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PERCEPTIONS OF PATIENT SAFETY CULTURE AMONG HEALTHCARE EMPLOYEES IN QASSIM REGION, SAUDI ARABIA

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Abstract

Purpose*:* The study explores the perceptions of patient safety culture among employees in healthcare hospitals in Qassim Region, Saudi Arabia. The specific objectives was to determine the role of teamwork in promoting patient safety culture, to explore the role of supervision in promoting patient safety culture, to establish perception towards patient safety among healthcare workers, and to determine the patient safety management system in Qassim region hospitals.

Methodology*:* The researchers applied a descriptive, cross-sectional survey design which allowed collecting and analyzing data from the study respondents. The sample size included 375 people who were selected through convenient random sampling. The sample population of the study was healthcare workers in Qassim. Data collection was conducted using online questionnaires. Statistical treatment was conducted using SPSS software version 20.0 and data was analyzed in form of percentage, mean, standard deviation and frequency. Presentation of data was done through pie charts, bar graphs, tables and column graphs.

Findings: Over 61% of the respondents stated they worked as a team to get work done. Additionally, 62% reported that they were actively doing things to improve patient safety. About 36.5% of respondents felt like their mistakes are held against them while 38.1% stated that it was just by chance that more serious mistakes don't happen in hospital. Over 53% stated that they work in "crisis mode" trying to do too much, too quickly although 52.6% argued that patient safety is never sacrificed to get more work done. Besides, 52.6% of respondents worried that their mistakes were kept in their personal life while 42.2% stated that they had patient safety problems in their workplace. Notably, 48.7% reported that hospital management seems interested in patient safety only after an adverse event happens. Besides, majority participants (58%) reported that their procedures and systems are good at preventing errors from happening and 62% of supervisors were found to say a good word when a job is well-done according to established patient safety procedures. Approximately 63.7% of respondents reported that the overall grade of patient safety was 63.7%.

Unique contribution to theory, practice and policy: The study will contribute to new knowledge on patient safety, healthcare culture role in prevention of adverse events in hospital, safety culture related models and concepts. The hospitals should ensure that the staffs promote teamwork spirit by ensuring that teamwork environment is used to advance patient safety.

Keywords: *Patient, Safety, Culture, Perceptions, Qassim Region, Saudi Arabia*

1.0 INTRODUCTION

Patient safety is one of the major health concerns as patients across the world suffer from avoidable harm. Globally, four out of ten patients suffer from harm in emergency and primary care settings due to unsafe care practices (WHO, 2019). Nearly 80 per cent of these cases can be prevented (WHO, 2019). The existence of adverse events because of unsafe healthcare practices is one of top ten causes of disability and death worldwide. In high income nation, one in every ten individuals is harmed in the process of accessing care in hospital. The harm emerges from different adverse events with approximately 50 per cent of them being preventable (WHO, 2019). Moreover, 134 million adverse events takes place in healthcare centers particulars in low- and middle-income countries (LMICs) because of unsafe care leading to 2.4 million losses of lives. Nearly 66.6 per cent of all adverse events emerging from unsafe care and disability adjusted life years (years lost to death and disability) occur in LMICs (WHO, 2019).

Patient safety entails minimizing the chances of mistakes, limiting harm, and avoiding errors via planning that nurture communication, minimizes errors, and reduces rate of infection. Health practitioners are expected to validate medical procedures, utilize monitoring technology, advance a team atmosphere and ensure patients comprehend their treatment aiming to promote patient safety (Aljadhey *et al*., 2013). In Organization for Economic Cooperation and Development (OECD) nations, over 15 per cent of the entire hospital expenditure and activity is a direct effect of adverse events (WHO, 2019). In the Eastern Mediterranean Region, over 18 per cent of admissions in hospital are linked with adverse events and up to 3 per cent of admissions in hospital are linked with an adverse event that is serious enough to contribute to permanent disability or death (Aljadhey *et al*., 2013). An adverse event is any case that leads in patient's harm (Alquwez *et al*., 2018) which may include hospital-acquired infections and injuries, incontinence, malnutrition, medication errors, and falls. In Saudi Arabia, a study conducted in one hospital noted that the rate of adverse events was 8.5 per 100 admissions (WHO, 2019). Large health care centers in Saudi Arabia are likely to have many adverse events because of culture issues that lead to unsafe practices in different cases. The health care system in the Kingdom is characterized by significant number of healthcare providers from foreign cultures, hierarchy issues and language barriers (Johnston *et al*., 2019). Essentially, patient safety culture refers to an outcome of group or individual behavior patterns, competencies, perceptions, attitudes and values that affect the proficiency of, the style and commitment to safety management organization (Alquwez *et al*., 2018). Furthermore, safety culture is identified with addressing systems, leadership involvement, blame free environment and systemic data gathering and reporting.

Lack of patient safety culture in healthcare setting has been associated to medication errors and unsafe care practices. In Saudi Arabia, safety issues are thought to emerge from violations of safety standards and accidental mistakes and errors. Moreover, non-existence of safety culture in Saudi Arabian hospital has been a source of accidents and injuries (Aljadhey *et al*., 2013). Empirical evidence has pointed out that communication and feedback about errors, teamwork across units and organizational learning is key elements of patient safety culture in the country. However, lack of teamwork across different units, staffing problems and punishing reaction to error do not nurture safety culture (Johnston *et al*., 2019). Empirical evidence from different facilities in Kingdom of Saudi Arabia indicated that poor communication, staffing and punishing reaction to error are field of weakness which hinder patient safety culture (Aljadhey *et al*., 2013).

Investments in culture of patient safety are crucial in reducing cases of adverse events and patient harm in Saudi Arabian hospitals. It can promote a significant financial savings and improved patient outcomes. Empirical evidence has indicated that encouraging patient safety culture is crucial to minimize the burden of harm by over (Alrasheadi, 2019). Promoting patient safety culture is important to controlling adverse events in Saudi hospital especially Qassim region. Therefore, to strengthen care quality and advance patient safety, health care professionals in Qassim region must create patient safety culture. The reviewed literature noted research gaps which included scarcity of information on perceptions of patient safety culture among healthcare employees in Qassim region, and specifically, the patient safety system, role of supervision and teamwork in enhancing patient safety.

2.0 MATERIALS AND METHODS

2.1 Study design

The researchers applied a descriptive, cross-sectional survey design which allowed collecting data from the entire study population at a particular time and determine the relationship between perception of health workers and other variables (Bryman, 2017).

2.2 Variables

2.2.1 Dependent variable

The independent variable in this study is individual perceptions towards patient safety.

2.2.2 Independent variable

The independent variables in this study are supporting environment, teamwork spirit,

organizational culture, leadership and health administrators' policy (Bryman, 2017).

2.3 Study area

The study area was Qassim region which one of the administrative regions in the country and is located on the center of Kingdom of Saudi Arabia (Ministry of Health, 2018). The Ministry of Health manages hospitals in this region. Qassim region has over 15,380 healthcare workers in different hospitals (Ministry of Health, 2018).

2.4 Study population

The target population of the study is the healthcare workers in Qassim Region. According to the statistical book published by Ministry of health in Saudi Arabia in 2018 the total number of health workers was 15380 (Ministry of Health, 2018).

2.5 Sampling techniques

The processes of study sampling were adopted to accomplish the necessity of the data collection process (Vanderstoep & Johnson, 2008). The study selected a sample that was representative of the entire healthcare professions in Qassim region. The researcher, in this survey, utilized stratified sampling, purposive sampling and simple random sampling to select study participants. Importantly, purposive sampling was used to select health care workers providing medical care services because they could be able to give comprehensive information on the perceptions of patient safety in the hospital (Vanderstoep & Johnson, 2008). Moreover, these officers have sufficient experience and information on the topic of study. Besides, stratified sampling was adopted to sample respondents from various health professionals from different units across various hospitals in Qassim region (Patten & Newhart, 2017). Stratified sampling ensured that each group of professional working in hospital setting was proportionately represented in the sample (Bryman, 2017). Additionally, simple random sampling was crucial in this study because it gave each study subject an equal opportunity to participate in the study (Patten & Newhart, 2017). In this regard, with this sampling procedure, the researcher had the ability to draw a sample from health care professionals including nurses, physicians, health records, health administrators, and managers in Qassim region.

2.6 Inclusion and exclusion criteria

The study used a list of eligibility criteria to select participants who formed part of the study sample (Vanderstoep & Johnson, 2008). The following inclusion criteria were used;

(i) Individuals who worked in healthcare facilities in Qassim region

(ii) Persons who gave informed consent

(iii) Both Saudi and non-Saudi nationals in the country

The exclusion criteria were used to drop off the population that did not possess the required characteristics of the study (McCusker & Gunaydin, 2015). They included subordinate staff that worked in hospitals but did not deal with safety of the patients

2.7 Sample size determination

The sample size of the study is calculated by Raosoft sample size calculator (Raosoft.com). The sample of 375 was obtained from the population. The target population was 15,380 health care workers; margin of error was 5%, confidence level of 95%, and response distribution of 50%.

2.8 Data collection procedure

Permission was obtained from the hospitals in Qassim region before the start of data collection. The data collected from respondent who used the link was sent to them. The E-mail and WhatsApp were used to send 375 electronic questionnaires through Google document. The total respondents were 308 which formed the sample size. The response rate was 82.1% of total participants. The data collection lasted for a period of two weeks between distribution of questionnaire and receipts of filled questionnaires. The first link was sent in 29 of March, 2020 and the last day of receiving data was in 12 of April, 2020.

2.9 Data collection tools

2.9.1 Questionnaire

The researcher used Agency of Health Research and Quality (AHRQ) questionnaire to explore the patient safety culture in hospitals (Agency of Healthcare Research and Quality 2008). Questionnaires were distributed to the health workers in Qassim region. The questionnaire was translated into languages of Arabic and English. This questionnaire is made from eight sections. These sections design to explore twelve dimensions which included teamwork within units, supervisor/manager expectation & actions promoting patients safety, organizational learning – continuous improvement, frequency of events reported, teamwork across units, staffing, handoffs & transitions, and non-punitive response to errors (Agency of Healthcare Research and Quality 2008).

2.10 Pre-test of questionnaire

Before the commencement of research, questionnaires were pretested in order to identify potential weakness to the design of the questionnaires (Bryman, 2017). Pretesting was conducted on healthcare professions with similar characteristics to the study population. The researcher conducted a pre-testing with ten percent of the study participants who were not part of the sample (McCusker & Gunaydin, 2015). The researcher used the pre-test to correct questions that were vague or confusing questions and also to make an

estimation of the time needed to complete the survey (Vanderstoep & Johnson, 2008).

2.11 Validity and reliability

The study validity refers to the capacity of the research instruments to assess what the investigator intends to measure. Precisely, content validity was determined by ensuring that the content of semi-structured interviews reflects the research questions (Bryman, 2017). To guarantee reliability of the data collected, questionnaires were provided in Arabic and English versions to avoid distortion of information (Polit & Beck, 2010).

2.12 Data analysis

Statistical processes were adopted to analyze the data. Essentially, AHRQ guidelines were initiated for interpretation and analysis of the perceptions of participants in terms of patient safety culture (Patten & Newhart, 2017). After checking the questionnaire for completeness and consistencies, quantitative data was analyzed using SPSS version 20.0. Descriptive statistics was used to find out the mean and standard deviation as well as frequency and percentages. A presentation of findings was completed using bar graphs, pie charts, tables, and column graphs.

3.0 RESULTS

3.1 Socio-demographic characteristics

The findings indicated that the majority of the respondents were men at 187 (60.7 percent) while the rest were females 121 (39.3 percent). In terms of nationality, Saudi nationals were 198 (64.3 percent) while non-Saudis were 110 (35.7 percent). When asked on the length of experience in the hospital, most of the respondents at 116 (37.7 percent) while the least at 13 (4.2 percent) had worked for 21 years or more. In terms of duration of service in a particular hospital units, the majority of the respondents at 114 (37.0 percent) had served for 6 to 10 years while the least proportion was 21 years or more at 7 (2.3 percent). On whether there was direct interaction or contact with patients, 265 (86.0 percent) confirmed direct interactions existed while the rest at 43 (14.0 percent) noted that such interactions never existed. Finally, regarding the professional working experience, most of the participants at 119 (38.6 percent) indicated that they had an experience of 6 to 10 years while the least number of respondents at 8 (2.6 percent) had 21 years or more.

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Table 1 Socio-demographic characteristics

Characteristic	Category	Frequency	Proportion
Gender	Male	187	60.70%
	Female	121	39.30%
	Total	308	100%
Nationality			
	Saudi	198	64.30%
	Non-Saudi	110	35.70%
	Total	308	100%
Working experience in l			
	Less than 1 year	15	4.90%
	1 to 5 years	77	25.00%
	6 to 10 years	116	37.70%
	11 to 15 years	63	20.50%
	16 to 20 years	24	7.80%
	21 years or more	13	4.20%
	Total	308	100%
Working experience in hospital unit			
	Less than 1 year	21	6.80%
	1 to 5 years	95	30.80%
	6 to 10 years	114	37.00%
	11 to 15 years	52	16.90%
	16 to 20 years	19	6.20%
	21 years or more	7	2.30%
	Total	308	100%
Amount of working hours			
	Less than 20 hrs. /wk.	4	1.30%
	20-39 hrs. per week	27	8.80%
	40-59 hrs. per week	141	45.80%
	60-79 hrs. per week	57	18.50%
	80-99 hrs. per week	41	13.30%
	100 hrs. per wk. or more	38	12.3
	Total	308	100
Direct interaction or co	Yes	265	86.00%
	No	43	14.00%
	Total	308	100%
Working experience in t			
	Less than 1 year	19	6.20%
	1 to 5 years	72	23.40%
	6 to 10 years	119	38.60%
	11 to 15 years	61	19.80%
	16 to 20 years	29	9.40%
	21 years or more	8	2.60%
	Total	308	100%

4.1.1 Primary work area or unit in the hospital

On the primary work area or unit in the hospital, 43 (14%) worked in pediatrics units, 35 (11.4 percent) in Emergency department, 34 (11 percent) in Surgery Unit, 26 (8.4 percent) in Pharmacy, 20 (6.5 percent) at Medicine (non-surgical) and Obstetrics each. Moreover, 18 (5.8 percent) worked in Rehabilitation unit and 18 (5.8 percent) worked in many different/no specific units. Furthermore, 17 (5.5 percent), 16 (5.2 percent), 14 (4.5 percent), and 8 (2.6 percent) respondents served in ICU, Radiology, laboratory, and Psychiatry/mental health, respectively. Besides, eight (2.6 percent), 7 (2.3 percent), 4 (1.3 percent) and 2 (0.6 percent) respondents worked in served in Administration/management, anesthesiology, Quality assurance unit, and HR, respectively. Others, 18 (5.8 percent) worked in various departments such as OPD, Medical Supply, HHC, medical records, and Public Health

Table 02. What is your primary work area or unit in this hospital?

What is your primary work area or unit in this hospital?		
	Frequency	**Percent**
Many different/No specific units	18	5.8%
Medicine (non-surgical)	20	6.5%
Surgery	34	11%
Obstetrics	20	6.5%
Pediatrics	43	14%
Emergency department	35	11.4%
ICU	17	5.5%
Psychiatry/mental health	8	2.6%
Rehabilitation	18	5.8%
Pharmacy	26	8.4%
Laboratory	14	4.5%
Radiology	16	5.2%
Anesthesiology	7	2.3%
Quality Assurance	4	1.3%
HR	2	0.6%
Administration/Management	8	2.6%
Others e.g. OPD, Medical supply, HHC, medical records, Public Health	18	5.8%
Total	308	100%

3.2 Role of Teamwork in patient safety culture healthcare

3.2.1 People support one another in this unit

When respondents were asked on whether they people supported each other in their units, the majority at 132 (42.9 percent) agreed while least at 15 (4.9 percent) strongly disagreed. The mean was 2.57 and Standard deviation is 1.103. The findings are summarized on Figure 1 below.

