

Patient satisfaction with nursing care quality and patient safety culture in the medical-surgical unit

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ABSTRACT

The objective of the study was to determine a significant relationship between patient safety culture as perceived by the nurses. The study was done in the medical-surgical units of a private hospital in Cebu City. The respondents were 131 regular nurses assigned in the medical surgical units and patients admitted in the medical-surgical units. Quota/purposive sampling technique was used. Research tools used were the Modified Hospital Survey on Patient Safety Culture developed by the Agency of Healthcare Research and Quality and the Modified Patient Satisfaction with Nursing Care Questionnaire developed by Laschinger, Hall, Pedersen & Almost. Results showed that majority (52.475%) of the regular nurses assigned in the medical-surgical units of a private hospital in Cebu City have positive assessments with regards to the perceptions, values, attitudes and patterns of behavior that determine the dedication to, manner and mastery of an institutions management of health and safety indicating a positive patient safety culture. 55% of the patient respondents rated the nursing care quality in medical-surgical units as "Excellent" or "Very Good" indicating a positive patient satisfaction rating. Spearman's Rho revealed that there is no significant relationship between patient safety culture as perceived by nurses and patient satisfaction to nursing care quality. Mann-Whitney Test and Kruskal-Wallis Test for Difference revealed no significant difference in perception in patient safety culture based on the demographic profiles of nurses and no significant difference in patient satisfaction to nursing care quality based on the demographic profiles of the patients. Some dimensions of patient safety culture had less than 50% of the nurse respondents giving a positive assessment which indicated that these were areas needing of improvement. Continuous evaluation of patient safety in the hospital is needed to assess strengths and areas needing improvement. Continuous re-evaluation of policies is needed to ensure its effectiveness in the attainment of the patient safety culture of the organization.

Keywords: culture, patient, safety, satisfaction

I. INTRODUCTION

Fitzpatrick, ray once stated that patient satisfaction is an indicator of system performance and the quality of healthcare provision (Fitzpatrick, 1991). Patient satisfaction is a major indicator of the quality of care provided by a healthcare institution. It is an emerging health policy all over the world. A review of literature relevant to patient satisfaction reveals that the assessment of the patient satisfaction level is a tool that determines the quality of healthcare delivery, an analysis of the existing situation and a workout strategy that can improve it. It is very useful to understand the needs of the patient therefore patient satisfaction is of very high

value to a healthcare institution. With a deeper understanding of patient satisfaction and the determination of its existing level, healthcare services can be made relevant to the needs of the people and patients. Research has also identified the link between the outcomes of the patients and the scores of patient satisfaction (Institute of Medicine, 2001). The assessment from the perspective of the patients gives them a voice, which would aid in making health services more responsive to the patient's needs and their expectations (World Health Organization, 2000).

One of the major health care services is nursing care. Nursing care contributes a huge part to the patient healing process. Even if a hospital has enough

competent physicians, it would not be enough if there is no appropriate and sufficient nursing care. Nurses have a 24 hour contact with patients. They are in the frontlines. Patient expectations from nurses should be satisfied with a compassionate and competent approach. Denying the patient of appropriate care means the healing process is compromised. The assessment of the satisfaction of patients with nursing care is important in order to determine areas of dissatisfaction and improve services.

Patient safety is the central theme and ultimate objective of health care quality. One of the most important challenges that is faced by healthcare today is ensuring the safety of everyone that comes into contact with healthcare services. Patient safety in developing countries faces harsher threats and challenges because of an environment with scarcer resources and inadequate infrastructure. There is little information on the rate of preventable patient harm in developing countries in southeast asia or about the healthcare quality (WHO, 2015).

Patient safety is a fundamental of nursing care. Nurses' code of ethics state that it is the nurses' responsibility to provide safe, competent and ethical care. Nurses play a critical role in ensuring the safety of the patient. They are in charge of monitoring of patients for clinical deterioration, they also have to be able to detect errors and near misses, they also have roles in the understanding of care processes and weaknesses in systems and the performance of countless other tasks that ensure patients receive high-quality care.

