;4(1):73–75.
26. Mozurkewich EL, Luke B, Avni M, et al. Working conditions and adverse pregnancy outcome: A meta-analysis. *Obstet Gynecol*. 2000;95(4):623–635.
27. *Labour Act Chapter 198: Laws of the Federation of Nigeria*. USA: Labour Act; 1990. p. 1–40.
28. *Biological Rhythms: Implications for the Worker*. U.S. Congress, Office of Technology Assessment, USA: Government Printing Office; 1991. p. 1–251.
29. Masadeh M. Women in the Hotel Industry: What's missing from this Picture? *International Journal of Academic Research in Business and Social Sciences*. 2013;3(1):573–580.
30. Lo K, Lamm F. Occupational stress in the hospitality industry - an employment relations perspective. *New Zealand Journal of Employment Relations*. 2005;30(1):23–48.
31. *Top ten hotels in Ile-Ife*. Top Ten Businesses, USA; 2012.
32. Ijaz S, Verbeek J, Seidler A, et al. *Correlations between permanent night-shift work and/or recurring night-shift work and the development of breast cancer (Cancer Mammeae)*. Italy: Finnish Institute of Occupational Health; 2013. p. 1–130.