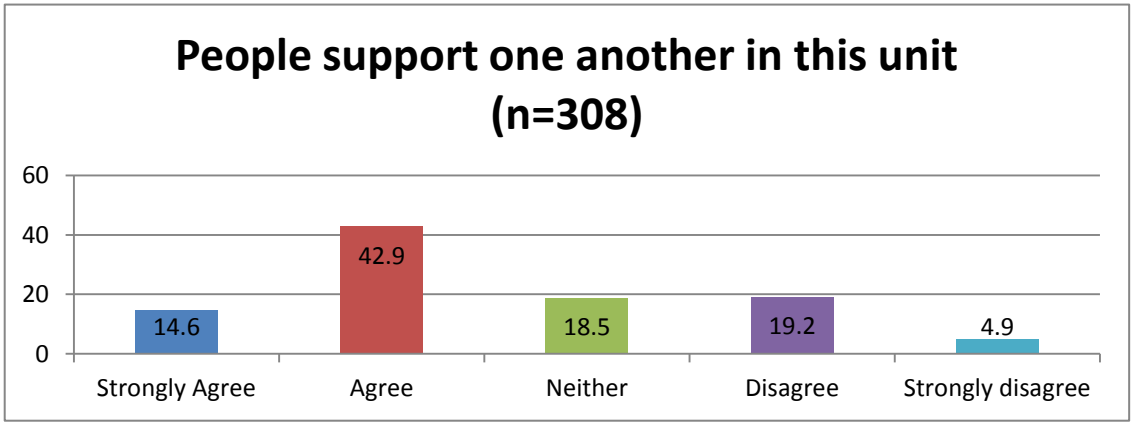

Figure 1 People support one another in this unit (n=308)

3.2.2 Staff to handle the workload

When asked whether there was adequate staff to handle the workload, the majority at 134 (43.5 percent) agreed with the statement while the minority at 13 (4.2 percent) strongly disagreed. The mean was 2.67 and Standard deviation is 1.05. Figure 2 summarizes this information.

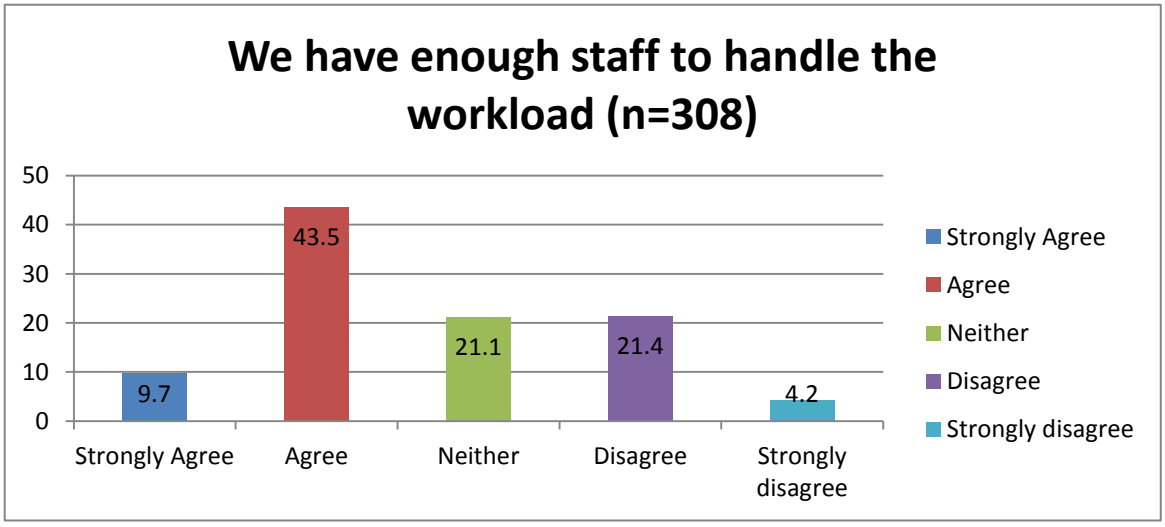

Figure 2: We have enough staff to handle the workload (n=308)

3.2.3 When a lot of work needs to be done quickly, we work together as a team to get the work done

Respondents were asked whether they collaborate when a lot of work needs to be done quickly, 146 (47.4 percent) agreed with the statement while 12 (3.9 percent). Table 3 summarizes this information. The mean was 2.56 and Standard deviation is 1.098. Figure 3 summarizes this information.

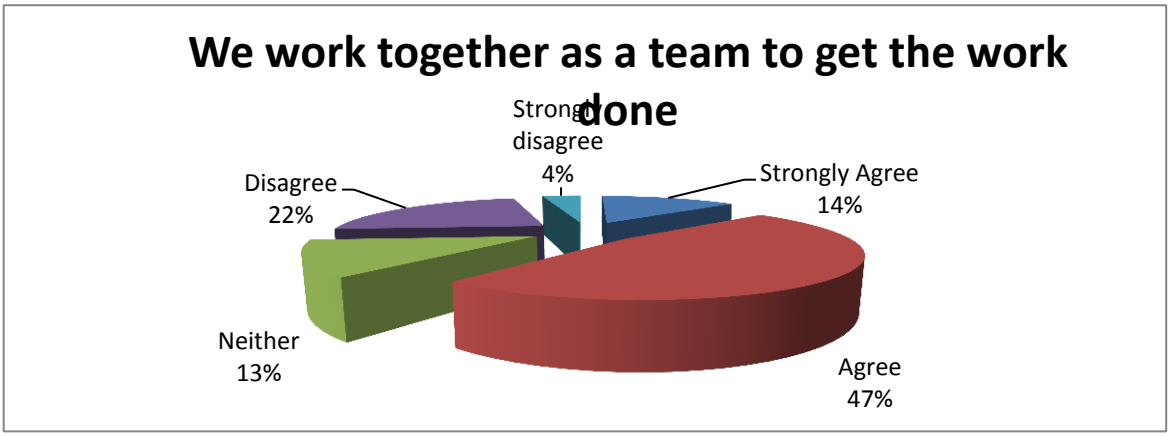

Figure 3: We work together as a team to get the work done

3.2.4 In this unit, people treat each other with respect

When asked whether employees treat each other with respect, most of the respondents at 148 (48.1 percent) agreed, 61 (19.8 percent) were neutral, 55 (17.9 percent) strongly agreed, while 41 (13.3 percent) and 3 (1.0 percent) disagreed and strongly disagreed, respectively. The mean was 2.31 and Standard deviation is 0.949. Figure 4 highlights the information below.

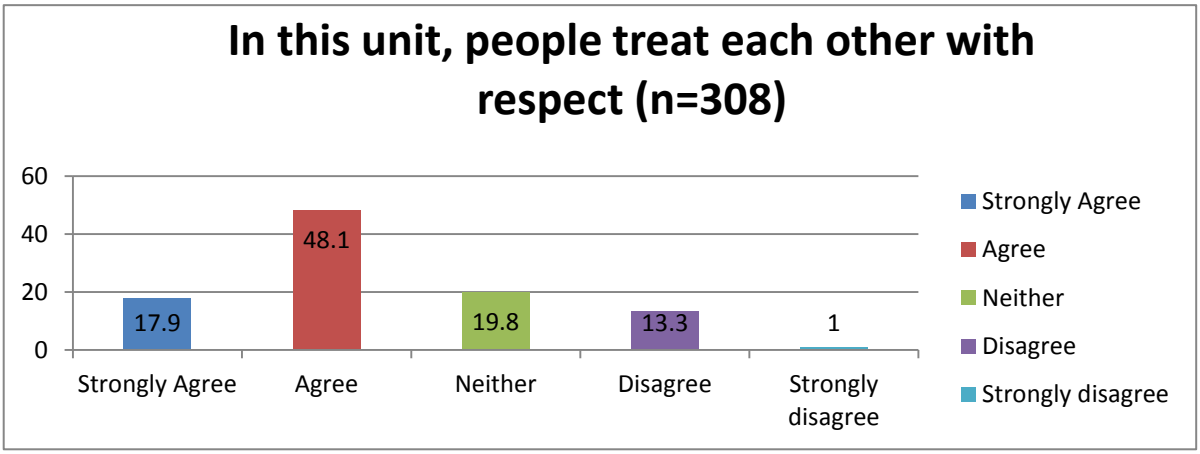

Figure 4: In this unit, people treat each other with respect (n=308)

3.2.5 Staff in this unit work longer hours than is best for patient care

When asked whether staff worked longer hours than is best for patient care, most of the respondents at 120 (39 percent) agreed, 86 (27.9 percent) disagreed, 52 (16.9 percent) were neutral, while 38 (12.3 percent) and 12 (3.9 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.72 and Standard deviation is 1.115. The findings are summarized in the Figure 5 below

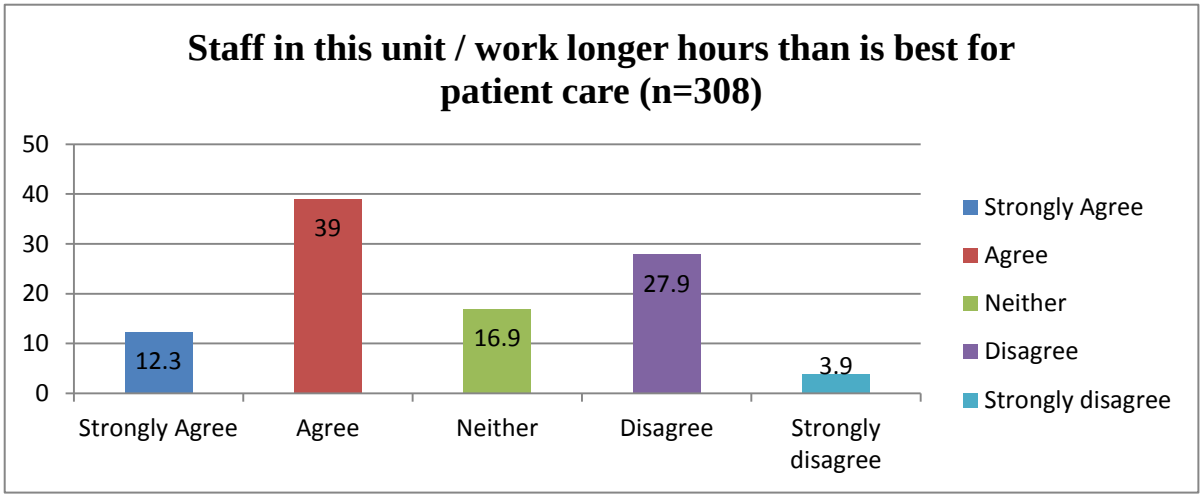

Figure 5: Staff in this unit / work longer hours than is best for patient care (n=308)

3.2.6 We are actively doing things to improve patient safety

When asked whether staff are actively doing things to improve patient safety, majority of the respondents at 138 (44.8 percent) agreed, 58 (18.8 percent) were neutral, 53 (17.2 percent) disagreed, while 53 (123.3 percent) and 6 (1.9 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.42 and Standard deviation is 1.026. Figure 6 highlights this information.

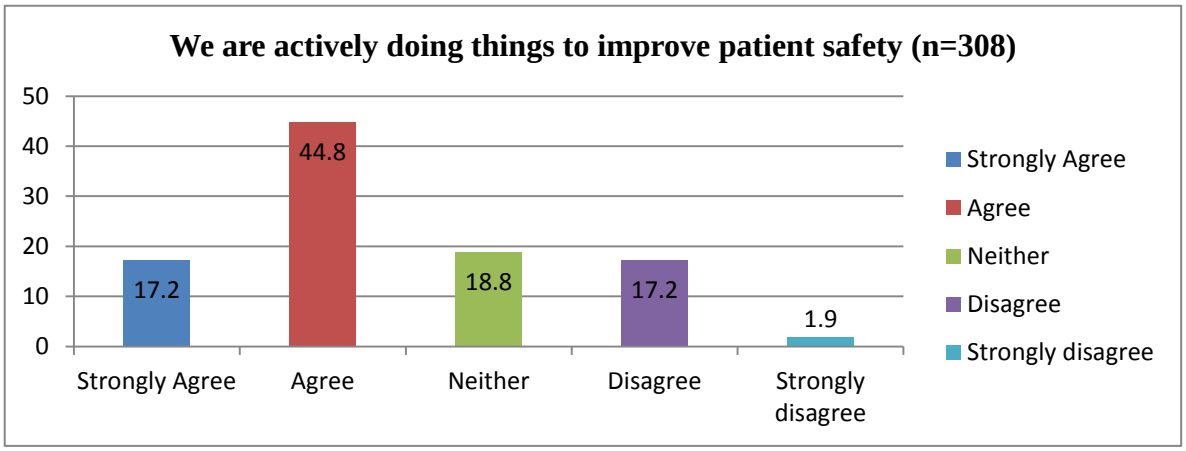

Figure 6: We are actively doing things to improve patient safety (n=308)

3.2.7 We use more agency/temporary staff than is best for patient care

When asked whether more agency/temporary staff than is best for patient care were used, the majority of the respondents at 105 (34.1 percent) agreed, 86 (27.9 percent) disagreed, 67 (21.8 percent) were neutral, while 26 (8.4 percent) and 24 (7.8 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.93 and Standard deviation is 1.126. The results are summarized in figure 7 below

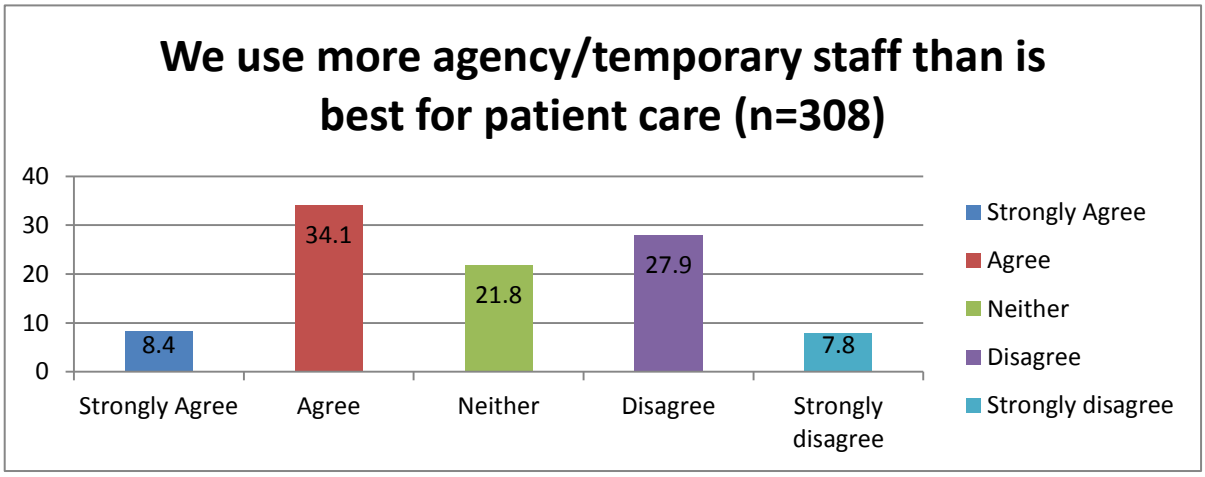

Figure 7: We use more agency/temporary staff than is best for patient care (n=308)

3.2.8 Staffs feels like their mistakes are held against them

When asked whether staff felt like their mistakes are held against them, most of the participants at 112 (36.4 percent) agreed, 76 (24.7 percent) were neutral, 75 (24.4 percent) disagreed, while 31 (10.1 percent) and 14 (4.5 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.77 and Standard deviation is 1.069. Figure 8

summarizes this information

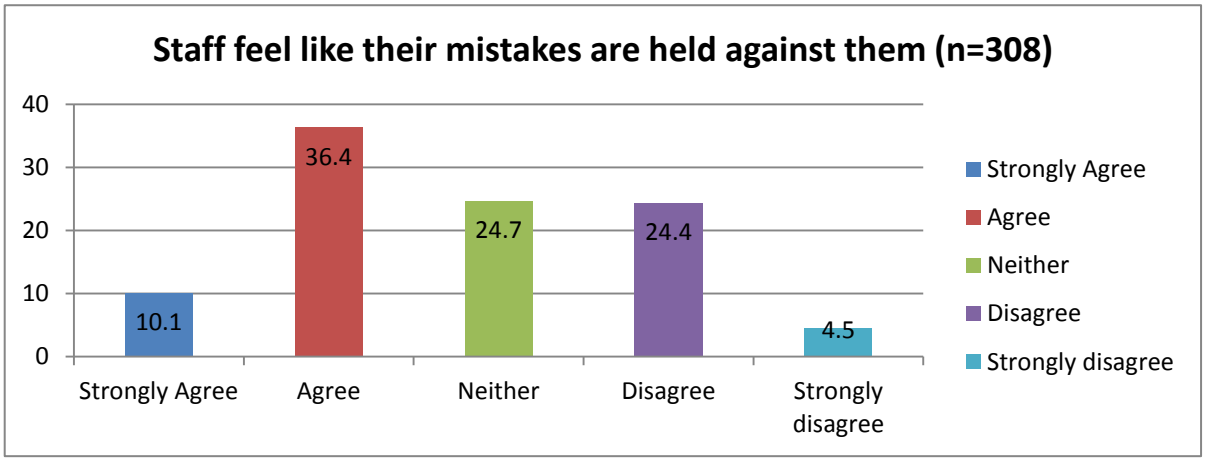

Figure 8: Staff feels like their mistakes are held against them (n=308)

3.2.9 Mistakes have led to positive changes here

When probed whether mistakes have led to positive changes in the hospital, most of the participants at 131 (42.5 percent) agreed, 79 (25.6 percent) disagreed 58 (18.8 percent) were neutral, while 26 (8.4 percent) and 14 (4.5 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.75 and standard deviation is 1.070. Figure 9 presents this information.