Improvement of patient safety regarding risks and outcomes in a healthcare system depends on the building of patient safety culture.

Hupcey (2000) found out that patients depicted emotions of discomfort when they perceive that they were not safe. Patient discomfort would lead to lower patient satisfaction. It has been hypothesized that patient safety and patient satisfaction are correlated due to the fact that both are embodiments of a fundamental culture of the hospital, one that is committed to the welfare of patients and undergoes steps that would be able satisfactorily to meet or surpass the expectations of patients while at the same time, promoting a care that is without error (Wolosin, 2008).

A positive patient safety culture may receive complimentary appraisals from patients. A positive patient safety culture may not only result in positive assessments from patients, but it would also lead to a decrease in episodes of unfavorable events occurring in a hospital as cited by Mardon, Khanna, Sorra, Dyer, and Famolaro (2010).

This study was undertaken to determine the

correlation between patient safety culture as perceived by the regular nurses and patient satisfaction with nursing care quality in the medical-surgical units of a private hospital in cebu city. There has been very little evaluation of the patient safety culture in the hospitals of cebu city. Only one other study evaluated patient safety culture in their hospital and it was by Arcenal (2015) entitled "south general hospital employees' level of safety culture and work attitude: proposed program design for organizational setting enhancement towards patient safety".

II. THEORETICAL FRAMEWORK

Comfort theory by Katharine Kolcaba states the duty to meet the patient's comfort needs (Kolcaba, 2011). Nurses address those needs by doing an assessment the patient's need for comfort, the development and implementation of the right nursing interventions and the evaluation of the comfort of the patient following the interventions. Hupcey (2000) found out that patients depicted emotions of discomfort when they perceive that they were not safe. Patient discomfort would lead to lower patient satisfaction. Meeting the patient's needs would result in the improvement of patient satisfaction.

III. METHODOLOGY

Correlational Research Design was used in this study. The study was conducted in the medical-surgical units of a private hospital in Cebu City. One hundred thirty one (131) medical-surgical nurses and 131 patients were used in the study. Patients who were not included were those who were unconscious and those who are undergoing a treatment regimen that affects participation in the study such as mechanical ventilation, sedation and restraint. The sampling technique used was quota/purposive sampling. Because of the confidentiality procedures of the hospital, purposive sampling was used. Patients whose attending physicians agreed to their participation in the study were included as respondents. Not all physicians agreed to the participation of their patients in the study which made the use of a sampling frame listing inapplicable.

Modified Hospital Survey on Patient Safety Culture. The Hospital Survey on Patient Safety Culture was designed to measure the patient safety culture of hospitals. The Hospital Survey on Patient Safety Culture has 42 items that are categorized into 12 dimensions of Patient Safety Culture. Organizational views and customs related to the four factors of culture can be evaluated by the Hospital Survey on Patient Safety Culture (Jones, Skinner, Sun, Mueller & Xu, 2008).

There are 12 dimensions that are measured by the

survey and these are: Teamwork within units, this dimension determines if staff provide each other with support, is respectful to one another and if they work together as a team. This dimension has 4 items. Supervisor/manager expectations and promoting safety actions, this dimension determines whether the leadership takes into account suggestions by the staff, gives praise to the staff for the application of patient safety procedures that improve patient safety and does not encourage hastier work through the use of short cuts. This dimension is 4 items.

Organizational learning, this dimension refers to the existence of a continuing improvement in patient safety done by staff which involves learning from errors and the evaluation of the effectiveness of new interventions that are implemented. This dimension has 3 items (Famolaro et al., 2014).

Hospital management support for patient safety, this dimension refers to the hospital management's commitment to the provision of a work climate that results in the promotion of patient safety and displays if patient safety is the first priority or is only considered if an adverse even occurs. This dimension has 3 items. (Famolaro et al., 2014)

Overall perceptions of patient safety, this dimension refers to the staffs' opinions about procedures and systems designed to prevent errors from happening in hospital units and also about the staffs' methods of coping with work pressure related to preventing medical errors. This dimension has 4 items. Feedback and communication about errors, this dimension refers to whether staffs are updated about errors that occur, informed about changes put in place based on report on events and a discussion of ways to prevent mistakes from occurring again. This dimension has 3 items (Famolaro et al., 2014).

