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Nurses at a County Referral Hospital in Kenya**



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## The Effect of Various Working Shifts on Social Wellness Among Nurses at a County Referral Hospital in Kenya

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### Abstract

**Purpose:** The purpose of this study was to investigate the relationship between shift work and the social health status among nurses at the selected County Referral Hospital in Kenya. Specifically, the study aimed to assess how different work shifts affected the nurses' social well-being, so as to provide an insight that can inform strategies to improve the overall health and job performance among the nurses.

**Methodology:** This was a descriptive cross-sectional study which was conducted among 167 nurses working in a county referral hospital in Kenya. The study adopted quantitative approach to collect data from the respondents using simple random sampling technique. Statistical package for social sciences (SPSS) version 27 software was utilized to compute descriptive statistics so as to generate mean scores for the various responses, with a mean score above 2.5 showing that the shift had a negative effect on the respondents' social health.

**Results:** The study findings showed that night duty and 12 hours shift had a negative effect on the respondents' social health, with most of them stating that the shifts led to marriage instabilities, being viewed by the community as promiscuous, family strains, and also being isolated by neighbours and friends. Others included being absent in some major social activities in the family / community and lack of time to interact with family members.

**Unique Contribution to Theory, Policy and Practice:** The study results demonstrate that night duty and the 12 hours shifts had a negative effect on the nurses' social health. Consequently, the senior management in the institution should prioritize implementing shorter shifts (6 or 8 hours) to improve nurses' overall wellness. There is also need to ensure a fair and structured shift rotation system to prevent prolonged night and 12-hour shifts. Mental health support, counselling services and stress management programs should also be enhanced to help nurses cope with the social effects of the long working shifts.

**Keywords:** *Nurses, Work Shifts, Social Health, Working Hours*

## 1.0 Introduction

Nurses form the backbone of healthcare service delivery, ensuring continuous patient care in both outpatient and inpatient settings. To meet the growing demand for 24-hour healthcare services, hospitals have adopted shift work schedules that extend beyond traditional daytime working hours.

The shifts include working on day and also at night. For example, a study conducted among 22275 nurses from 577 hospitals to analyze their shift length, scheduling characteristics, and reported safety and quality showed that 65% of the nurses were allocated the 12 to 13 hours shift while 26% of them were allocated the eight to nine hours shift. The results also showed that four percent of them were allocated the 10 to 11 hours shift while 5% of the nurses were working for more than 13 hours (Stimpfel and Aiken, 2013). On the same aspect, another study involving 2990 nurses in 48 hospitals in England showed that 33.0% of the nurses worked for eight hours or less, 13.8% worked for eight to 10 hours, 19.2% worked for 10.1 to 11.9 hours while 34.1% worked for more than 12 hours (Emmanuel et al, 2020).. Similarly, a study carried out in 12 European countries to assess the relationship between the 12 hours work allocation and the respondents' job satisfaction showed that 50% of the nurses worked for less than eight hours, 31% of them had worked for eight to 10 hours while 4% had worked from 10.1 to less than 12 hours. The results also showed that 14% of the nurses reported that they had worked for 12 to 13 hours, while less than one percent had worked for more than 13 hours (Dall'Ora et al, 2015). Another study on psychosocial effects related to working at night among nurses in Saudi Arabia which involved 1521 nurses showed that 75.1% of the participants were involved in rotating night shift work. In this case, they worked on night duty for a period between two to three days continuously and then changed to day duty. About 10.8% of the participants were allocated to work on continuous night shift for one week, whereas 14.1% worked on night shift when requested. Among the study participants, 15.5% of them said that they liked night shift work, 49.1% said they disliked the night shift, while 35.4% said that they preferred to work on night occasionally (Alsharari, 2019).

A cross-sectional study to determine the association between shift working and musculoskeletal symptoms among nurses in a general hospital in Tehran, established that 35.7%, 8% worked on night duty while 56.3% worked on rotating shifts (Attarchi et al, 2014). Another cross-sectional study among 31,627 registered nurses in general medical/surgical units in 488 hospitals in 12 European countries established that most (50%) of the nurses were working for eight hours or less, 32% worked between eight and ten hours, 14% worked between 12 to 13 hours while only 1% of them worked for more than 13 hours (Griffiths et al, 2014). A system review on nurses' experiences and preferences around shift patterns showed that some of the nurses were working on four-hour shift, others worked between eight to 10 hours with some working on shifts longer than 12 hours (Ejebu et al, 2021). However, these shifts have had various effects on the nurses' social health status which may consequently affect provision of quality patient care.