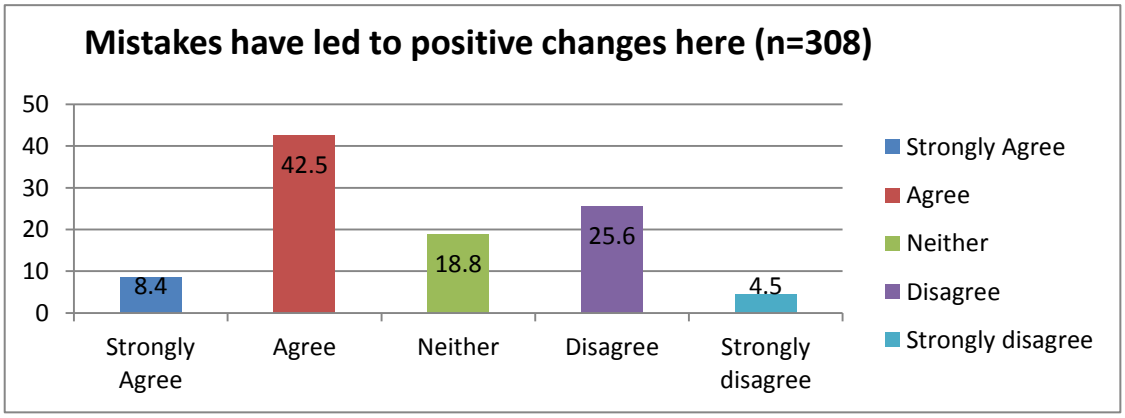

Figure 9: Mistakes have led to positive changes here

3.2.10: It is just by chance that more serious mistakes do not happen around here

When asked whether it was just by chance that more serious mistakes did not happen in hospital, the majority of the respondents at 120 (39 percent) agreed, 73 (24.7 percent) disagreed, 71 (23.1 percent) were neutral, while 28 (9.1 percent) and 16 (5.2 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.64 and Standard

deviation is 1.054. Figure 10 presents the table below

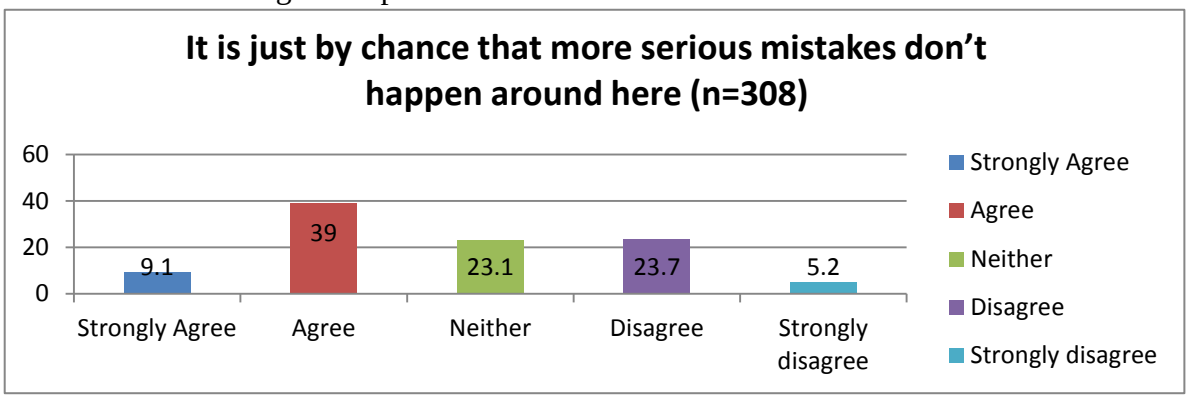

Figure 10: It is just by chance that more serious mistakes don't happen around here (n=308)

3.2.11. When one area in this unit gets really busy, others help out

When asked whether others help out when one area in the unit gets really busy, the majority of participants at 121 (39.4 percent) agreed, 76 (24.7 percent) were neutral, 61 (19.8 percent) disagreed, while 38 (12.3 percent) and 12 (3.9 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.64 and Standard deviation is 1.054. The presentation is found in figure 11

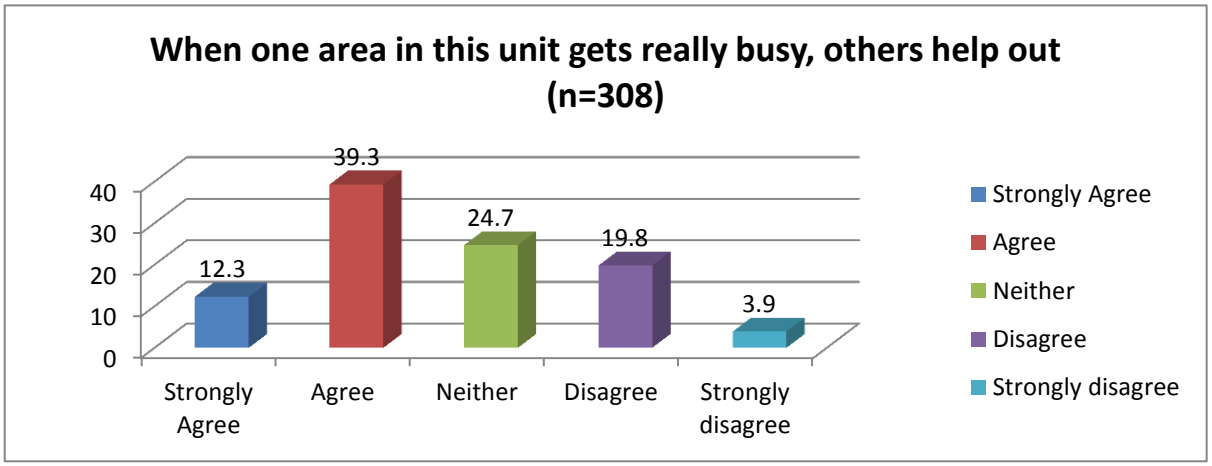

Figure 11: When one area in this unit gets really busy, others help out

3.2.12: When an event is reported, it feels like the person is being written up, not the problem

The respondents were asked whether in case an event is reported it feels like the person is being written up as opposed to the problem, most of the participants at 124 (40.3 percent) agreed, 88 (28.6 percent) disagreed, 47 (15.3 percent) were neutral, while 43 (14.0

percent) and 6 (1.9 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.64 and Standard deviation is 1.096. The summary is found on figure 12 below

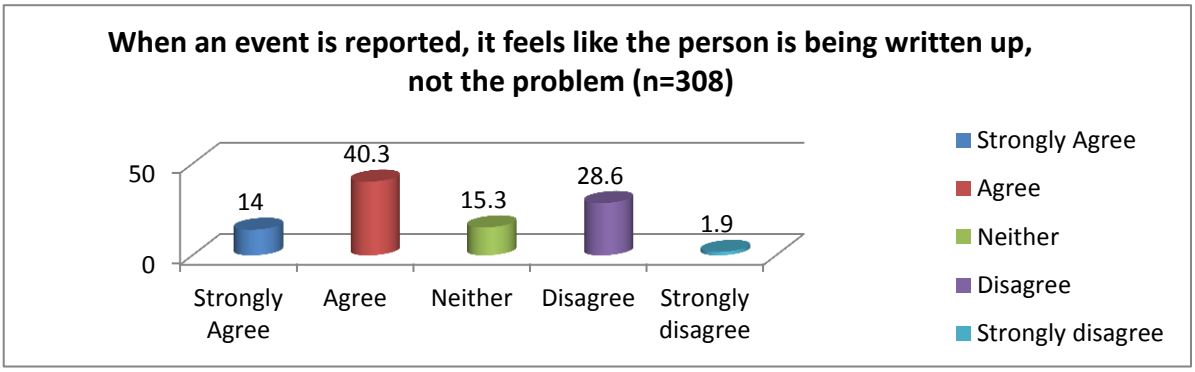

Figure 12: When an event is reported, it feels like the person is being written up, not the problem

3.2.13: After we make changes to improve patient safety, we evaluate their effectiveness

The respondents were asked whether they evaluated the effectiveness of changes made to improve patient safety, the majority if the respondents at 151 (49 percent) agreed, 61 (19.8 percent) disagreed, 41 (13.3 percent) were neutral, while 38 (12.3 percent) and 17 (5.5 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.57 and Standard deviation is 1.106. Figure 13 presents this information

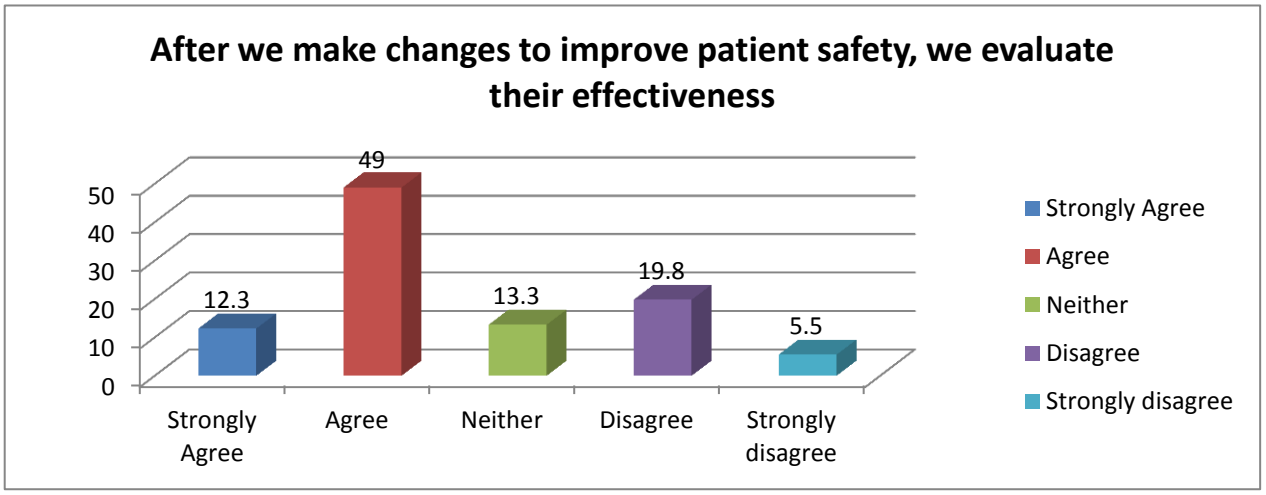

Figure 13: After we make changes to improve patient safety, we evaluate their effectiveness

3.2.14: We work in "crisis mode" trying to do too much, too quickly

The respondents were asked whether they worked in "crisis mode" trying to do too much, too quickly, the majority if the respondents at 126 (40.9 percent) agreed, 68 (22.1 percent) disagreed, 59 (19.2 percent) were neutral, while 39 (12.7 percent) and 16 (5.2 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.66 and standard deviation is 1.111. Figure 14 summarizes this information

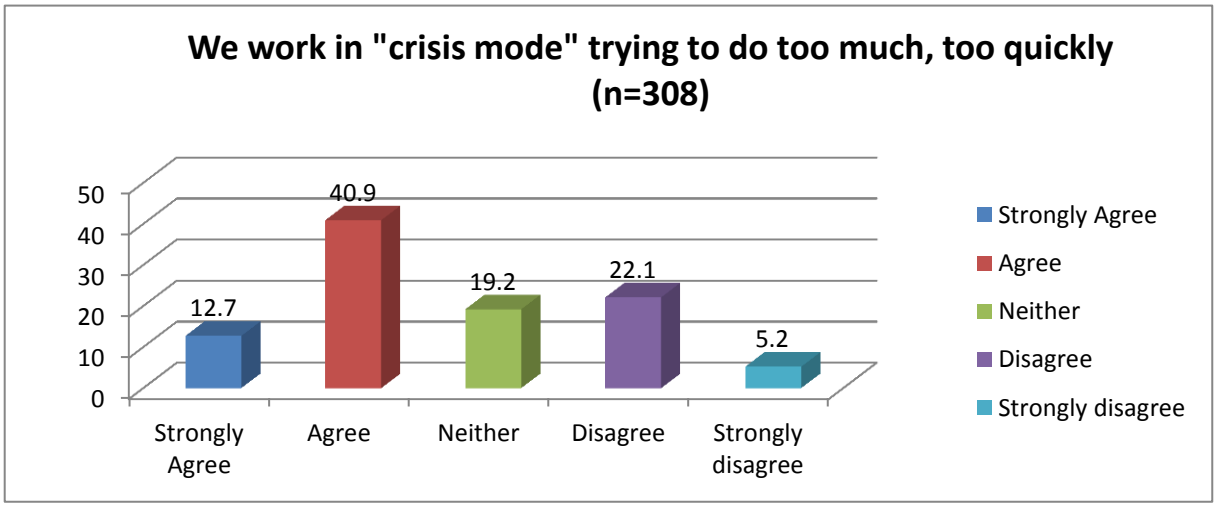

Figure 14: We work in "crisis mode" trying to do too much, too quickly (n=308)

3.2.15 Patient safety is never sacrificed to get more work done

The respondents were asked whether patient safety is never sacrificed to get more work done, most of the respondents at 118 (38.3 percent) agreed, 81 (26.3 percent) disagreed, 52 (16.9 percent) were neutral, while 44 (14.3 percent) and 13 (4.2 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.68 and Standard deviation is 1.135. Figure 15 summarizes this information