Communication Openness, this dimension refers to the freedom of staff to speak up whenever they witness something that may affect patient care negatively, their freedom to question people with more authority and the staff's courage to speak up when something isn't right. This dimension has 3 items. Frequency of Events Reported, this dimension refers to how frequently staff report every type of error such as latent errors, accidents, and near misses. This dimension has 3 items (Famolaro et al., 2014).

Teamwork across hospital units, this dimension determines if the units within the hospital coordinate and cooperate with each other and the encouragement among staff from other units for the provision of the best quality of care for the patients. This dimension has 4 items. Staffing, this dimension refers to the adequacy of staff and the appropriate number of working hours

that can handle the workload. This dimension has 4 items (Famolaro et al., 2014).

Hospital handoffs and transitions, this dimension refers to the transfer of patient care and patient information across units in the hospital and during the changing of shifts. This dimension has 4 items. And, Non-punitive response to errors, this dimension refers to the freedom staff has with regards to the reporting of adverse events and their mistakes not being held contrary to them. This dimension has 3 items (Famolaro et al., 2014).

A five-point Likert scale is being utilized in the questionnaire and required the participants to signify the extent to which agreed or disagreed with the statements composing the questionnaire. By counting the number of positive responses to items that compose a dimension, a composite frequency can be made.

A positive patient safety culture is defined as the majority of the healthcare workers (>50%) having a positive assessment with regards to the perceptions, values, attitudes and patterns of behavior that determine the dedication to, manner and mastery of an institution's management of health and safety. A neutral patient safety culture is defined as 50% of the healthcare workers giving positive assessments with regards to the perceptions, values, attitudes and patterns of behavior that determine the dedication to, and manner and mastery of an institution's management of health and safety. A negative patient safety culture is defined as having <50% of the healthcare workers giving positive assessments with regards to the perceptions, values, attitudes and patterns of behavior that determine the dedication to, and manner and mastery of an institution's management of health and safety.

The instrument was pretested at another private hospital and produced a Cronbach alpha of 0.80. Face validity was addressed through a consultation with a psychometrician and the research mentor. Content validity was addressed through a consultation with 3 senior nursing service administrators specifically the chief nurse, the staff development officer and a senior supervisor using the Validators' Questionnaire Assessment. The scale level content validity index ranged from 4.4 to 4.8 which indicated that the questionnaire has high validity.

Modified Patient Satisfaction with Nursing Care Quality Questionnaire. Developed by Laschinger et al. (2005) the questionnaire aims to represent the patient's point of view regarding the quality of nursing care they are receiving. It consists of 17 questions which can be classified into 2 major categories namely information given by nurses and quality of nursing care. The questionnaire required participants to indicate on a five-

point Likert scale their ratings of the nursing care quality as perceived by the participant.

Having majority (>50%) of the respondents giving an assessment of "Excellent" or "Very Good" to the items indicated a positive patient satisfaction on the quality of care given by nurses as perceived by the patients. Having majority (50%) of the respondents giving an assessment of "Good" to the items indicated a neutral patient satisfaction on the quality of care given by nurses as perceived by the patients. Having majority (50%) of the respondents giving an assessment of "Poor" or "Fair" to the items indicated a negative patient satisfaction on the quality of care given by nurses as perceived by the patients.