Social health is the ability of individuals to form healthy and rewarding interpersonal relationships with others. Social health also includes one's ability to develop and maintain friendships, creating boundaries in friendships and relationships and having a supportive network of family and friends

(Tammy, 2020). Studies have demonstrated that working in shifts affects social life in addition to physiological and mental conditions. It poses negative effect to social life especially marital and child-related responsibilities of women working on night duty as a result of inadequate time. Other issues associated with night duty include disruption of family order, divisions and poor relationships with friends (Okuyan and Deveci, 2017). In this respect, a was study carried out among 120 nurses working at the Clinical Centre of Vojvodina (Serbia) to assess the effects of shift work on fatigue. In this study, nurses who were working on the other shifts apart from night duty indicated that their social life was highly affected (Batak et al, 2013). A qualitative case study was carried out in Australian hospitals among 14 nurses who were allocated to work on night shifts in medical and surgical wards. The study showed that working on night allowed time for the nurses to participate in various social and family undertakings (Powell, 2013). Similarly, a research carried out to assess problems associated with shift work and its effects on female nurses in Udaipur, Rajasthan in India demonstrated that female nurses, especially those working on night shift experienced many challenges related to ill health (Rathore, 2012). The participants said that they could not give much time to their family members especially their children who sleep early. The participants also said that sometimes they had to work on night shifts and also attend to their social functions. Some of the nurses said that their family members (children and husband) in some cases were uncooperative causing a lot of frustration to them.

Despite the well-documented effects of shift work on nurses' social health globally, there is limited research within the Kenyan context. Therefore, this study sought to bridge this knowledge gap by providing evidence-based insights that can inform policies to improve nurses' social well-being and enhance the overall quality of healthcare services at the county referral hospital.

## **2.0 Materials and Methods**

In this research, descriptive cross-sectional study design was carried out to determine the effect of various work shifts on social health status among 167 nurses working at a county referral hospital in Kenya.

Inclusion criteria included all the nurses responsible for the provision of direct care to patients in the various departments. In the exclusion criteria, all nurses who have worked for less than one month in the health care facility during the study period, student nurses and nurses on nursing council attachment were excluded from the study. In regard to sampling, multistage sampling was used whereby the institution was stratified according to the service delivery areas (specialties) like medical, surgical, maternity, paediatrics, gynaecology and accidents/ emergency department among others. Units in each specialty were then identified after which the nurses to participate in the study were randomly selected. A structured questionnaire was administered to the nurses who provided direct care to patients. The data was analysed using the SPSS version 27 software for analysis. Descriptive analysis was computed to generate frequencies and percentages for categorical data. To determine the effect of the various shifts on the respondents' social wellbeing, responses were rated in a Likert scale, which had scores between 1 and 5. By indicating a score of one against a response, this meant that the respondent strongly disagreed with the item in question.

A score of 2, demonstrated that the respondent disagreed with the statement while a score of 3 indicated a neutral perspective on the statement. Similarly, a score of 4 showed that the respondents agreed with the statement, while a score of 5 showed that the respondent strongly agreed with the item in question. Computation of the mean scores for the various work shifts was carried out. Any mean score above 2.5 showed that the shift had a negative effect on the respondents' social wellbeing.

Confidentiality and privacy were observed throughout the data collection process. An informed consent was also obtained from the study participants before commencing the data collection process.

### 3.0 Results

#### 3.1 Respondents' sociodemographic characteristics

The number of respondents were 167, out of 191 questionnaires that were distributed, making a response rate of 87.4%. The youngest respondent was 21 years old while the oldest was 59 years with a mean of 36.55 years. The nurses' years of experience ranged from 2 to 35 years with a mean of 12 years (table 1). Female gender formed majority of the respondents (n=117; 70.1%). Similarly, most 74.9% (125) of the respondents were married. Majority of the respondents (53.3%, n=89) were diploma holders while 34 (20.3%) of them had a Bachelor of Science in nursing or above, among other qualifications. In terms of cadre, majority of the respondents (n=66; 39.5%) were at the level of nursing officer two (table 2).