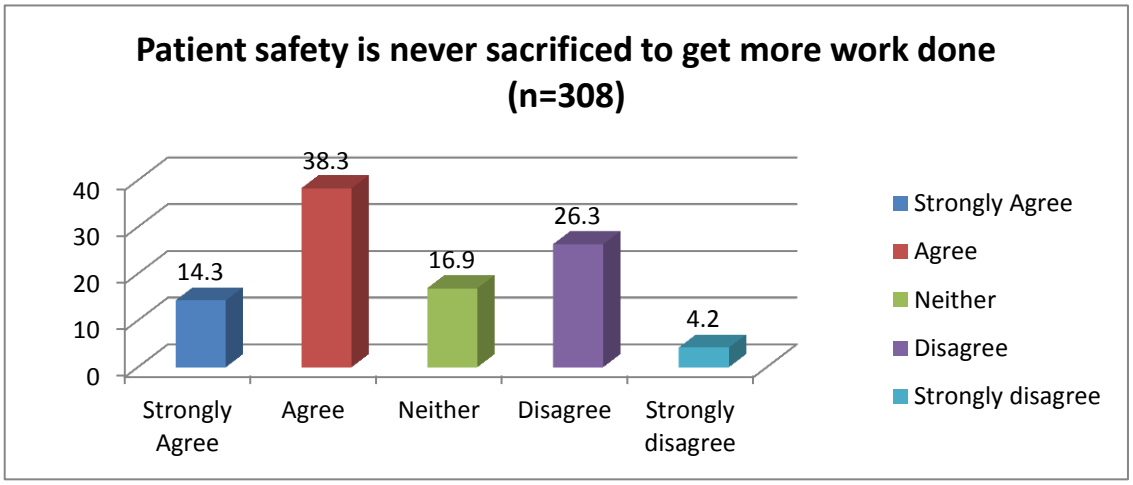

Figure 15: Patient safety is never sacrificed to get more work done (n=308)

3.2.16 Staff worry that mistakes they make are kept in their personal life

The respondents were asked whether staffs are worried that their mistakes are kept in their personal life, most of the respondents at 111 (36 percent) agreed, 70 (22.7 percent) disagreed, 65 (21.1 percent) were neutral, while 51 (16.6 percent) and 11 (3.6 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.61 and standard deviation is 1.115.Summary is presented on figure 16

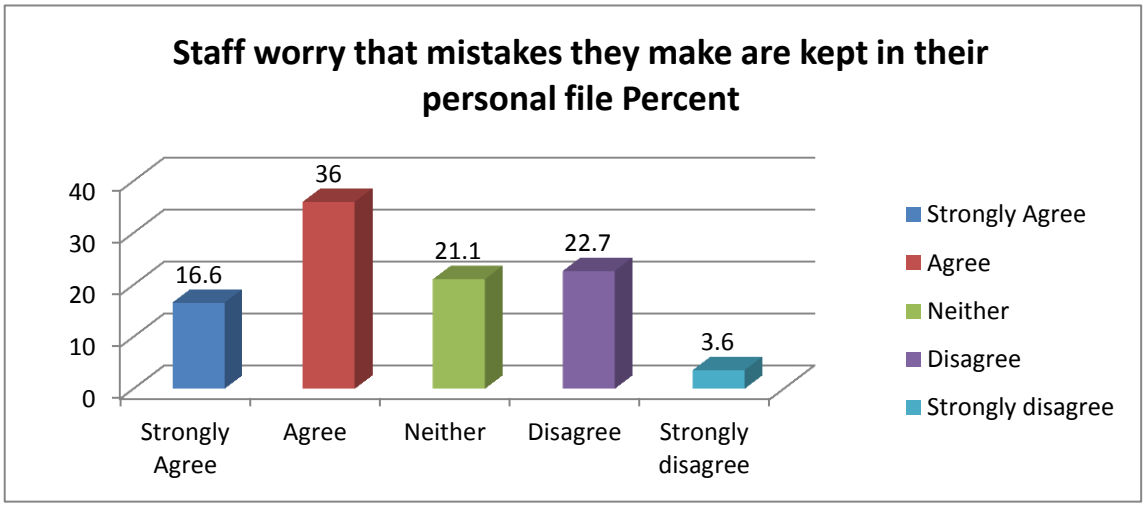

Figure 16 Staff worry that mistakes they make are kept in their personal file

3.2.17: We have patient safety problems in this unit

The respondents were asked whether they had patient safety problems in their units, majority of the participants at 105 (34.1 percent) agreed, 95 (30.8 percent) disagreed, 70 (22.7 percent) were neutral, while 25 (8.1 percent) and 13 (4.2 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.89 and Standard deviation is 1.065. Figure 17 summarizes this information.

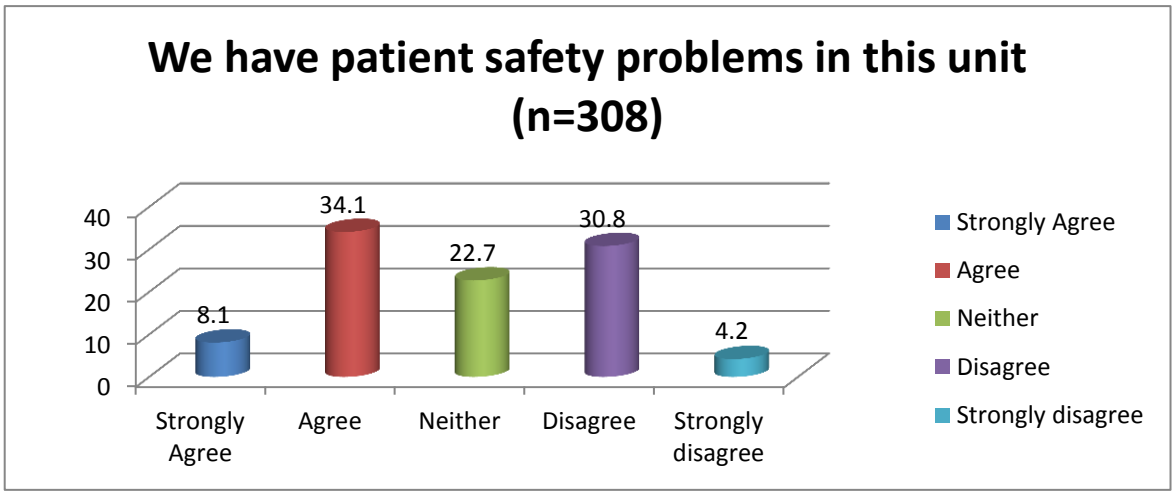

Figure 17: Patient safety problems in this unit

3.2.18: Our procedures and systems are good at preventing errors from happening

The respondents were asked whether their procedures and systems are good at preventing errors from happening, majority of the participants at 139 (45.1 percent) agreed, 63 (20.5 percent) disagreed, 60 (19.5 percent) were neutral, while 40 (13 percent) and 6 (1.9 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.53 and Standard deviation is 1.019. Figure 18 summarizes this information

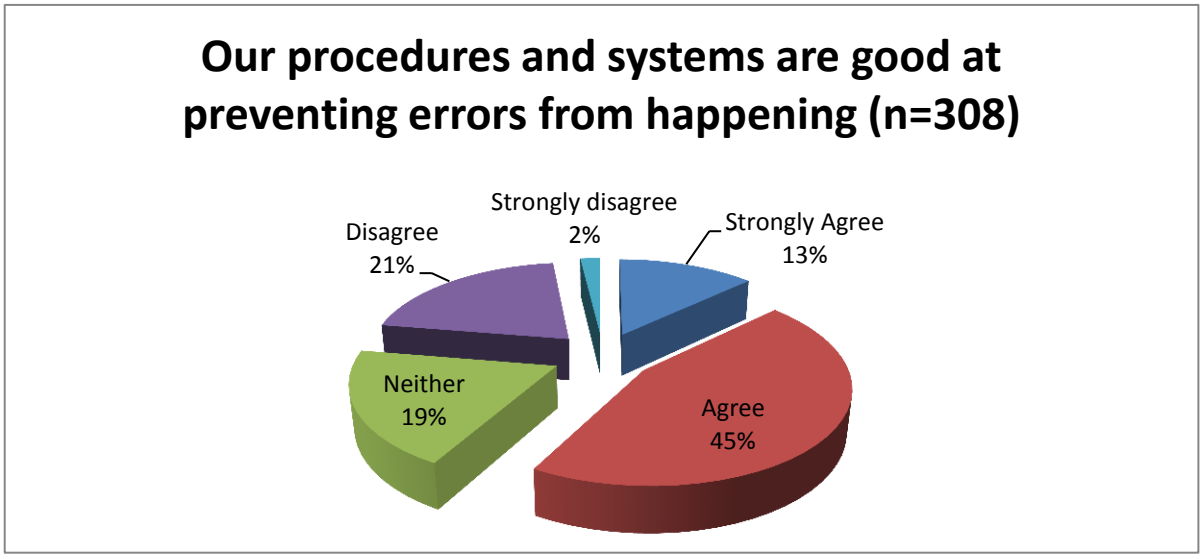

Figure 18: Our procedures and systems are good at preventing errors from happening (n=308)

3.3 Supervision/Management

3.3.1 My supervisor/manager says a good word when he/she sees a job-done according to established patient safety procedures

The respondents were asked whether their supervisor/manager says a good word when he/she sees a job-done according to established patient safety procedures, majority of the participants at 163 (52.9 percent) agreed, 62 (20.1 percent) were neutral, 39 (12.7 percent) disagreed, while 27 (8.8 percent) and 17 (5.5 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.53 and Standard deviation is 1.006. Figure 19 presents this information.

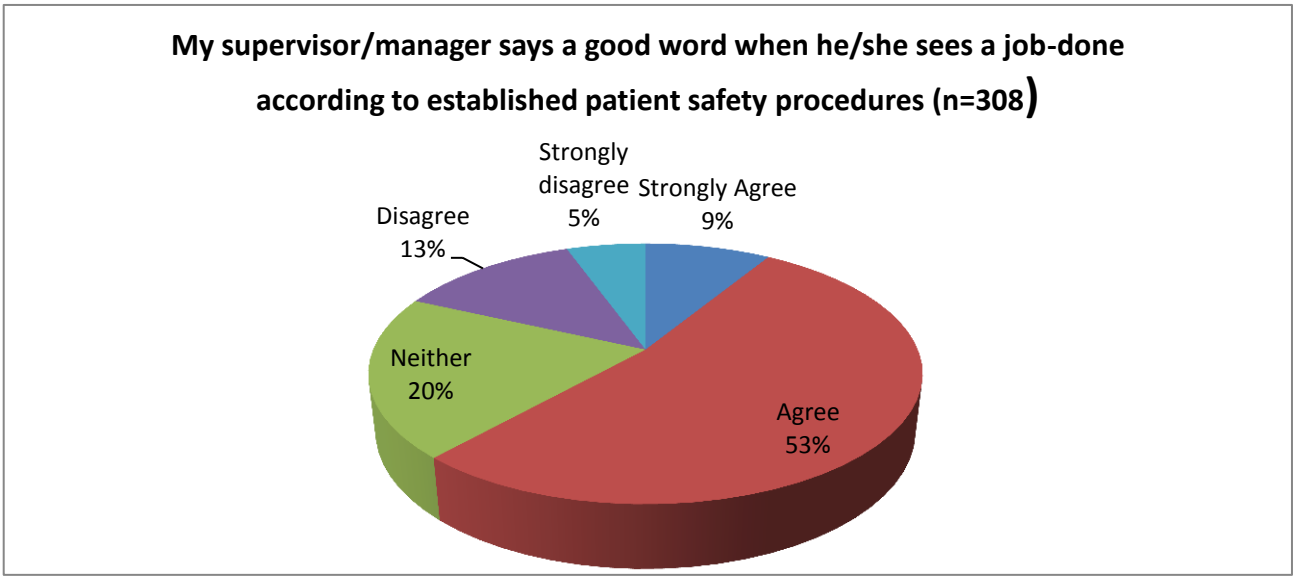

Figure 019: My supervisor/manager says a good word when he/she sees a job-done according to established patient safety procedures

3.3.2 My supervisor/manager seriously considers staff suggestions for improving patient safety

The respondents were asked whether their supervisor/manager seriously considers staff suggestions for improving patient safety, majority of the participants at 144 (46.8 percent) agreed, 65 (20.1 percent) were neutral, 55 (17.9 percent) disagreed, while 37 (12.0 percent) and 7 (2.3 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.52 and Standard deviation is 0.993. Figure 20 presents this information.

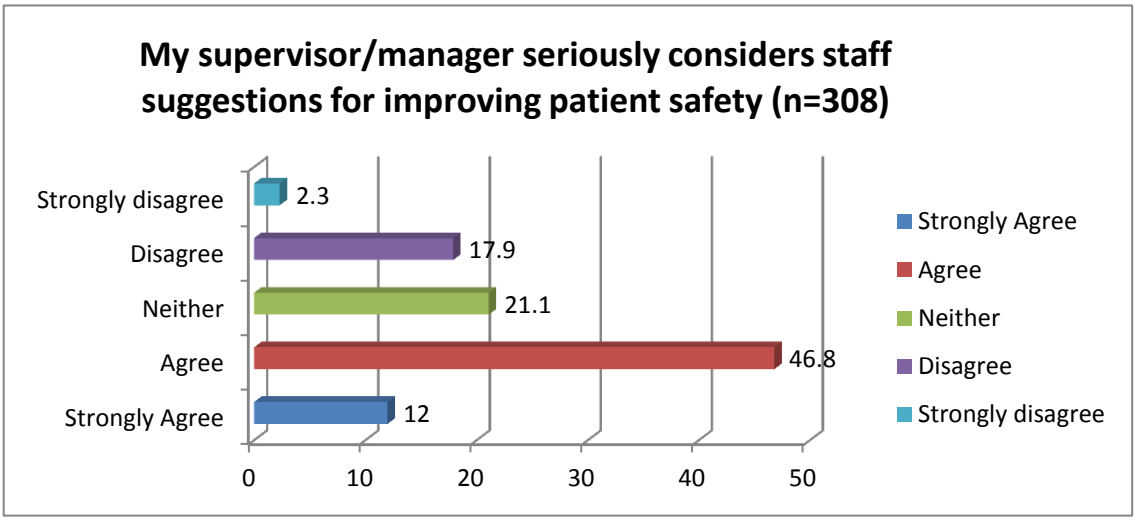

Figure 020: My supervisor/manager seriously considers staff suggestions for improving patient safety

3.3.3 Whenever pressure builds up, my supervisor/manager wants us to work faster, even if it means taking shortcuts

The respondents were asked whether their supervisor/manager wants them to work faster whenever pressure builds up even if it meant taking shortcuts, majority of the participants at 111 (36 percent) agreed, 87 (28.1 percent) disagreed, 71 (23.1 percent) were neutral, while 22 (7.1 percent) and 17 (5.5 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.89 and Standard deviation is 1.068. Figure 21 presents this information.