The instrument was pretested at another private hospital and produced a Cronbach alpha of 0.76. Face validity was addressed through a consultation with a psychometrician and the research mentor. Content validity was addressed through a consultation with 3 senior nursing service administrators specifically the chief nurse, the staff development officer and a senior supervisor using the Validators' Questionnaire Assessment. The scale level content validity index ranged from 4.1 to 4.7 which indicated that the questionnaire has high validity

Frequency and percentage was used to profile the respondents. In the determination of the patient safety culture of nurses and patient satisfaction, frequency and percentage was used. The magnitude and direction of the relationship between the perceived patient safety culture of nurses and the perceived satisfaction of patients was determined using Spearman's rho correlation and Nonparametric tests (Mann-Whitney and Kruskal-Wallis) was used for the determination of a significant difference of the perceived patient safety culture among the demographic profiles of nurses as well as patient satisfaction among the demographic profiles of the patient respondents.

IV. RESULTS AND DISCUSSION

The average age was 24.89 years old with a standard deviation of 1.98 years. The age of the oldest nurse respondent was 32 years old while the youngest nurse respondent was 22 years old. All the nurse respondents were in the young adulthood age group. The majority of the nurse respondents were female comprising 72.5% of the total number of respondents while the remaining 27.5% were male. The average number of patient in a day of the nurse respondent was 8 with a standard deviation of 1. The minimum number of patient in a day was 6 while the maximum was 10 patients. More than half or 56.5% of the nurse respondents had 8 – 10 patients per day. Majority or 71.8% of the nurse

respondents' length of service in years were from 1 year to 3 years.

Table 1
Demographic Profile of the Respondents

Distribution of Nurse Respondents by Age		
Age Group	f	%
Less than 25	55	41.9
25-29	72	54.9
30 and above	4	3.2
Distribution of Nurse Respondents by Gender		
Gender	f	%
Male	36	27.5
Female	95	72.5
Distribution of Nurse Respondents by Patient Load		
Number of Patients	f	%
1-4	0	0
5-6	9	6.9
7-8	99	75.6
9-12	23	17.5
Distribution of Nurse Respondents by Experience		
Experience in Years	f	%
Novice	9	6.9
Advanced Beginner	94	71.8
Competent	18	13.7
Proficient	10	7.6
Distribution of Patient Respondents by Age (years)		
Age	f	%
Young Adulthood	59	45.0
Middle Adulthood	58	44.3
Old Adulthood	14	10.7
Distribution of Patient Respondents by Gender		
Gender	f	%
Male	76	58.0
Female	55	42.0
Distribution of Patient Respondents by Highest Educational Attainment		
Gender	f	%
High School Graduate	25	19.1
College graduate	94	71.8
Post-graduate	12	9.2
	Σ 131	100.0

Out of the 131 patient respondents, mostly or 45% were young adults and then followed by 44.3% middle adult and 10.7% old adult. More than half or 58% of the patient respondents were male while 42% were female. Majority or 71.8% of the patient respondents were college graduate, followed 19.1% who were high school graduate and the remaining 9.2% had post-graduate degree.

Table 2
Positive Assessment of the 12 Dimensions of Patient Safety Culture

Dimension	% of + Assessments
Teamwork Within Units	96.2
Supervisor/Manager expectations and actions promoting patient safety	53.4
Organizational Learning	90.8
Management Support for Patient Safety	38.9
Overall Perceptions of Patient Safety	45.8
Feedback and Communication about error	75.6
Communication Openness	47.3
Frequency of Events Reported	55.0
Teamwork Across Units	55.7
Staffing Level	8.4
Handoffs and Transitions	58.8
Nonpunitive response to errors	3.8
Composite Average Score	52.475

A positive patient safety culture is defined as the majority of the healthcare workers (>50%) having a

positive assessment with regards to the perceptions, values, attitudes and patterns of behaviour that determine the dedication to, manner and mastery of an institution's management of health and safety. Patient safety culture has 12 dimensions. These dimensions measure the opinions of hospital staff regarding issues in patient safety, medical errors and reporting of events. The dimensions having >75% of the respondents having a positive assessment which indicated that it was a patient safety strength were Teamwork Within Units, Organizational Learning and Feedback and Communication about Error.