*Table 1: Respondents' age and years of experience*

Variable	N	Minimum	Maximum	Mean	95% Confidence Interval	
					Lower	Upper
Age in years	167	21	59	36.55	35.07	38.03
Years of Experience	167	2	35	12.04	10.63	13.45

*Table 2: Other socio-demographic characteristics*

<b>Variable</b>		<b>Frequency</b>	<b>Percentage</b>
Gender	Male	50	29.9
	Female	117	70.1
	Total	167	100
Marital status	Married	125	74.9
	Divorced	3	1.8
	Separated	10	6.0
	Single	29	17.3
	Total	167	100
Professional Qualifications	Certificate	20	12.0
	Diploma	89	53.3
	Higher Diploma	24	14.4
	Bachelor's degree and above	34	20.3
	Total	167	100
Designation	SNO	32	19.2
	NO1	40	24.0
	NO II	66	39.5
	NO III	15	8.9
	Others	7	16.3
	ACN	7	16.3
	Total	167	100

***Night shift and social wellness among the respondents****Table 1: Night shift and social wellness among the nurses*

<b><i>Being allocated on night shift...</i></b>	<b>Responses</b>					<b>Total</b>	<b>Mean score</b>
	<b>Strongly disagree (1)</b>	<b>Disagree (2)</b>	<b>Average (3)</b>	<b>Agree (4)</b>	<b>Strongly agree (5)</b>		
	<b>No (%)</b>	<b>No (%)</b>	<b>No (%)</b>	<b>No (%)</b>	<b>No (%)</b>		
Negatively affected my ability to make friends	8 (18.6)	9(20.9)	9(20.9)	3(6.9)	14(32.7)	43	3.14
Negatively affected my relationship with my children	6(13.9)	11(25.6)	8(18.6)	5(11.6)	13(30.3)	43	3.19
Caused disagreement between me and other close family members	12(27.9)	10(23.4)	6(13.9)	3(6.9)	12(27.9)	43	2.84
Negatively affected my children's behaviour	10(23.3)	11(25.6)	7(16.3)	6(13.9)	9(20.9)	43	2.84
Made me not to engage in social activities	8(18.7)	6(13.9)	9(20.9)	5(11.6)	15(34.9)	43	3.30
interfered with my study schedules	7(16.3)	7(16.3)	5(11.6)	9(20.9)	15(34.9)	43	3.42
Interfered with my religious schedules	6(13.9)	6(13.9)	8(18.7)	6(13.9)	17(39.6)	43	3.51
Interfered with my social appointments	4(9.3)	6(13.9)	8(18.7)	9(20.9)	16(37.2)	43	3.63
<b>Average mean score</b>							<b>3.23</b>

Among the respondents, (43) said that they were allocated to work on the night shift. While assessing the association between night shift and the respondents' social wellness, the researcher

used various items as shown in table 3. One of the items used was whether the shift affected their ability to make friends. In response to this, 32.7% (14) of them strongly agreed that the shift affected their ability to make friends, 6.9% (3) agreed, 20.9% (9) had a neutral view with the same proportion agreeing while 18.7% (8) of them strongly disagreed. On the same aspect of night shift, the respondents were asked whether this shift negatively affected their relationship with the children. In this case, 30.3% (13) of them strongly agreed, 11.6% (5) agreed, 18.7% (8) had a neutral view, 25.6% (11) disagreed while 13.9% (6) of the respondents strongly disagreed.

Another item assessed was whether night shift caused disagreements between the respondents and other close family members, whereby 27.9% (12) of them strongly agreed, 6.9% (3) agreed, 3.6% (6) had a neutral view while 23.4% (10) disagreed with 27.9% (12) of the respondents strongly disagreeing. The respondents were also asked whether the night shift negatively affected their children's behaviour, in which case, 20.9% (9) strongly agreed, 13.9% (6) agreed, 16.3% (7) were neutral, with 25.6% (11) disagreeing while 23.3% (10) of them strongly disagreed.