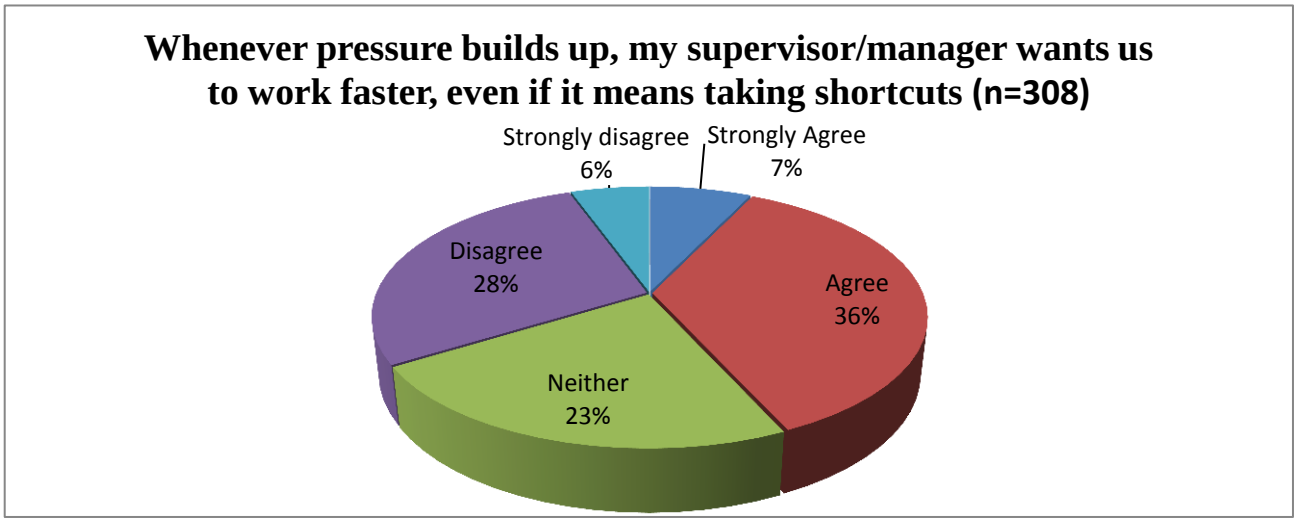

Figure 021: Whenever pressure builds up, my supervisor/manager wants us to work faster, even if it means taking shortcuts (n=308)

3.3.4 My supervisor/manager overlooks patient safety problems that happen over and over

The respondents were asked whether their supervisor/manager overlooks patient safety problems that happen over and over, most of the study participants at 129 (41.9 percent) agreed, 74 (24 percent) were neutral, 59 (19.2 percent) disagreed, while 40 (13.0 percent) and 6 (1.9 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.55 and Standard deviation is 1.005. Figure 22 presents this information.

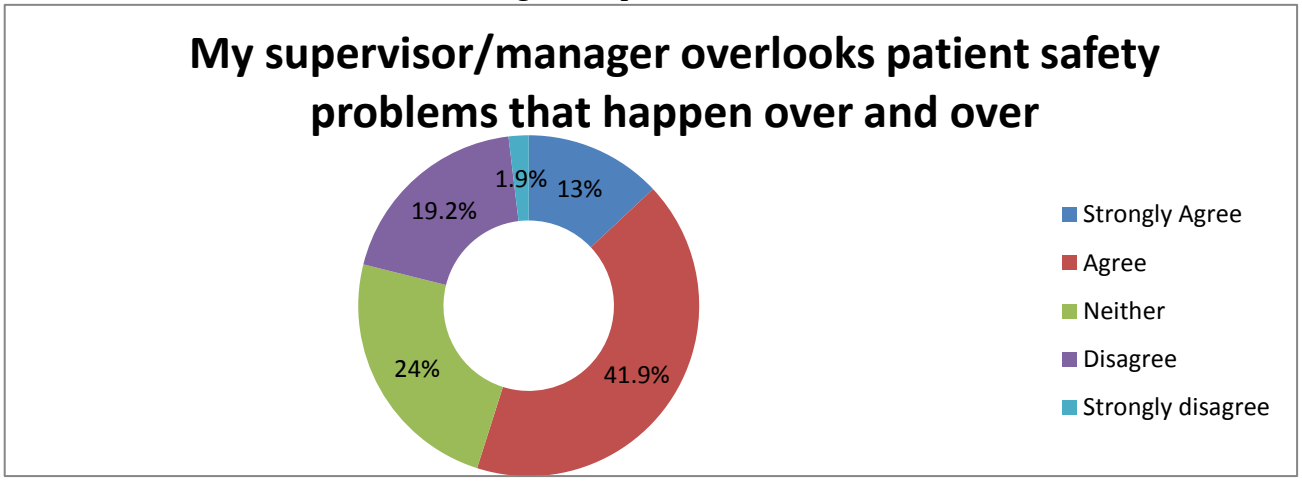

Figure 022: My supervisor/manager overlooks patient safety problems that happen over and over

3.4 Communications

3.4.1 We are given feedback about changes put into place based on event reports

The respondents were asked whether they were given feedback about changes put into place based on event reports, most of the study participants at 148 (48.1 percent) agreed, 60 (19.5 percent) disagreed, 59 (19.2 percent) were neutral, while 29 (9.4 percent) and 12 (3.9 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.60 and standard deviation is 1.027. Figure 23 presents this information.

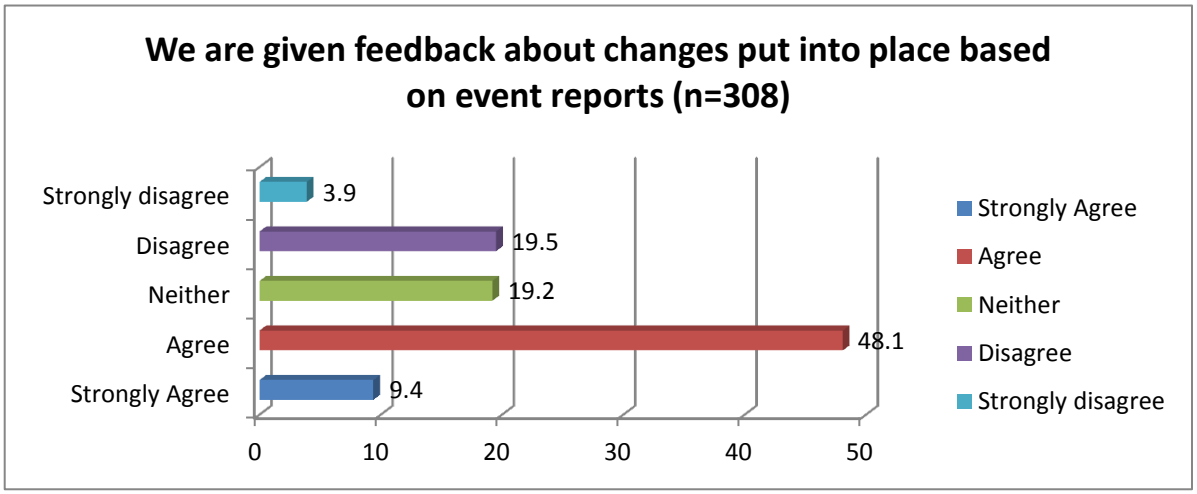

Figure 23: We are given feedback about changes put into place based on event reports (n=308)

3.4.2 Staff will freely speak up if they see something that may negatively affect patient care

When the respondents were asked whether staff will freely speak up if they see something that may negatively affect patient care, most of the study participants at 143 (48.1 percent) agreed, 65 (21.1 percent) neither agreed or disagreed, 60 (19.5 percent) disagreed, while 35 (11.4 percent) and 5 (1.6 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.54 and Standard deviation is 0.983. Figure 24 presents this information.

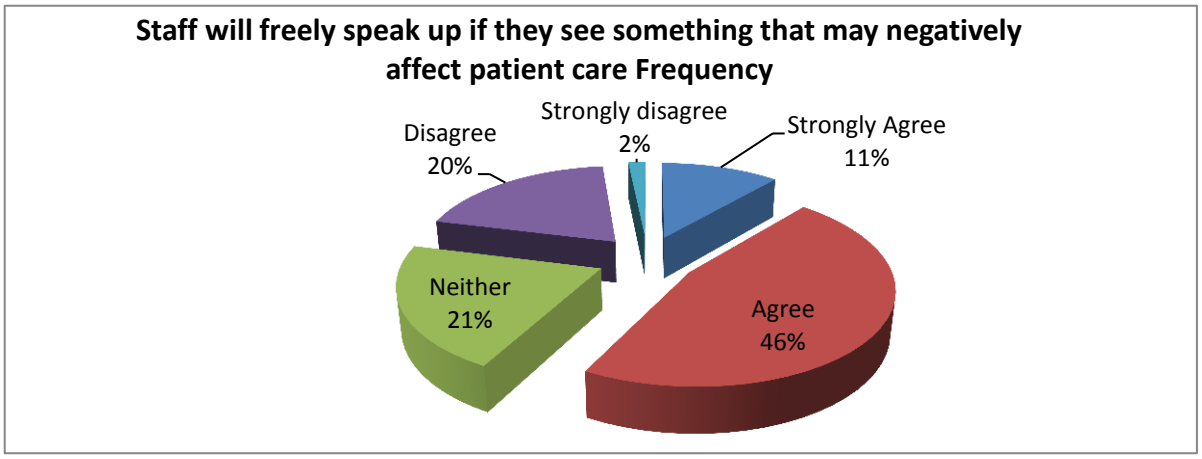

Figure 24: Staff will freely speak up if they see something that may negatively affect patient care

3.4.3 We are informed about errors that happen in this unit

When the respondents were asked whether they are informed about errors that happen in their working units, most of the study participants at 142 (46.1 percent) agreed, 76 (24.7 percent) disagreed, 46 (14.9 percent) neither disagreed nor agreed, while 32 (10.4 percent) and 12 (3.9 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.66 and Standard deviation is 1.079. Figure 25 presents this information.

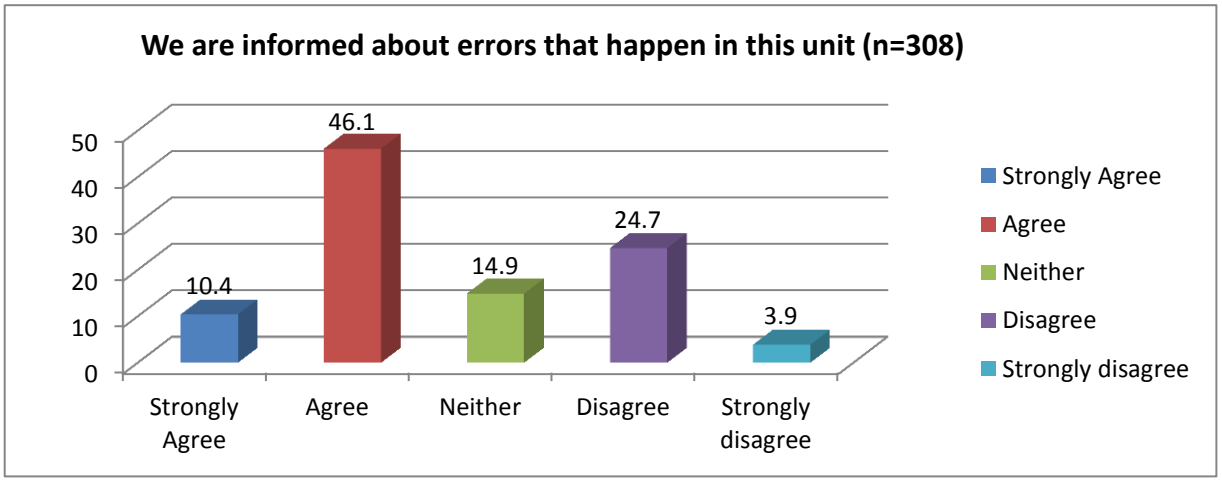

Figure 25: We are informed about errors that happen in this unit (n=308)

3.4.4 Staff feels free to question the decisions or actions of those with more authority

When the respondents were asked whether staff feel free to question the decisions or actions of those with more authority, most of the study participants at 106 (34.4 percent) agreed, 85 (27.6 percent) neither disagreed nor agreed, 73 (23.7 percent) disagreed, while 24 (7.8 percent) and 20 (6.5 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.66 and Standard deviation is 1.079. Figure 26 presents this information.

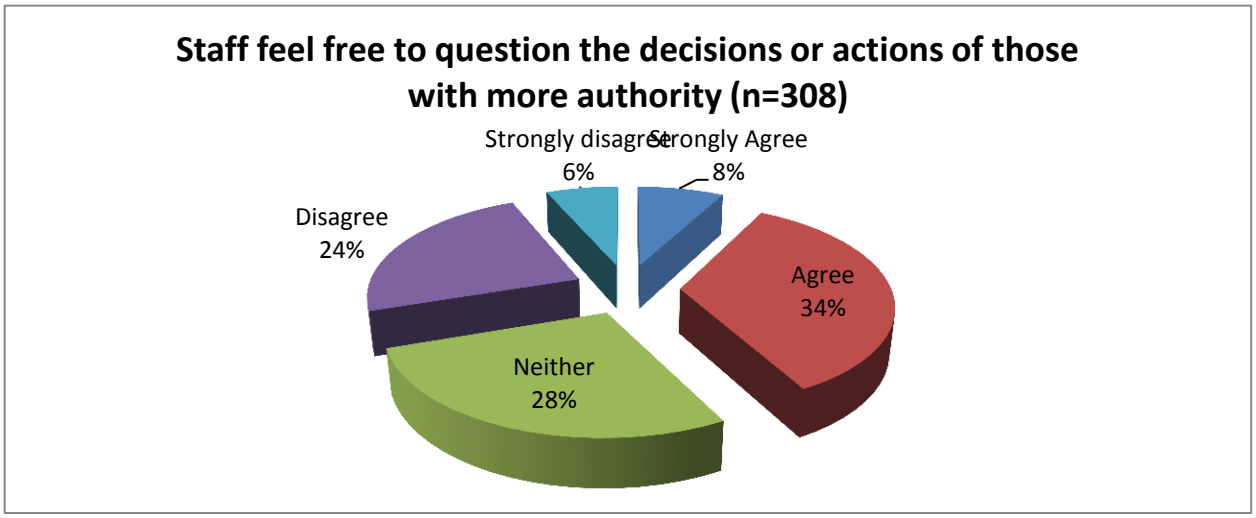

Figure 26: Staff feels free to question the decisions or actions of those with more authority (n=308)

3.4.5 In this unit, we discuss ways to prevent errors from happening again

When the respondents were asked whether they discussed ways to control errors from occurring, most of the study participants at 128 (41.6 percent) agreed, 67 (21.8 percent) disagreed, 66 (21.4 percent) neither disagreed nor agreed, while 36 (11.7 percent) and 11 (3.6 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.87 and Standard deviation is 1.067. Figure 27 presents this information.

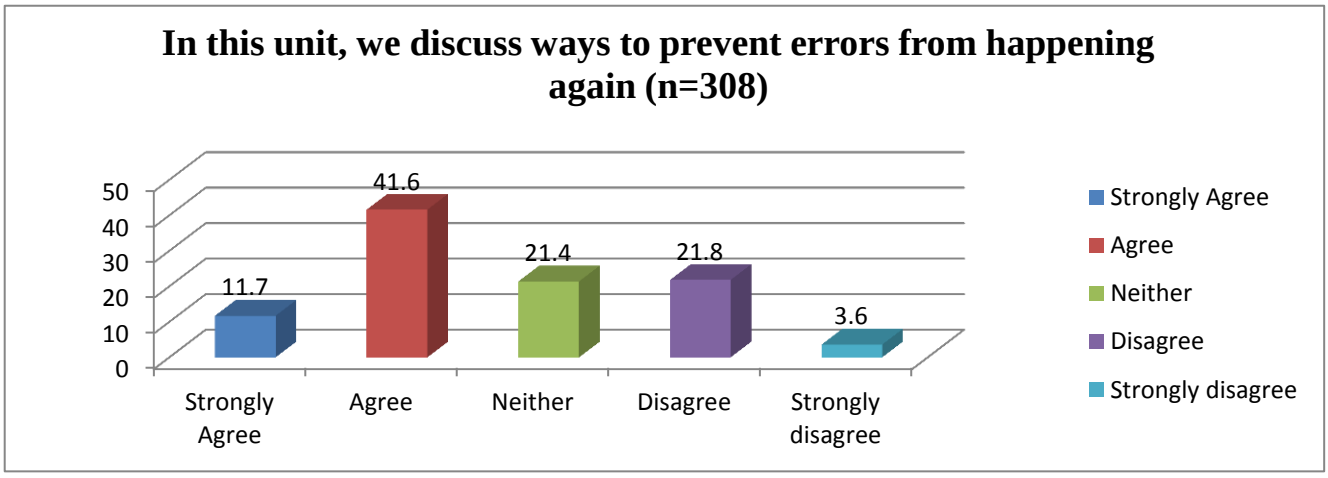

Figure 27: In this unit, we discuss ways to prevent errors from happening again (n=308)

3.4.6 Staff are afraid to ask questions when something does not seem right

When the respondents were asked whether staff are afraid to ask questions when something does not seem right, most of the study participants at 120 (39.0 percent) agreed, 89 (28.9 percent) neither agreed nor disagreed, 72 (23.4 percent) disagreed, while 17 (5.5 percent) and 10 (3.2 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.64 and standard deviation is 1.057. Figure 28 presents this information.