Teamwork Within Units had 96.2% (126) of the nurse respondents having a positive perception which meant that staff provide each other with a lot of support. It also shows that when a lot of work needs to be done, the staffs in the unit work together as a team to get things done. There is also a generous show of respect for one another in the unit. For a team to work effectively, each member needs to possess special knowledge, attitude, skills and the positive inclination towards working in a team Cannon-Bowers, Tannenbaum, Salas, and Volpe, (1995 as cited in Baker, Day & Salas, 2006).

Organizational Learning had 90.8% (119) of the nurse respondents having a positive perception which meant that there is a continuing improvement in patient safety done by staff which involves learning from errors and the evaluation of the effectiveness of new interventions that are implemented. The nurse respondents believe that mistakes have led to positive changes in the hospital and that there is continued evaluation of the effectiveness of change. Hospitals with positive organizational learning assessments are sensitive to errors, have processes for problem identification, they learn from errors, suggestions for improving care are valued, have systems in place that decrease or eliminate threats that are identifiable, has commitment to learning for secure care, is aware of the hazards of insufficient knowledge, and constantly informs the patient regarding his/her care (Heidari, Nayeri, Ravari, & Sabzevari, 2016)

And, Feedback & communication about error which had 75.6% (99) of the nurse respondents having a positive perception which meant that staffs are updated about errors that occur, informed about changes put in place based on report on events and a discussion of ways to prevent mistakes from occurring again. The provision of timely feedback about actions and improvements to avoid future errors to the reporter significantly improves error reporting and the level of patient safety in the hospital (Force, Deering, & Hubbe, 2006).

The dimensions having >50% of the respondents having a positive assessment which indicated that they

were Positive patient safety culture were Supervisor/Manager Expectations and actions promoting patient safety, Frequency of Events Reported, Teamwork Across Units and Handoffs and Transitions.

Supervisor/manager expectations & actions promoting patient safety which had 53.4% (70) of the nurse respondents having a positive perception which meant that only a little more than half of the nurse respondents believe that the leadership takes into account suggestions by the staff, gives praise to the staff for the application of patient safety procedures that improve patient safety and does not encourage hastier work through the use of short cuts.

The quality of leadership has been shown in studies to have a potential impact in the climate of the organization (Wu, Chen, & Li, 2008). For example, the relationship between safety culture and leadership has been linked to the supervisor's concern for the well-being of his group members (Hofmann, Morgeson, & Gerras, 2003). As a result, a shared perception on safety climate is made because of interactions between member and leader (Kozlowski & Doherty, 1989). Research has shown that a psychologically safe culture that advances interpersonal risk taking which results in learning are created by leaders (Edmondson, 1999).

Frequency of events reported had 55.0% (72) of the nurse respondents having a positive perception which meant that only a little more than half of the nurse respondents report every type of error such as latent errors, accidents and near misses which may be due to a punitive response from the hospital and would result in lesser reports of errors that happen.

Incident reporting systems are used by hospitals to monitor patient safety issues and adverse events (Farley, 2008).

Because of the importance of incident reporting systems it should be promoted for use in healthcare institutions. Incident reporting systems should be simple so that staff may be able to utilize them with minimal or without training (Karsh, Escoto, Beasley, & Holden, 2006).

Teamwork Across Units had 55.7% (73) of the nurse respondents having a positive perception which meant that only a little more than half of the nurse respondents believe that the units within the hospital coordinate and cooperate with each other and there is encouragement among staff from other units for the provision of the best quality of care for the patients. Staffs feel that it is often uncomfortable working with people from other units. This may be due to the utilization of ineffective communication techniques that do not effectively and efficiently relay vital information needed for patient care across units.

Insufficient teamwork and communication in providing health-care services have been determined as crucial factors in adverse events that occur in patients. Many adverse events have some relation to the communication failures and errors in patient handoffs from one department to another which can be avoided through the use of effective teamwork practices. (Petersen, Brennan, O'Neil, Cook, & Lee, 1994).