In an attempt to probe more on the association between night shift and the respondents' social wellness, the researcher enquired from the respondents on whether the shift made them not to engage in social activities with other family members/relatives. In their response, 34.9% (15) of the respondents strongly agreed, 11.6% (5) agreed, 20.9% (9) of them had a neutral opinion, 13.9% (6) disagreed while 18.7% (8) of them strongly disagreed with the fact that the shift made them not to engage in social activities with other family members. Still on the issue of night shift, the respondents were asked whether the shift interfered with their study schedules, whereby 34.9% (15) strongly agreed, 20.9% (9) agreed, 11.6% (5) were neutral, 16.3% (7) of them disagreed while the same proportion strongly disagreed. Similarly, the researcher enquired from the respondents whether the night shift interfered with their religious schedules in which case 39.6% (17) of them strongly agreed, 1% (63.9) agreed, 18.7% (8) were neutral, 13.9% (6) disagreed, while the same proportion of respondents strongly disagreed. The researcher also asked the respondents whether the night shift interfered with their social appointments and other routine functions, whereby 37.2% (16) of them strongly agreed, 20.9% (9) agreed, 18.7% (8) were neutral, 13.9% (6) of them disagreed while 9.3% (4) of them strongly disagreed as shown in table 23. To determine the effect of night shift on the respondents' social health, an eight item tool was used, with the responses being measured on a likert scale. The average mean score for the eight items was 3.23, indicating that the shift negatively affected their social health (table 3).



### 3.3 twelve hours shift and social wellness among the respondents

Table 4: 12 hours shift and social wellness among the nurses

<i>Being allocated on 12 hours shift...</i>	Responses					Total	Mean score
	Strongly disagree (1)	Disagree (2)	Average (3)	Agree (4)	Strongly agree (5)		
	No (%)	No (%)	No (%)	No (%)	No (%)		
Negatively affected my ability to make friends	6(24)	7(28)	4(16)	4(16)	4(16)	25	2.72
Has negatively affected my relationship with my children	4(16)	4(16)	4(16)	9(36)	4(16)	25	3.20
Caused disagreement between me and other close family members	5(20)	8(32)	1(4)	7(28)	4(16)	25	2.88
Negatively affected my children's behaviour	5(20)	6(24)	7(28)	4(16)	3(12)	25	2.76
Made me not to engage in social activities	4(16)	5(20)	5(20)	6(24)	5(20)	25	3.12
Interfered with my study schedules	5(20)	4(16)	4(16)	6(24)	6(24)	25	3.16
Interfered with my religious schedules	3(12)	3(12)	4(16)	7(28)	8(32)	25	3.56
Interfered with my social appointments	5(20)	3(12)	3(12)	5(20)	9(36)	25	3.40
<b>Average mean score</b>							<b>3.10</b>

The respondents who stated that they were allocated to work on the 12 hours shift comprised 15% (25) of the total study participants. While assessing the association between 12 hours shift and the respondents' social wellness, the researcher used various items as shown in table 4. One of the items used was whether the shift affected their ability to make friends. In response to this, 16% (4) of them strongly agreed that the shift affected their ability to make friends. A similar proportion agreed, with the same number having a neutral view. Likewise, 28% (7) agreed while 24% (6) of them strongly disagreed. On the same aspect of 12 hours shift, the respondents were asked whether this shift negatively affected their relationship with the children. In this case, 16% (4) of them strongly agreed, 36% (9) agreed, 16% (4), similar to those who had a neutral view, or disagreed and even strongly disagreed. Another item assessed was whether 12 hours shift caused disagreements between the respondents and other close family members, whereby 16% (4) of them strongly agreed, 28% (7) agreed, 4% (1) had a neutral view while 32% (8) disagreed with 20% (5) of the respondents strongly disagreeing. The respondents were also asked whether the 12 hours shift negatively affected their children's behaviour, in which case, 12% (3) of them strongly agreed, 16% (4) agreed, 28% (7) were neutral, with 24% (6) disagreeing while 20% (5) of them strongly disagreed.

In an attempt to probe more on the association between 12 hours shift and the respondents' social wellness, the researcher enquired from the respondents on whether the shift made them not to engage in social activities with other family members/relatives. In their response, 20% (5) of the respondents strongly agreed, 24% (6) agreed, 20% (5) of them had a neutral opinion, same to those who disagreed while 16% (4) of them strongly disagreed with the fact that the shift made them not to engage in social activities with other family members.