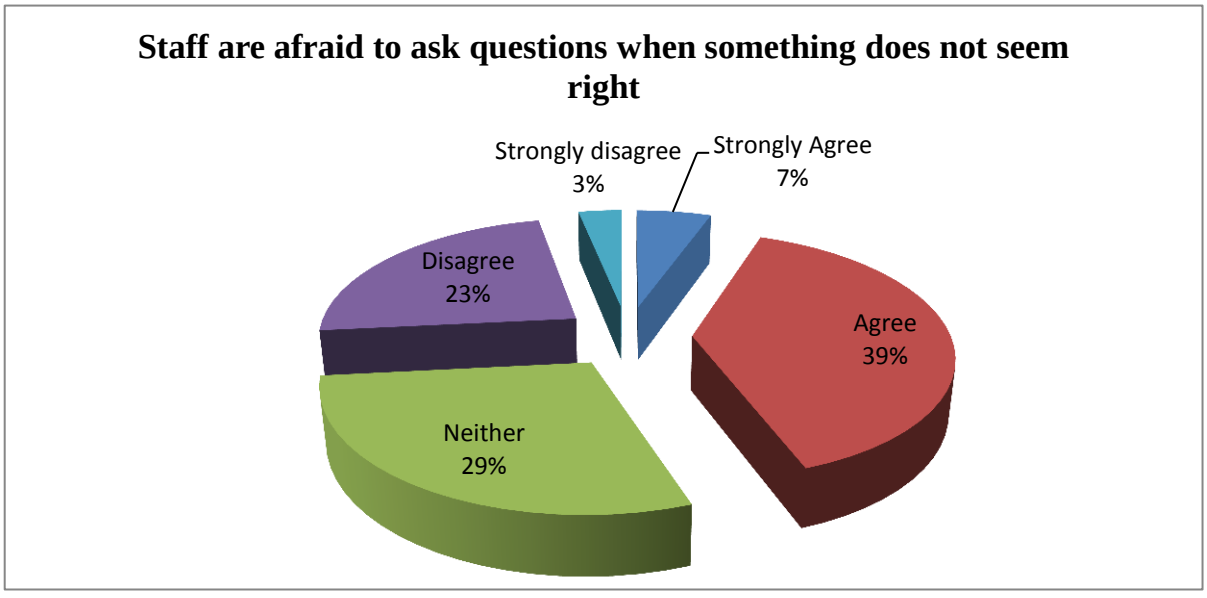

Figure 28: Staff are afraid to ask questions when something does not seem right

3.5 Frequency of Events Reported

3.5.1 When a mistake is made, but is caught and corrected before affecting the patient, how often is this reported?

The respondents were asked how often a mistake is reported when it is caught and corrected before affecting the patient, most of them at 98 (31.8 percent) stated most of the times, 91 (29.5 percent) indicated sometimes, 67 (21.8 percent) responded always, while 40 (13 percent) and 12 (3.9 percent) answered rarely and never, respectively. The mean was 2.80 and standard deviation is 0.968. Figure 29 presents this information.

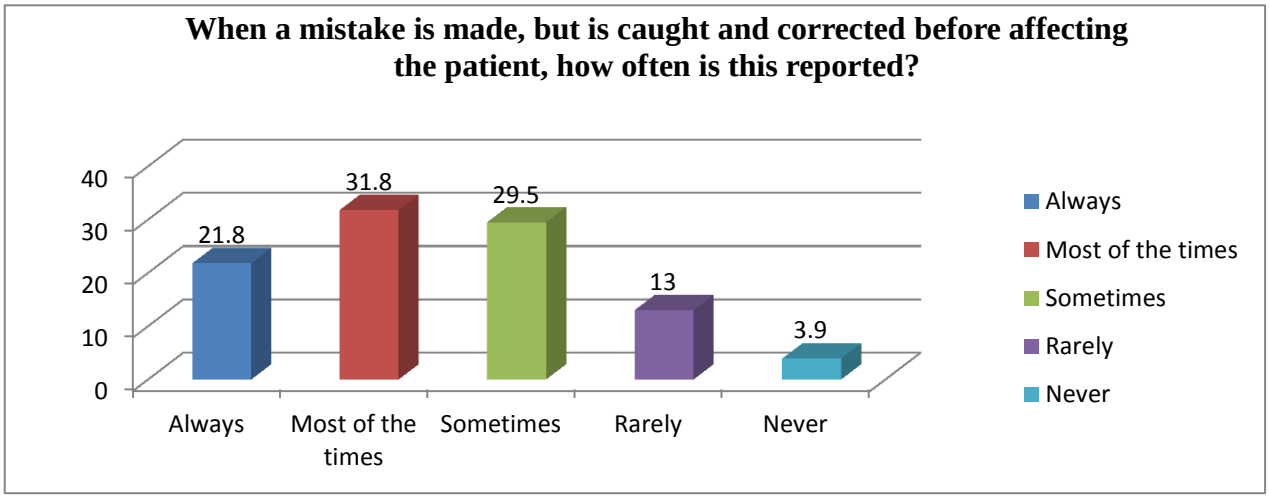

Figure 29: Frequency of reporting medical errors

3.5.2 When a mistake is made, but has no potential to harm the patient, how often is this reported?

The respondents were asked how often a mistake that has no potential to harm the patient is reported, most of them at 99 (32.1 percent) answered sometimes, 87 (28.2 percent) answered most of the times, 60 (19.5 percent) responded always, while 54 (17.3 percent) and 7 (2.3 percent) answered rarely and never, respectively. The mean was 2.45 and standard deviation is 1.086. Figure 30 presents this information.

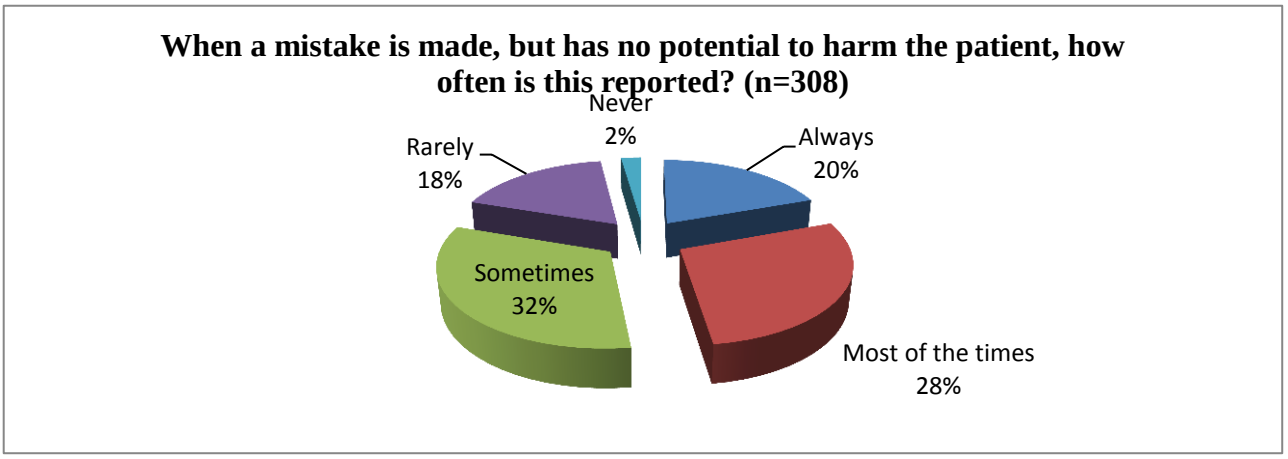

Figure 30: When a mistake is made, but has no potential to harm the patient, how often is this reported? (n=308)

3.5.3 When a mistake is made that could harm the patient, but does not, how often is this reported?

The respondents were asked how often a mistake that has potential to harm the patient is reported, most of them at 88 (28.6 percent) answered sometimes, 84 (27.3 percent) answered most of the times, 71 (23.1 percent) responded always, while 54 (17.5 percent) and 10 (3.2 percent) answered rarely and never, respectively. The mean was 2.55 and standard deviation is 1.063. Figure 31 presents this information.

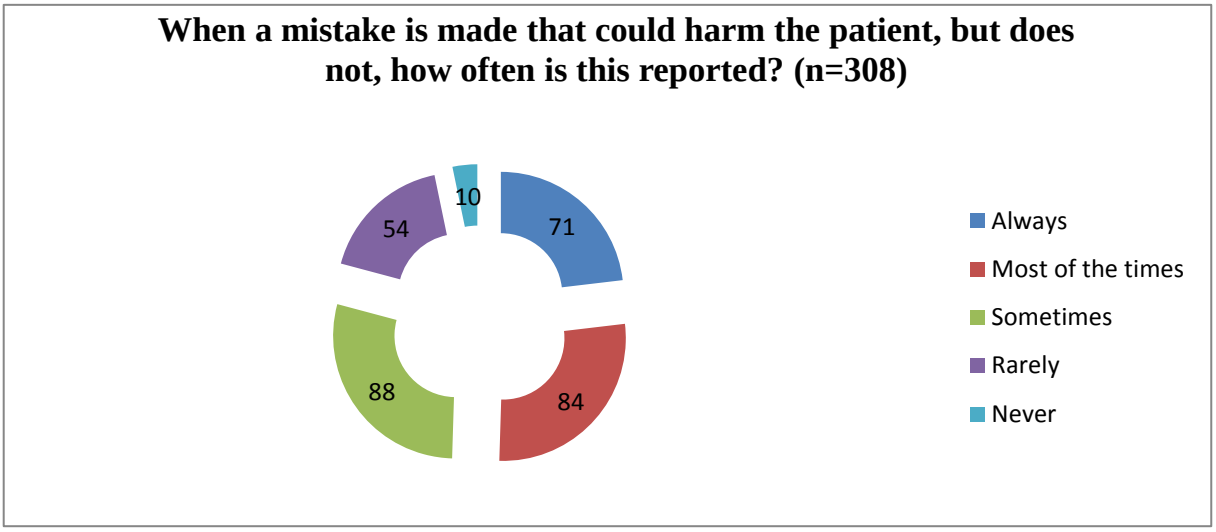

Figure 31: When a mistake is made that could harm the patient, but does not, how often is this reported? (n=308)

3.6 Overall Grade on Patient Safety

3.6.1 Please give your work area/unit in this hospital an overall grade on patient safety

Respondents were asked to rate the patient safety services of their work area or unit. Most of the research participants 132 (42.9 percent) rated as very good, 90 (29.2 percent) rated it as acceptable, 64 (20.3 percent) as excellent while 21 (6.8 percent) and 1 (0.3 percent) as poor and failing respectively. The mean was 2.50 and standard deviation is 1.124. Figure 32 presents this information.

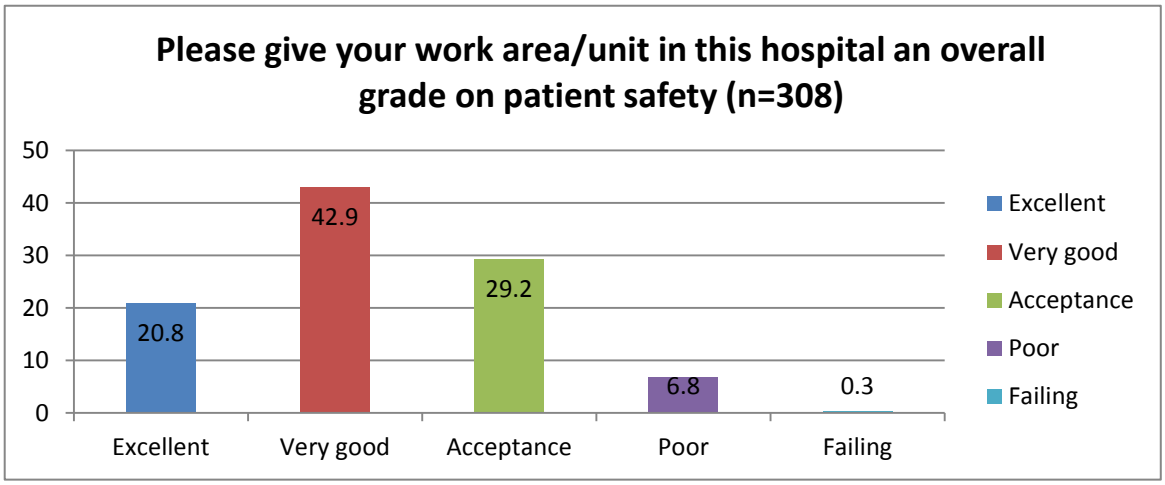

Figure 32: Overall Grade on Patient Safety

3.7 Patient safety culture in hospital

3.7.1 Hospital management provides a work climate that promotes patient safety

When the respondents were asked whether hospital management provides a work climate that promotes patient safety, most of the study participants at 126 (40.9 percent) agreed, 62 (20.1 percent) neither agreed nor disagreed, 62 (20.1 percent) disagreed, while 35 (11.4 percent) and 23 (7.5 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.23 and standard deviation is 0.867. Figure 33 presents this information.

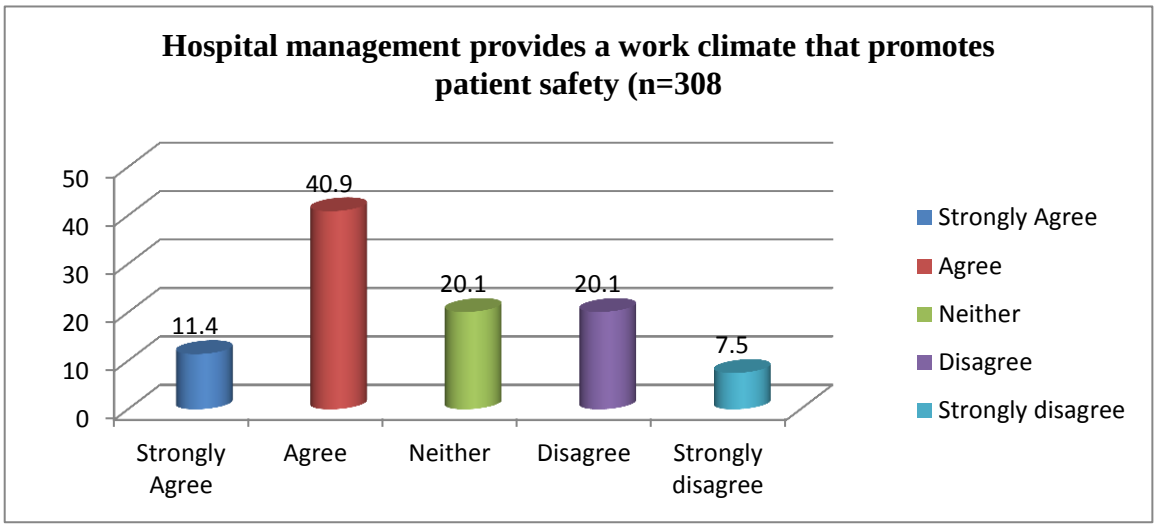

Figure 33: Hospital management provides a work climate that promotes patient safety

3.7.2 Hospital units do not coordinate well with each other

When the respondents were asked whether hospital units do not coordinate well with each other, most of the study participants at 102 (33.1 percent) agreed, 90 (29.2 percent) disagreed, 78 (25.3 percent) neither agreed nor disagreed, while 21 (6.8 percent) and 17 (6.8 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.71 and standard deviation is 1.134. Figure 34 presents this information.