And, Handoffs and Transitions which had 58.8% (77) of the nurse respondents having a positive perception which meant that only a little more than half of the nurse respondents believe that the transfer of patient care and patient information across units in the hospital and during the changing of shifts is effective. Handoffs that are ineffective can result in breaches in patient safety and gaps in patient care including wrong site surgery, errors in medication and death of patients. Communication breakdown has been cited as a major reason in ineffective handoffs (Gandhi, 2005).

The dimensions having <50% of the respondents having a positive assessment which indicated that they were Areas needing improvement were Management support for patient safety, Overall perceptions of patient safety and Communication openness.

Areas needing improvement were Management support for patient safety which had 38.9% (51) which meant that less than half of the staffs believe that the hospital management has a commitment to the provision of a work climate that results in the promotion of patient safety. Less than half believe that the work climate isn't conducive to patient safety and staffs believe that the management does not put patient safety as top priority and would only get interested in patient safety when an adverse event happens.

In the review of Parand, Dopson, Renz and Vincent (2014) found out that healthcare managers have an important role in the maintenance and the promotion of safe and quality care. Time spent, engagement and activities of hospital managers and boards influence safety and quality performance. The management's commitment towards patient safety through the provision of resources, education and role accountability would shape employees perceptions on patient safety.

Overall perceptions of patient safety had 45.8% (60) which meant that less than half of the staff believe that procedures and systems designed to prevent errors from happening in hospital units and staffs' methods of coping with work pressure related to preventing medical errors is effective. Less than half believe that patient safety is never sacrificed to get more work done, serious mistakes do not happen in the hospital just by chance and there are patient safety problems in units.

Systems of the hospital should be continually

monitored for effectiveness and is dynamic according to the needs that has to be addressed in the hospital. The administration's role in continuous quality improvement is the provision of working support to channel productive change and the improvement of inconsistencies.

Organizational structures and control systems interact to produce shared values, beliefs and behavioral norms that are necessary to support a safety culture that is patient-centric (Hellings, Schrooten, Klazinga, & Vleugels, 2007).

Communication openness which had 47.3% (62) which meant that less than half of the staff believe that they have the freedom to speak up whenever they witness something that may affect patient care negatively, that they are free to question people with more authority and that they have the courage to speak up when something isn't right.

Ineffective communication between health care professionals has been indicated by current research as the leading cause of medical errors and patient harm (Leonard, Graham, & Bonacum, 2004).

The areas of great concern were those having <10% of the respondents having a positive assessment which indicated that these areas need immediate attention. These areas are Staffing and Nonpunitive response to errors.

These patient safety dimensions need serious attention because of the very low percentage of staff having a positive perception. Staffing level only had 8.4% (11) of the staff having a positive perception which meant that a huge majority of the staff believe there is an inadequacy of staff that can handle the workload and staff experience an inappropriate number of working hours.

Hart Research Associates conducted a study and they found out that nurses believe that understaffing has a significant influence in the quality of care patients received. Understaffing resulted to inadequate time to comfort, assist or educate the patient and their families. Patients wait for longer periods of time for their medications and procedures and medication errors had a greater frequency (Hart, 2003).

Research done by New England Journal of Medicine (NEJM), Journal of American Medical Association (JAMA) and Joint Commission (JCO) have come to the conclusion that the number of patients a nurse has to take care for has a very influential impact on the health outcomes of the patient (Stefanini, 2003). Poor outcomes and higher actual costs have been related to short staffing as cited by Blegen (2006).

Findings from the AHRQ study revealed that hospitals whose registered nurse staffing was high had lower rates

of five adverse events for patients having pneumonia, shock, upper gastrointestinal bleeding, urinary tract infections and longer stays in the hospital, patients who have had major surgery had lower rates of two adverse events which are urinary tract infections and failure to rescue (Hickam, Severance, Feldstien, Ray, & Gorman, 2003).

And, Nonpunitive Response which only had 3.8% (5) of the staff having a positive perception which meant that a huge majority of staff believe they have no freedom with regards to the reporting of adverse events and their mistakes are being held against them.