Still on the issue of 12 hours shift, the respondents were asked whether the shift interfered with their study schedules, whereby 24% (6) of them strongly agreed, same to those who agreed. On the same issue, 16% (4) of the respondents were neutral while the same proportion disagreed, with 20% (5) of them strongly disagreeing. Similarly, the researcher enquired from the respondents whether the 12 hours shift interfered with their religious schedules in which case 32% (8) of them strongly agreed, 28% (7) agreed, 16% (4) were neutral, 12% (3) disagreed, while the same proportion of respondents strongly disagreed. The researcher also asked the respondents whether the 12 hours shift interfered with their social appointments and other routine functions, whereby 36% (9) of them strongly agreed, 20% (5) agreed, 12% (3) were neutral, similar to those who disagreed while 20% (5) of them strongly disagreed as shown in table 4.

To determine the effect of 12 hours shift on the respondents' social health, an eight item tool was used, with the responses being measured on a likert scale. The average means core of the eight items was 3.10, indicating that the 12 hours shift negatively affected their social health.

### 3.4 Eight Hours shift and social wellness among the nurses

Table 5: Eight hours shift and social wellness among the nurses

<i>Being allocated on 8 hours shift...</i>	Responses					Total	Mean
	Strongly disagree (1)	Disagree (2)	Average (3)	Agree (4)	Strongly agree (5)		
	No (%)	No (%)	No (%)	No (%)	No (%)		
Negatively affected my ability to make friends	18(21.2)	19(22.3)	19(22.3)	16(18.8)	13(15.4)	85	2.84
Negatively affected my relationship with my children	32(37.6)	18(21.2)	17(20)	6(7.1)	12(14.1)	85	2.39
Caused disagreement between me and other close family members	41(48.3)	24(28.2)	15(17.6)	2(2.4)	3(3.5)	85	1.85
Negatively affected my children's behaviour	30(35.3)	31(36.4)	9(10.6)	14(16.5)	1(1.2)	85	2.18
Made me not to engage in social activities	45(53)	30(35.3)	5(5.8)	2(2.4)	3(3.5)	85	1.68
Interfered with my study schedules	46(54.2)	21(24.7)	5(5.8)	10(11.8)	3(3.5)	85	1.89
Interfered with my religious schedules	51(60)	17(20)	6(7.1)	5(5.8)	6(7.1)	85	1.80
Interfered with my social appointments	36(42.3)	34(40)	2(2.4)	3(3.5)	10(11.8)	85	2.02
<b>Average mean score</b>							<b>2.08</b>

The respondents who stated that they were allocated to work on the eight hours shift comprised (85) of the total study participants. For the researcher to assess the association between eight hours shift and the respondents' social wellness, various items were used as shown in table 5. One of the items used was whether the shift affected their ability to make friends. In response to this,

15.4% (13) of them strongly agreed that the shift affected their ability to make friends. On the same issue, 18.8% (16) of the respondents agreed, 22.3% (19) were neutral, same to those who disagreed while 21.2% (18) of them strongly disagreed. Likewise, the respondents were asked whether this shift negatively affected their relationship with the children. In this case, 14.1% (12) of them strongly agreed, 7.1% (6) agreed, 20% (17) had a neutral view, 21.2% (18) disagreed while 37.6% (32) strongly disagreed. Another item assessed was whether eight hours shift caused disagreements between the respondents and other close family members, whereby 3.5% (3) of them strongly agreed, 2.4% (2) agreed, 17.6% (15) had a neutral view while 28.2% (24) disagreed with 48.3% (41) of the respondents strongly disagreeing. The respondents were also asked whether the eight hours shift negatively affected their children's behaviour, in which case, 1.2% (1) of them strongly agreed, 16.5% (14) agreed, 10.6% (9) were neutral, with 36.4% (31) disagreeing while 35.3% (30) of them strongly disagreed.

In an attempt to probe more on the association between eight hours shift and the respondents' social wellness, the researcher enquired from the respondents on whether the shift made them not to engage in social activities with other family members/relatives. In their response, 3.5% (3) of the respondents strongly agreed, 2.4% (2) agreed, 5.8% (5) of them had a neutral opinion, 35.3% (30) disagreed while 53% (45) of them strongly disagreed with the fact that the shift made them not to engage in social activities with other family members. Still on the issue of eight hours shift, the respondents were asked whether the shift interfered with their study schedules, whereby 3.5% (3) of them strongly agreed, 11.8% (10) agreed, 5.8% (5) of the respondents were neutral, 24.7% (21) disagreed, while 54.2% (46) of them strongly disagreed. Similarly, the researcher enquired from the respondents whether the eight hours shift interfered with their religious schedules in which case 7.1% (6) of them strongly agreed, 5.8% (5) agreed, 7.1% (6) were neutral, 20% (17) disagreed, while 60% (51) of respondents strongly disagreed.