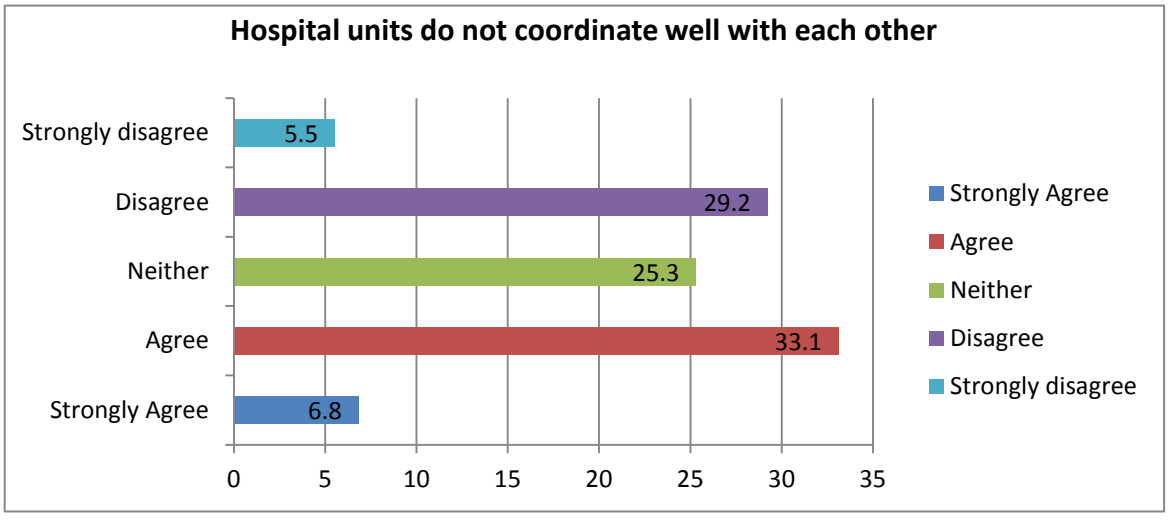

Figure 34: Hospital units do not coordinate well with each other

3.7.3 Things "fall between the cracks" when transferring patients from one unit to another

When the respondents were asked whether things "fall between the cracks" when transferring patients from one unit to another, most of the study participants at 98 (31.8 percent) agreed, 95 (30.4 percent) disagreed, 66 (21.4 percent) neither agreed nor disagreed, while 22 (7.1 percent) and 27 (8.8 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.94 and standard deviation is 1.057. Figure 35 presents this information.

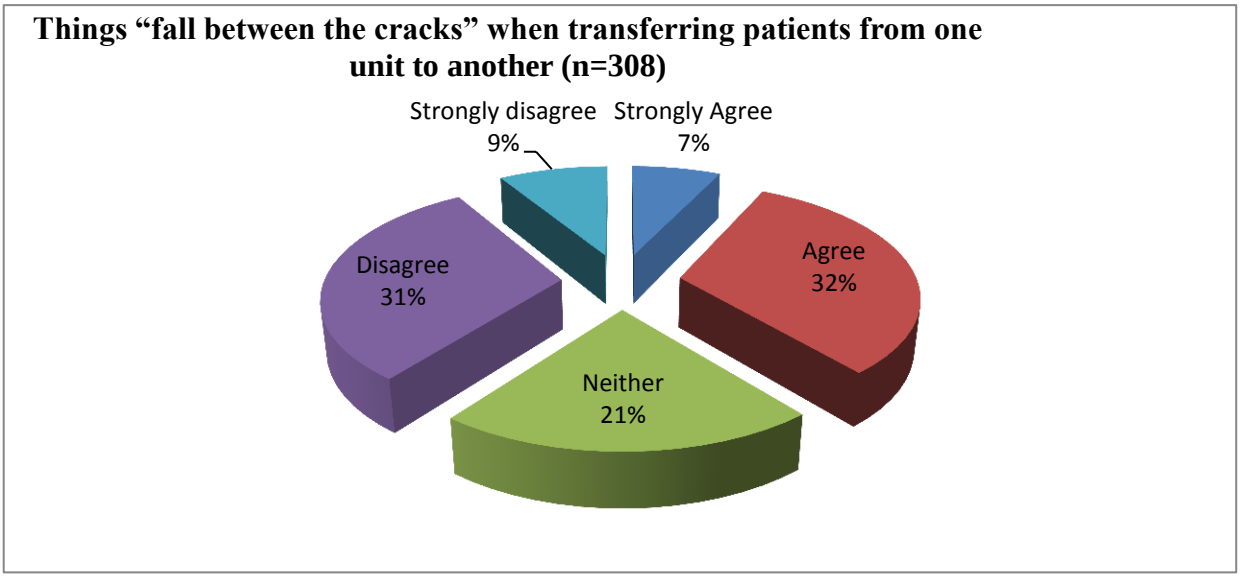

Figure 35: Things "fall between the cracks" when transferring patients from one unit to another (n=308)

3.7.4 There is good cooperation among hospital units that need to work together

When the respondents were asked whether there is good cooperation among hospital units that need to work together, majority of study participants at 140 (45.5 percent) agreed, 76 (24.7 percent) neither agreed nor disagreed, 62 (20.1 percent) disagreed, while 26 (8.4 percent) and 4 (1.3 percent) strongly agreed and strongly disagreed, respectively. The mean was 3.02 and standard deviation is 1.125. Figure 36 presents this information.

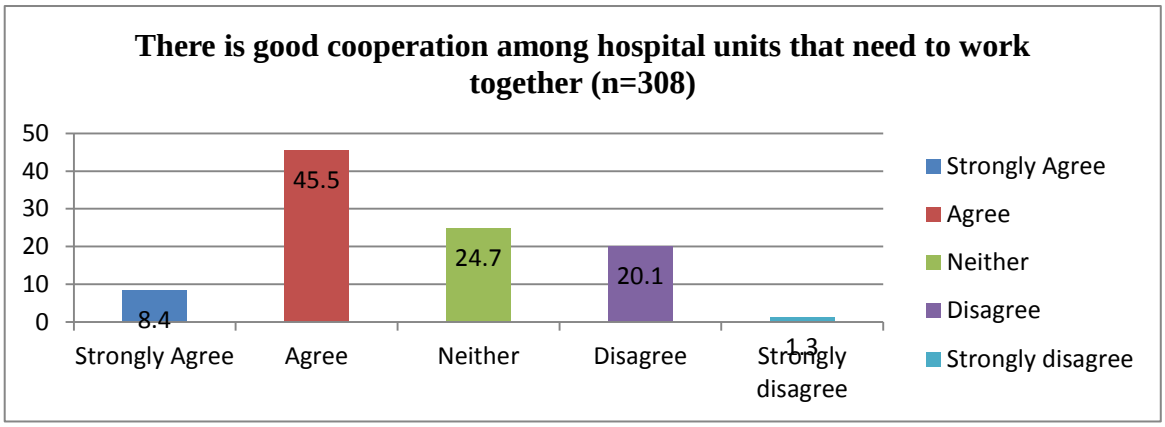

Figure 36: There is good cooperation among hospital units that need to work together (n=308)

3.7.5 Important patient care information is often lost during shift changes

When the respondents were asked whether important patient care information is often lost during shift changes, majority of study participants at 109 (35.4 percent) disagreed, 80 (26 percent) agreed, 68 (22.1 percent) neither agreed nor disagreed, while 33 (10.7 percent) and 18 (5.8 percent) strongly disagreed and strongly agreed, respectively. The mean was 2.60 and standard deviation is 0.944. Figure 37 presents this information.

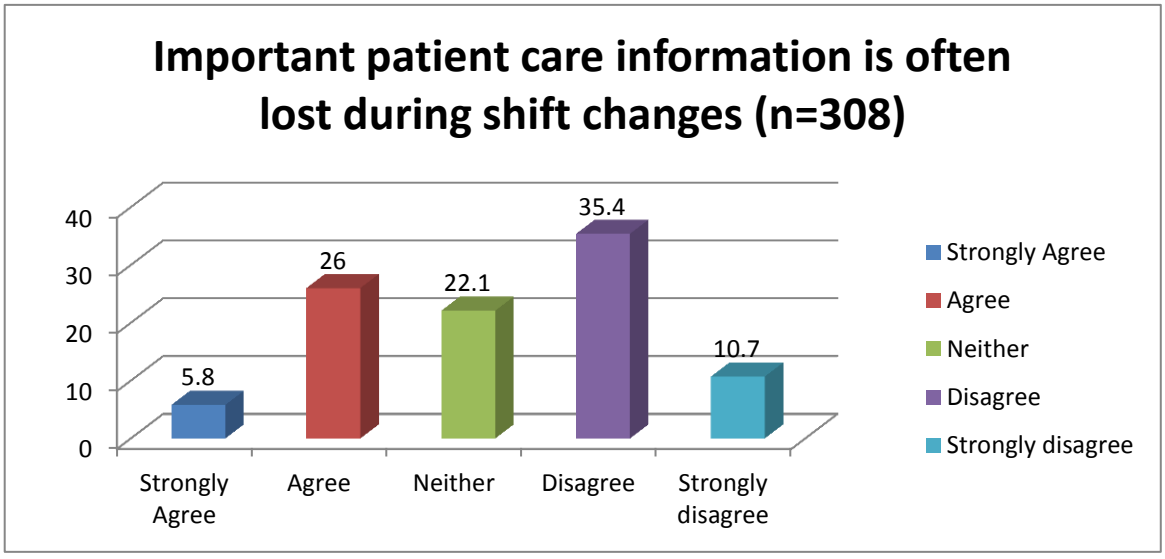

Figure 37: Important patient care information is often lost during shift changes

3.7.6 It is often unpleasant to work with staff from other hospital units

When the respondents were asked whether it is often unpleasant to work with staff from other hospital units, majority of study participants at 100 (32.5 percent) disagreed, 91

(29.5 percent) agreed, 75 (24.4 percent) neither agreed nor disagreed, while 24 (7.8 percent) and 18 (5.8 percent) strongly agreed and strongly disagreed, respectively. The mean was 3.19 and standard deviation is 1.115. Figure 38 presents this information.

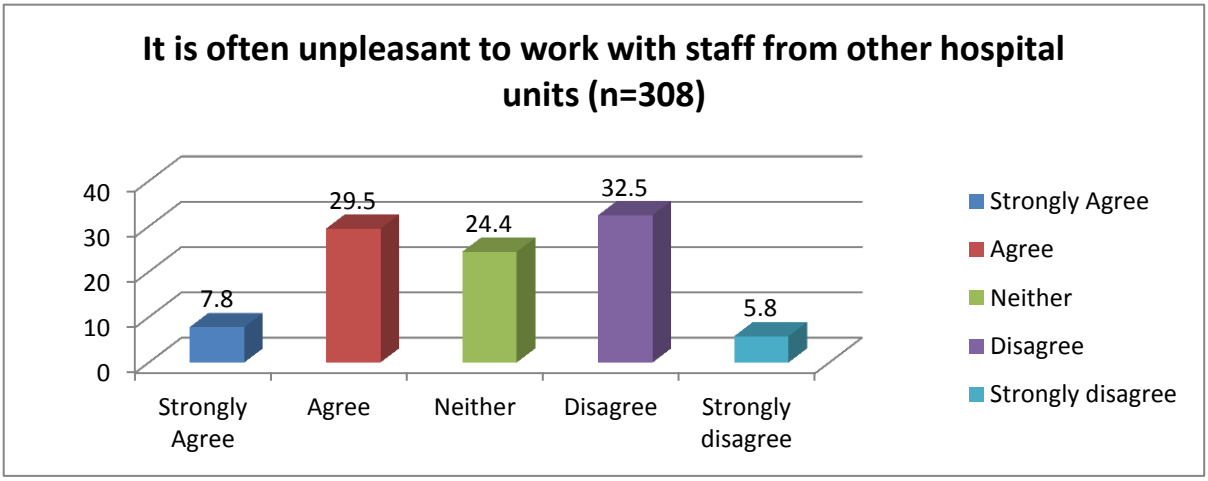

Figure 38: It is often unpleasant to work with staff from other hospital units (n=308)

3.7.7 Problems often occur in the exchange of information across hospital units

When the respondents were asked whether problems often occur in the exchange of information across hospital units, majority of study participants at 96 (31.2 percent) disagreed, 96 (31.2 percent) agreed, 67 (21.8 percent) neither agreed nor disagreed, while 28 (9.1 percent) and 21 (6.8 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.99 and standard deviation is 1.081. Figure 39 presents this information.

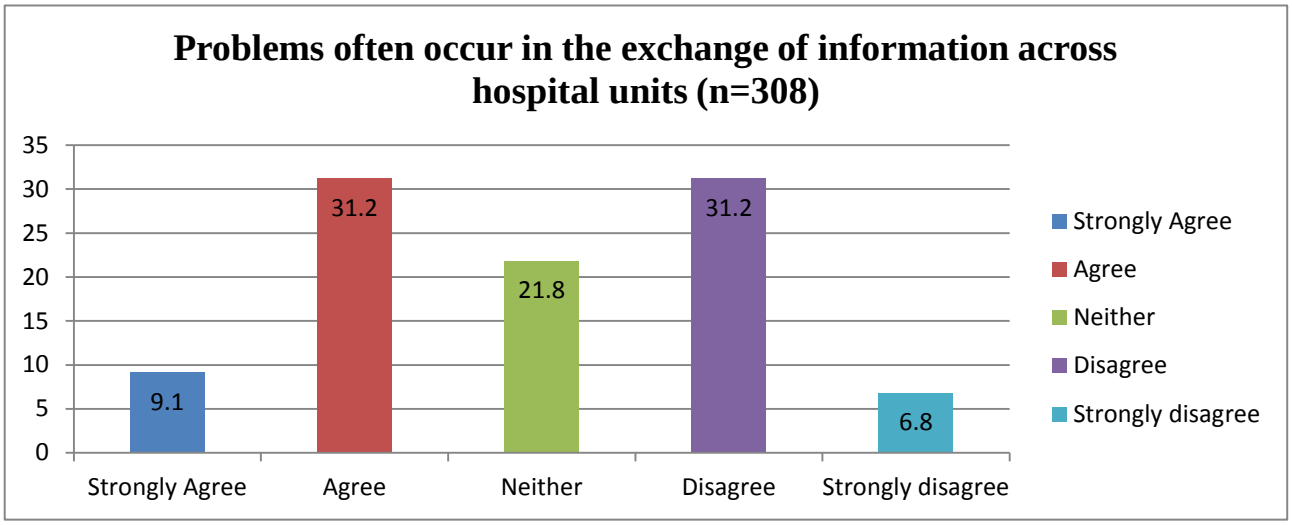

Figure 39: Problems often occur in the exchange of information across hospital units (n=308)

3.7.8 The actions of hospital management show that patient safety is a top priority

When the respondents were asked whether the actions of hospital management show that patient safety is a top priority, majority of study participants at 119 (38.6 percent) agreed, 78 (25.3 percent) disagreed, 59 (19.2 percent) neither agreed nor disagreed, while 42 (13.6 percent) and 10 (3.2 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.95 and standard deviation is 1.123. Figure 40 presents this information.