Marx (2001) stated a nonpunitive environment has to be created to promote reporting of one's own or others' mistakes and ways to address them. Without the creation of a nonpunitive environment, it will be nearly impossible to improve the safety of the organizational system.

A composite average score of 52.475% meant that more than half of the nurses working in the Medical-Surgical units of a private hospital in Cebu have a positive assessment with regards to the perceptions, values, attitudes and patterns of behavior that determine the dedication to, manner and mastery of an institutions management of health and safety.

Table 3
Patient Satisfaction to Nursing Care Quality in the Medical Surgical Unit

Rating	f	%
Excellent or Very Good	72	55.0
Good	41	31.3
Poor or Fair	18	13.7
Total	131	100.0

Table 4
Spearman's Rho Correlation for the relationship between Patient Safety Culture as perceived by the nurses and Patient Satisfaction to Nursing Care Quality

Dimension of patient safety culture	Patient Satisfaction	p	Interpretation
Team work within units	$r_s=0.076$	0.388	Not Significant
Supervisor/manager Expectations & actions promoting patient safety	$r_s=0.285$	0.001	Significant
Organizational learning	$r_s=0.111$	0.205	Not Significant
Management support for patient safety	$r_s=0.134$	0.127	Not Significant
Overall perceptions of patient safety	$r_s=0.042$	0.635	Not Significant
Feedback & communication about error	$r_s=0.102$	0.248	Not Significant
Communication openness	$r_s=0.057$	0.515	Not Significant
Frequency of events reported	$r_s=0.157$	0.074	Not Significant
Teamwork across units	$r_s=0.134$	0.126	Not Significant
Staffing level	$r_s=-0.058$	0.510	Not Significant
Handoffs & transitions	$r_s=0.008$	0.931	Not Significant
Nonpunitive response	$r_s=0.058$	0.509	Not Significant

Eighteen (18) or 13.7% of the patients gave a "Poor" or "Fair" rating to most of the items in the questionnaire which meant that they had a negative rating to the nursing care quality in the medical-surgical unit.

Forty-one (41) or 31.3% of the patients gave a "Good" rating to most of the items in the questionnaire which

meant they had a neutral rating to the nursing care quality in the medical surgical unit while Seventy two or 55% of the patients gave an "Excellent" or "Very Good" rating to most of the items in the questionnaire which meant they had a positive rating to the nursing care quality in the medical surgical unit of the private hospital in Cebu.

Spearman's Rho correlation revealed that out of the 12 dimensions of patient safety culture, only Supervisor/manager expectations & actions promoting patient safety showed a significant relationship with patient satisfaction

Table 5
Mann-Whitney Test for Difference in the Patient Safety Culture as perceived by Nurses according to Nurse Respondents' Gender

Dimension of patient safety culture	z	p	Interpretation
Team work within units	-0.496	0.620	Not Significant
Supervisor/manager expectations & actions promoting patient safety	-0.060	0.953	Not Significant
Organizational learning	-1.224	0.221	Not Significant
Management support for patient safety	-0.461	0.645	Not Significant
Overall perceptions of patient safety	-0.561	0.575	Not Significant
Feedback & communication about error	-2.817	0.005	Significant
Communication openness	-0.780	0.436	Not Significant
Frequency of events reported	-0.540	0.589	Not Significant
Teamwork across units	-1.921	0.055	Significant
Staffing level	-0.438	0.661	Not Significant
Handoffs & transitions	-1.232	0.218	Not Significant
Nonpunitive response	-0.085	0.932	Not Significant

Mann-Whitney U test revealed that perceived patient safety culture dimensions were the same among male and female nurses.

Among the patient safety culture dimensions, there was a significant difference in the patient safety culture dimension feedback and communication about error between male and female nurse respondents, $z=-2.817$ and $p<0.05$. Female nurse respondents had positive perception toward feedback and communication about error compared with males who had negative perception.