The researcher also asked the respondents whether the eight hours shift interfered with their social appointments and other routine functions, whereby 11.8% (10) of them strongly agreed, 3.5% (3) agreed, 2.4% (2) were neutral, 40% (34) disagreed while 42.3% (36) of them strongly disagreed. For the researcher to determine the effect of eight hours shift on the respondents' social health, an eight item tool was used, with the responses being measured on a likert scale. The average mean score was 2.08, which showed that the eight hours shift did not have a negative effect on their social health (table 5).

### 3.5 Six-hour shift and social wellness among the respondents

Table 6: Six hours shift and social wellness among the nurses

<i>Being allocated on 6 hours shift...</i>	Responses					Total	Mean score
	Strongly disagree (1)	Disagree (2)	Average (3)	Agree (4)	Strongly agree (5)		
	No (%)	No (%)	No (%)	No (%)	No (%)		
Negatively affected my ability to make friends	5(35.7)	4(28.6)	3(1.8)	1(7.1)	1(7.1)	14	2.21
Has negatively affected my relationship with my children	6(42.9)	4(28.6)	3(21.4)	1(7.1)	0(0)	14	1.93
Caused disagreement between me and other family members	6(42.9)	4(28.6)	2(14.3)	1(7.1)	1(7.1)	14	2.07
Negatively affected my children's behaviour	6(42.9)	4(28.6)	2(14.3)	1(7.1)	1(7.1)	14	2.07
Made me not to engage in social activities	4(28.6)	5(35.7)	2(14.3)	2(14.3)	1(7.1)	14	2.36
interfered with my study schedules	4(28.6)	4(28.6)	3(21.4)	1(7.1)	2(14.3)	14	2.50
Interfered with my religious schedules	5(35.7)	3(21.4)	4(28.6)	1(7.1)	1(7.1)	14	2.29
Interfered with my social appointments	5(35.7)	4(28.6)	1(7.1)	1(7.1)	3(21.4)	14	2.50
<b>Average mean score</b>							<b>2.24</b>

Among the respondents, (14) of them indicated that they were allocated to work on the six hours shift. In order for the researcher to assess the association between the six hours shift and the respondents' social wellness, various items were used as shown in table 6. One of the items used was whether the shift affected their ability to make friends whereby 7.1% (1) of them strongly

agreed that the shift affected their ability to make friends. On the same issue, 7.1 (1) of the respondents agreed, 21.4% (3) were neutral, 28.6% (4) disagreed while 35.8% (5) of them strongly disagreed. Correspondingly, the respondents were asked whether this shift negatively affected their relationship with the children. In this case, none of them strongly agreed while 7.1 (1) agreed. On the same item, 21.4% (3) of the respondents had a neutral view, 28.6% (4) disagreed while 42.9% (6) strongly disagreed. Another item assessed was whether six hours shift caused disagreements between the respondents and other close family members, whereby 7.1 (1) of them strongly agreed same to those who agreed, 14.3% (2) had a neutral view while 28.6% (4) disagreed with 42.9% (6) of the respondents strongly disagreeing. The respondents were also asked whether the six hours shift negatively affected their children's behaviour, in which case, 7.1% (11) of them strongly agreed with the same number of respondents agreeing, 14.3% (2) were neutral, with 28.6% (4) disagreeing while 42.9% (6) of them strongly disagreed.