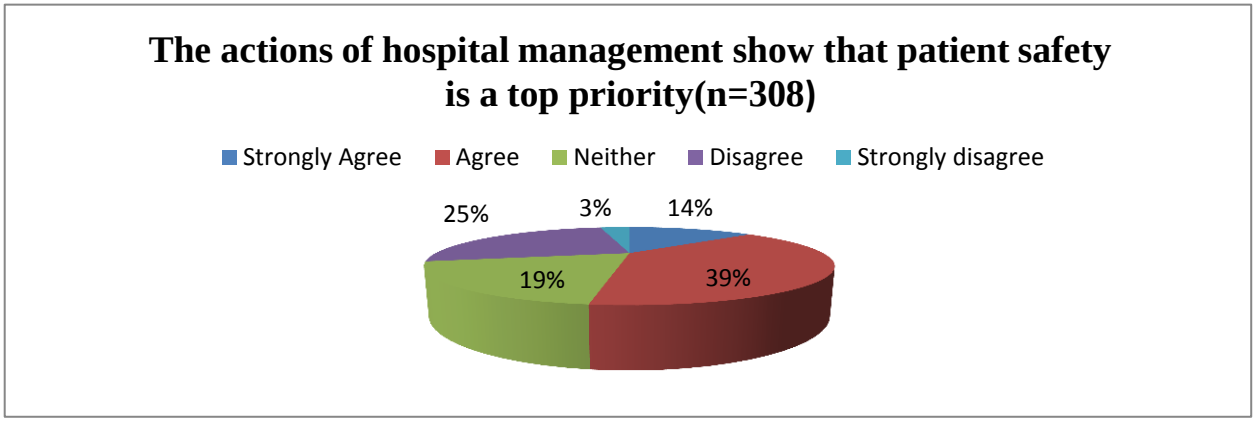

Figure 40: The actions of hospital management show that patient safety is a top priority (n=308)

3.7.9 Hospital management seems interested in patient safety only after an adverse event happens

When the respondents were asked whether hospital management seems interested in

patient safety only after an adverse event happens, majority of study participants at 125 (40.6 percent) agreed, 81 (26.3 percent) disagreed, 59 (19.2 percent) neither agreed nor disagreed, while 25 (8.1 percent) and 18 (5.8 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.66 and standard deviation is 1.095. Figure 41 presents this information.

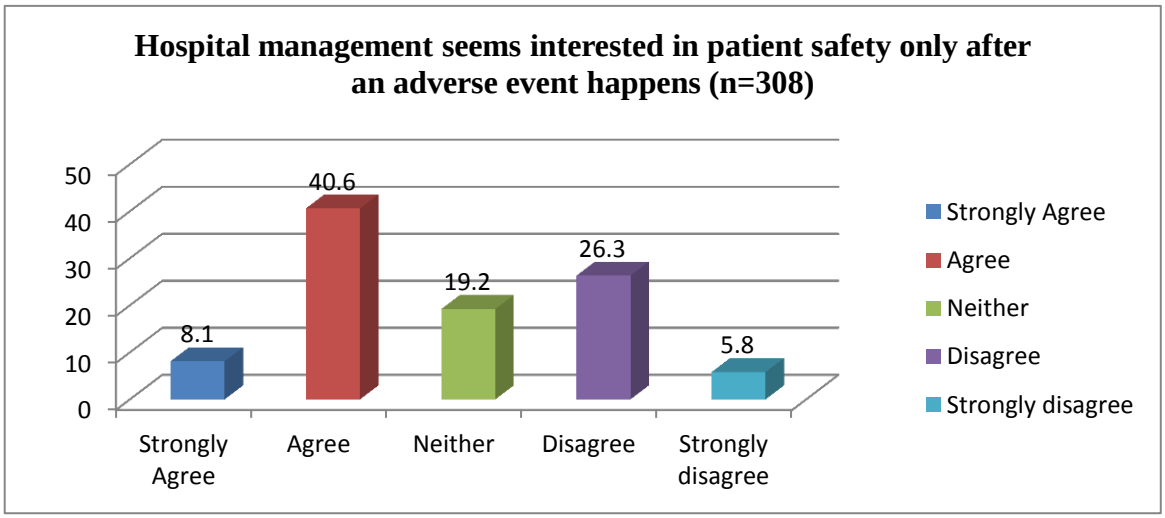

Figure 41: Hospital management seems interested in patient safety only after an adverse event happens (n=308)

3.7.10 Hospital units work well together to provide the best care for patients

When the respondents were asked whether Hospital units work well together to provide the best care for patients, majority of study participants at 113 (36.7 percent) agreed, 72 (23.4 percent) disagreed, 60 (36.7 percent) neither agreed nor disagreed, while 46 (14.9 percent) and 17 (5.5 percent) strongly agreed and strongly disagreed, respectively. The mean was 2.81 and standard deviation is 1.093. Figure 42 presents this information.

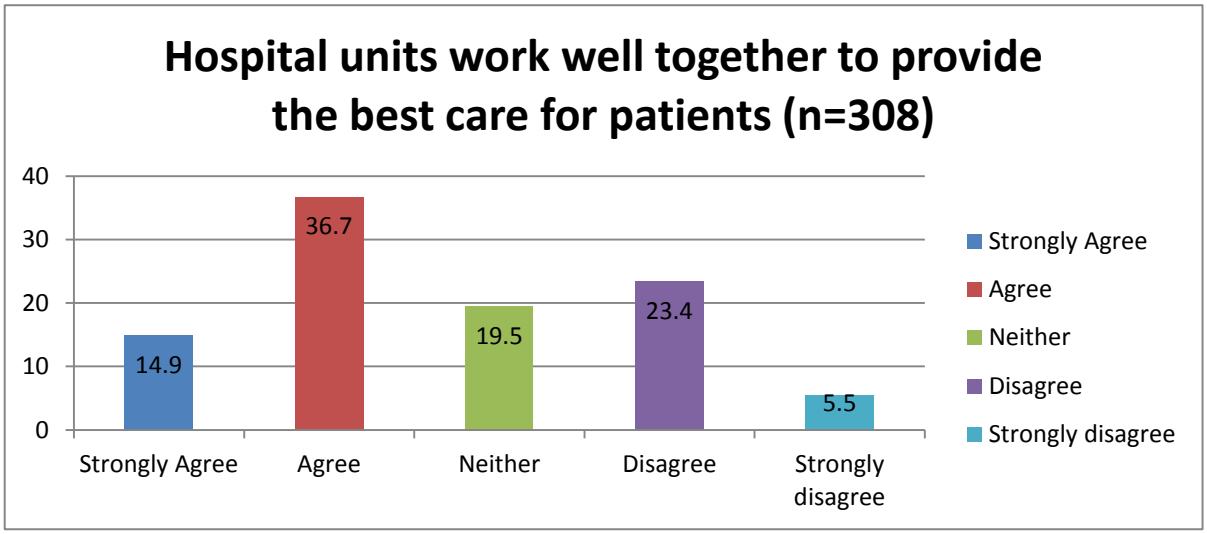

Figure 42 Hospital units work well together to provide the best care for patients (n=308)

3.7.11 Shift changes are problematic for patients in this hospital

When the respondents were asked whether shift changes are problematic for patients in this hospital, majority of study participants at 100 (32.5 percent) agreed, 98 (31.8 percent) disagreed, 80 (26.0 percent) neither agreed nor disagreed, while 17 (5.5 percent) and 13 (4.2 percent) strongly disagreed and strongly agreed, respectively. The mean was 2.68 and standard deviation is 1.149. Figure 43 presents this information.

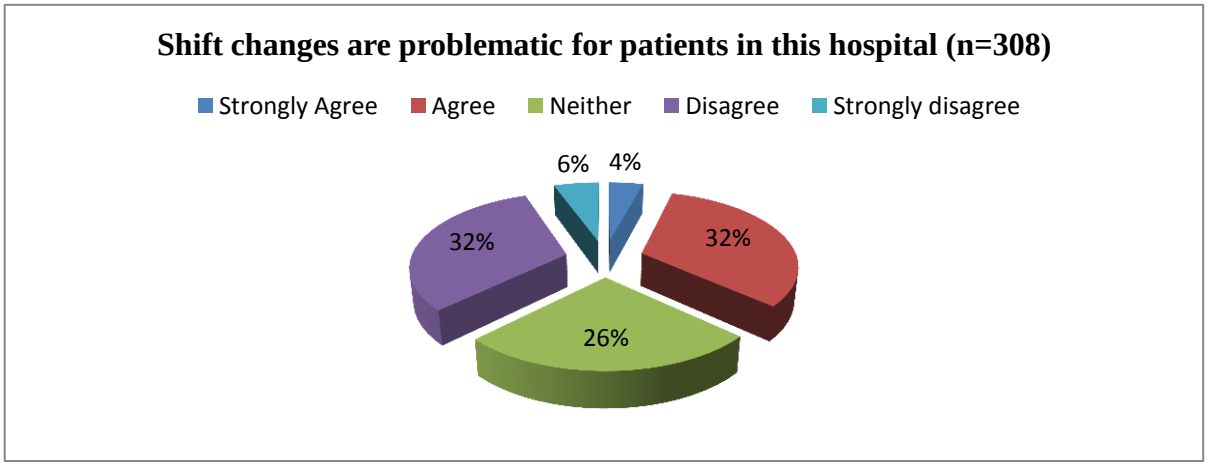

Figure 43 Shift changes are problematic for patients in this hospital (n=308)

3.7.12: In the past 12 months, how many event reports have you filled out and submitted?

When the respondents were asked how many event reports they have filled out and submitted in the past 12 months, majority of study participants at 94 (30.5 percent) indicated 11 to 20 event reports, 54 (17.5 percent) 6 to 10 event reports, 50 (16.2 percent) 3 to 5 event reports, while 41 (13.3 percent), 40 (13 percent), and 29 (9.4 percent) indicated no event report, 16 to 20 event reports, and 21 event reports or more, respectively. The mean was 3.42 and standard deviation is 1.483. Table 3 summarizes this information

Table 3 Event reported filled out and submitted

In the past 12 months, how many event reports have you filled out and submitted?		
	Frequency	**Percent**
No event report	41	13.3
1 to 2 event reports	50	16.2
3 to 5 event reports	54	17.5
6 to 10 event reports	94	30.5
11 to 20 event reports	40	13
21 event reports or more	29	9.4

4.0 DISCUSSION, CONCLUSION AND RECOMMENDATIONS

4.1 Discussion

4.1.1 Role of Teamwork in patient safety culture healthcare

The findings of the study indicated that most of the respondents agreed that teamwork existed in the health units. Supporting each other is instrumental in promoting patient safety and has an influence on the positive perceptions on patient safety among the staff. Moreover, the findings indicated that there was enough staff to handle the workload in hospital which is a key determinant in advancing the patient safety. Unfortunately, the majority of the respondents revealed that they worked for longer hours than is best for patient care which compromises the patient safety. The findings of this study are consistent with that of Aljadhey *et al*., (2014) which indicated that most of the health care

facilities suffer from huge workload which compromises the patient safety. Most of the research participants highlighted that employees in hospital help others out when one area in the unit gets really busy although over 37 per cent of them felt it was often unpleasant to work with staff from other hospital units.

4.1.2 Perceptions and attitudes of patient safety culture in healthcare

The findings of the study revealed that majority of the staff felt like their mistakes are held against them. The findings of this study are different from Sorra *et al*. (2016) which indicated that patient safety culture should encourage people to learn from mistakes. Therefore, when health care workers feel that they are held against them, they tend to have a poor perceptions and attitude of patient safety. Similarly, the majority indicated that mistakes have led to positive changes in the hospital. Furthermore, the findings discovered that when error is reported, healthcare workers felt that the person is being written up as opposed to the problem. Therefore, it implied that healthcare workers are victimized for their mistakes which leaders to poor perception of patient safety. It also implied that hospitals do not nurture patient safety culture among the staff because of victimization. The findings are contrary with Laal *et al*., (2016) which noted that strong safety culture should be encouraged among workers in healthcare by encouraging learning from mistakes, and taking employees as players to strengthen safety.

Most of the respondents indicated that they worked in “crisis mode” by trying to do too much, too quickly. By trying to do too much at a fast rate, the workers are more likely to increase the rate of errors among patients which negatively affects their perceptions towards patient safety. The findings are similar to Aljadhey *et al*., (2014) which noted that pressurizing healthcare to do too much may adversely affects the quality of care provided to patients. The results also disclosed that staff worry that mistakes they make are kept in their personal life. Therefore, the hospital does not provide a chance for healthcare staff to learn from mistakes. Therefore, they do not see their mistakes as a chance to learn. Subsequently, more than 42 per cent of the respondents indicated that they had patient safety problems in their place of work. The findings of this study are similar to Alkorashy, (2013) which disclosed that significant proportion of respondents had patient safety problems.

When asked how many times a mistake that has potential to harm the patient is reported, most of them answered sometimes. The findings indicated that most of the adverse events go unreported in the hospitals with negatively affects healthcare workers perceptions towards patient safety. The findings also highlighted that majority of the staff reported to be afraid to ask questions when something does not appear to be right.

4.1.3 Patient Safety management system

Most of the respondents opined that their hospitals procedures and systems are good at preventing errors from happening. The findings are similar to a study Alahmadi, (2010) which indicated that hospitals have improved procedures and systems to promote patient safety and eliminate errors. Over 52 per cent of the respondents reported that hospital management provides a work climate that promotes safety. In fact, approximately 63 per cent of research participants ranked the hospitals as either very good or excellent in terms of patient safety.

The majority of respondents pointed out that their supervisors appreciate them when they see a job-done according to established patient safety procedures. The findings is consistent with Al-Awa *et al*., (2012) who noted that effective leadership appreciates and inspire staff towards patient safety. The majority reported that their supervisors seriously considered staff suggestions for improving patients. In this respect, it helps to promote a culture and positive perception of patient safety. However, more than 43 per cent reported that whenever pressure builds up, their supervisors wants them to work faster, even if it means taking shortcuts. However, this practice may create a negative perception towards patient safety. Furthermore, the majority of research respondents noted that their supervisors overlooked patient safety problems that happen over and over. The findings of this study is contrary to Alswat *et al*. (2017) who noted that leaders of healthcare staff should be focused on patient safety problems when/if they happen. Over 48 per cent of the respondents indicated that hospital management seems interested in patient safety only after an adverse event happens which implied that patient safety is not a priority.

4.2 Conclusion

4.2.1 Role of Teamwork in the patient safety culture healthcare

Teamwork is very important in promoting patient safety in the healthcare system and promoting positive perceptions on patient safety among the staff. It was established that most of the healthcare workers health each other when one area in the unit gets really busy. The teamwork is affected by huge workload which compromises the patient safety.

4.2.2 Perceptions of patient safety culture

The perceptions and attitude of staff towards patient safety culture is important as it influences how they deal with mistakes. Most of the employees felt that their mistakes are held against them which mean they have negative perceptions and attitudes towards patient safety. When people are not given a chance to learn from their mistakes, it hinders patient safety culture because they feel victimized. It was evident that victimization of

staffs does not nurture patient safety. Moreover, the study noted that workers are sometimes forced to do too much, too quickly which raises chance of errors among patients which negatively affects their perceptions towards patients' safety. It is evident that workers in healthcare feel written up for their mistakes. Majority of the staff indicated that most of the adverse events go unreported in the hospitals which could be explained by the repercussions meted on healthcare staff after making errors.

4.2.3 Patient safety management systems

The findings indicated that sampled hospitals use good procedures and systems that prevent errors from occurring. It was evident from the study that supervisors appreciated workers when they saw job being done according to established safety procedures. Most of the study respondents noted that when pressure builds up in the hospitals, their supervisors force them to work faster, even if it means taking shortcuts which implied that it would create a negative perception over patient safety culture.

4.4 Recommendations

4.4.1 Role of teamwork in patient safety culture in hospital

The hospitals should ensure that the staffs promote teamwork spirit by ensuring that they help each other to reduce the workload. Teamwork environment should be used to advance patient safety. The hospital administrator should also ensure that they reduce the unpleasant feeling among the staff from other hospital units.

4.4.2 Perceptions towards patient safety

The healthcare administration in hospital should ensure that staffs do not feel written up when they make mistakes in order to ensure that they do not feel victimized for their mistakes. Moreover, the staffs should not feel victimized from their errors but should be given a chance to learn and be corrected appropriately. The hospitals should encourage staff to report errors when they occur in order to enhance patients' safety.

4.4.3 Patient safety management system

Supervisors should not compel staffs to work faster or encourage them to take shortcuts. The hospital administrator should also be focused on patient safety by ensuring all events that could compromise patient safety are addressed before they happen. The health administrators should adopt preventative process of controlling errors which could compromise patient safety.

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