Table 6
Mann-Whitney Test for Difference in the Patient Safety Culture as perceived by the Nurses according to Nurse Respondents' Patient Load

Dimensions	z	p	Interpretation
Team work within units	-1.356	0.175	Not Significant
Supervisor/manager expectations & actions promoting patient safety	-0.658	0.511	Not Significant
Organizational learning	-0.324	0.746	Not Significant
Management support for patient safety	-0.887	0.375	Not Significant
Overall perceptions of patient safety	-0.079	0.937	Not Significant
Feedback & communication about error	-0.044	0.965	Not Significant
Communication openness	-0.877	0.380	Not Significant
Frequency of events reported	-0.948	0.343	Not Significant
Teamwork across units	-0.656	0.512	Not Significant
Staffing level	-1.184	0.237	Not Significant
Handoffs & transitions	-0.441	0.659	Not Significant
Nonpunitive response	-0.024	0.981	Not Significant

There was also a significant difference in the patient safety culture dimension teamwork across units. Female nurse respondents had positive perception toward teamwork across unit compared with the male nurse respondents.

Mann-Whitney U test revealed that perceived patient safety culture dimensions were the same among those handling 5 to 6 patients, 7 to 8 patients and 9-12 patients per day.

Table 7
Kruskal-Wallis Test for Difference in the Patient Safety Culture as perceived by Nurses according to Nurse Respondents' Experience (Years)

Dimension of patient safety culture	H	df	p	Interpretation
Team work within units	1.630	3	0.653	Not Significant.
Supervisor/manager expectations & actions promoting patient safety	0.368	3	0.947	Not Significant
Organizational learning	1.563	3	0.668	Not Significant
Management support for patient safety	2.672	3	0.445	Not Significant
Overall perceptions of patient safety	3.421	3	0.331	Not Significant
Feedback & communication about error	6.566	3	0.087	Not Significant
Communication openness	6.269	3	0.099	Not Significant
Frequency of events reported	5.899	3	0.117	Not Significant
Teamwork across units	4.247	3	0.236	Not Significant
Staffing level	3.018	3	0.389	Not Significant
Handoffs & transitions	5.477	3	0.140	Not Significant
Nonpunitive response	1.200	3	0.753	Not Significant

Kruskal-Wallis test revealed that perceived patient safety culture of nurses were the same among the length of experience (years) group of the nurse respondents.

Table 8
Test for the Difference in the Patient Satisfaction to Nursing Care Quality according to the Patient Respondents' Profile.

Patient Profile	p	Interpretation
Age	0.178	Not Significant
Gender	0.708	Not Significant
Educational Attainment	0.566	Not Significant
Frequency of Admission	0.572	Not Significant

A p value of 0.178 indicated there was no significant difference in patient satisfaction across age groups. Results showed that older patients had more or less the same satisfaction rating to nursing care quality with the young and middle aged patients.

A p value of 0.708 indicated that there was no significant difference in patient satisfaction between male and female patients.

A p value of 0.566 indicated that there was no significant difference in patient satisfaction across educational attainment. Kruskal-Wallis test revealed that perceived patient satisfaction was the same across educational level of the patient respondents.

A p value of 0.572 indicated that there was no significant difference in patient satisfaction across frequencies of admission. Kruskal-Wallis test revealed that perceived patient satisfaction was the same across frequencies of admission of the patient respondents.

V. CONCLUSION

Based on the findings, the following conclusions are made:

There was no significant relationship between patient safety culture as perceived by nurses and patient satisfaction to nursing care quality. Although patient safety culture is an important factor for patient safety, patient satisfaction is not heavily reliant on the level of patient safety culture an institution has.

Patient safety culture as perceived by nurses was the same in both male and female nurse respondents. Patient safety culture as perceived by nurses were the same among those handling 5 to 6, 7 to 8 and 9-12 patients per day. Patient safety culture as perceived by nurses were the same among the length of experience (years) group of the nurse respondents.

Perceived patient satisfaction with nursing care quality was the same across age group of the patient respondents. Perceived patient satisfaction with nursing care quality was the same in both male and female patient respondents. Perceived patient satisfaction with nursing care quality was the same across educational level of the patient respondents.

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