In an attempt to probe more on the association between six hours shift and the respondents' social wellness, the researcher enquired from the respondents on whether the shift made them not to engage in social activities with other family members/relatives. In their response, 7.1% (1) of the respondents strongly agreed, 14.3% (2) agreed same to the ones who had a neutral opinion, 35.7% (5) of them disagreed while 28.6% (4) of them strongly disagreed with the fact that the shift made them not to engage in social activities with other family members. Still on the issue of six hours shift, the respondents were asked whether the shift interfered with their study schedules, whereby 14.3% (2) of them strongly agreed, 7.1% (1) agreed, 21.4% (3) of the respondents were neutral, while 28.6% (4) of them disagreed, same to the respondents who strongly disagreed. Similarly, the researcher enquired from the respondents whether the six hours shift interfered with their religious schedules in which case 7.1% (1) of them strongly agreed with the same proportion agreeing, 28.6% (4) were neutral, 21.4% (3) disagreed, while 35.8% (5) of them strongly disagreed. The researcher also asked the respondents whether the six hours shift interfered with their social appointments and other routine functions, whereby 21.4% (3) of the respondents strongly agreed, 7.1% (1) agreed, with the same number being neutral, 28.6% (4) disagreed while 35.8% (5) of them strongly disagreed. For the researcher to determine the effect of eight hours shift on the respondents' social health, an eight item tool was used, with the responses being measured on a likert scale. For all the eight items, the average mean score was 2.24, meaning that the six hours shift did not have a negative effect on their social health (table 6).

#### **4 Discussion**

The effect of the various shifts (night, 12 hours, eight hours and six hours) on the nurses' social health was measured using an eight item tool with the responses being measured on a five scores Likert scale. The average mean scores for the four shifts were 3.23, 3.10, 2.08 and 2.24 respectively. This demonstrated that night and 12 hours shifts had negative effect on the respondents' social health. Regarding the night shift, some the respondents voiced out that their marriages were breaking due to mistrust especially because of night duties. They stated that they were being viewed by the community as promiscuous especially when they work on night duty for

a long time. Others indicated that the night shift was causing a lot of family strain since taking care of the children is limited and more so among the newly married ones. In support for this, respondents in one of the studies indicated that night duty poses negative effect to social life especially marital and child-related responsibilities of women working on night duty as a result of inadequate time. Other issues associated with night duty include disruption of family order, divisions and poor relationships with friends (Okuyan, et al, 2017). Likewise, a study to assess problems associated with shift work and its effects on female nurses in Udaipur, Rajasthan in India showed that the nurses, especially those working on night shift could not give much time to their family members especially their children who sleep early. Some of the nurses said that their family members (children and husband) in some cases were uncooperative causing a lot of frustration to them (Rathore, 2012). However, contrary to these findings, a qualitative case study carried out in Australian hospitals among 14 nurses on night shifts in medical and surgical wards showed that the shift allowed them time to participate in various social and family undertakings (Powell, 2013). Various respondents also gave their views regarding the 12 hours shift some of the respondents said that working for long hours makes one be isolated by neighbours and friends because of spending their free time resting due to strain and fatigue. They also said that the 12 hours shift requires understanding family and friends, due to absence in some major social activities in the family and also in the community. Likewise, other respondents indicated that the shift is very long and by the time they leave work, they are so tired that they have no time to interact even with their family members.

## **5 Conclusion and recommendation**

### ***5.1 Conclusion***

Night duty and the 12 hours shift had a negative effect on the respondents' social health. Some of the negative effects of these shifts on social health included marriage instabilities, being viewed by the community as promiscuous, family strains, and also being isolated by neighbours and friends. Others included being absent in some major social activities in the family / community and lack of time to interact with family members.

### ***5.2. Recommendations***

The senior management of the health care facility should prioritize implementing shorter shifts (6 or 8 hours) to improve nurses' overall wellness and performance. The management should also ensure a fair and structured shift rotation system should be established to prevent prolonged night and 12-hour shifts, reducing burnout.

### **Ethical approval and consent to participate in the study**

This study was approved by the Mount Kenya university Ethical Review committee and the Kenya National Commission for Science, Technology and Innovation (NACSTI). The management of the Machakos County Referral hospital also authorized the data collection. Before data collection, all the respondents gave an informed consent for their participation.

### **Consent for publications**

The authors approve this manuscript for publication

### **Availability of data**

The data related to the study findings has been included in this article. However, more detailed data can be availed by the corresponding author upon request

### **Declaration**

We the authors declare that there is no any conflict of interest in regard to this research. The same has never been published in any other journal.

### **Authors contribution**

Author 1: Rosemary Mutindi Mutua: Information generation, writing and submission of the manuscript

Author 2: Atei Kerochi: Review and editing of the manuscript

Author 3: Nilufar H. Jivraj: Review and editing of the manuscript

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