

Implementation of Integrated Nursing Model towards the Quality of Services and Patients' Satisfaction

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Abstract

Introduction: The lack of nursing quality indirectly can be seen in patients dissatisfactory. Today society demands service that focuses on patients need, and the correct approach will be determined by the selection of the nursing model. To increase the quality of service in nursing, require a redesigned model through implementing integrated healthcare services. **Methods:** This is a quasi experimental study to implement an integrated nursing model using an intervention group and a control model. A total of 154 samples were chosen using consecutive sampling technique and equally distributed to each group. T-test were used to analyze the patients satisfaction level of the nursing service. **Results:** The result shows in the intervention group, there were 60 people (78%) that are satisfied, while in the control group, there is only four-person (5%). The increase might be caused by the nursing that is more consistent, cooperative, and responsive. The nurse understand problem identification and actively collaborate in search of solution in the integrated model. Constructive integrated structure model about responsible is essential in increasing professional nurse performance. **Conclusion:** In conclusion, there are significant differences; higher patient satisfaction level on the model implementing integrated model than without implementing integrated model.

Keywords: *Integrated model, Service Focus on Patients.*

Introduction

Indonesia society today understands the importance of high quality healthcare services; facilities such as hospitals which continue to improve healthcare services to fulfil patients' necessities. Uncountable researches have shown that excellence healthcare that give patients satisfaction will form patients' loyalty. Positives patients' perception of excellence healthcare is that it's acceptable and as expectations, then patients will be satisfied [1].

There are many problems in hospitals, especially the problem that involves nursing quality which is far from the patients or family expectations. This problem is caused by low cognition and low nursing skills in healthcare. Nurses have an essential task in giving nursing based on doctor's plan; diagnose, treatments, medications, preventions from disease, recovery along with

implement references, then the improvement effort is to increase the healthcare service in sustainable so the patients will be satisfied and fulfilled.

A research by Owaidh in 2018 about patients satisfaction in Saudi Arabia, involved 303 respondents; 82.8% patients feel very satisfied with the nursing, 90.1% feel satisfied with the doctor care, and 79.6% feel satisfied with the neatness, calmness, and design of the healthcare facilities [2].

New research in 2018 by Shahvali in Iran hospitals has shown that there are significant relations between nurse's moral sensitivity and patients satisfaction with excellent health care ($P < 0.05$) [3]. Most patients with 70.5% feel satisfied with the nursing; 93.5 % nurse have high moral sensitivity.

The relation between patients satisfaction and types of nurse unit is significant ($P = 0.03$). The increase of moral sensitivity on the nurse is effective in increasing patients' satisfaction to the excellence nursing.

A survey by Wattimena conclude that Indonesian people prefer for medical checkup and treatments oversea, because of the healthcare services quality in the country is still far from the expectation; such as transportation, health information, ethics, and medic teamwork [4]. This condition is one of the causes of sustainable unfinished patients' health. There are numerous factors which cause low nursing; it can be seen from structure aspects and providing nursing [5].

The department that plays a role in the healthcare structure is the human resources department; from numbers and types of nursing staff, until process on giving healthcare. Nursing methods cannot be sustainable if no nurse knows the patients' ongoing developments in details. It is difficult to improve nursing plans according to standards because of the fewer amounts of nurses and inadequate nursing skills. Collaboration skills from nurses are difficult because there are no specific nurses that understand in detail about patients' problem and developments.

To achieve in doing collaboration with other medic workers, especially doctors; nurses need to understand about patients' issues and progress because the problem is crucial for medical procedures. Nurses do not just report the result of vital signs, but also give information to doctors on the analysis results about the patients. The patients' problems are not only through comprehensive analysis, but also psychosocial problem because the relations between nurses and patients are development of trust.

The development relation of trust is the main reason between patients and nurses about patients' psychosocial. That relation only can develop when there are specified nurses that sustainable give attention and help patient's necessities. Today's healthcare has focused patient as the main for healthcare and not assign another profession, such as doctors. Today's paradigm necessities integrated healthcare comes from many occupations in giving healthcare.

Patient centre care based on Committee Accreditation Hospitals is the form that has to implement in healthcare patients based on patients' necessities [6]. Patients' healthcare that involves the healthcare giver professionals tends to be dynamic such as doctors, nurses, pharmacists, nutritionist, and others. Healthcare service which includes all types of work unit for integrated development patients' notes.

Based on introduction survey that has been done by researchers in Mitra Medika Amplas General Hospital on December 2018, there are 5 informants; the results shown that there are still so many complaints from patients during inpatient, along with results from 74% informants who feel unsatisfied on the service during inpatient. The patients' charges related to nursing services, where nurses are the human source that has a significant amount and represent as the spearhead of hospital services.

The success of nursing determines choice of healthcare models by increasing healthcare service in the society that focus on the patients' perspectives; respect, information, participation, collaboration, and demands on technology development. The nursing model must be efficient and effective. Patients' satisfaction level toward inpatient in Mitra Medika Amplas General Hospital is still low. Healthcare model that use for this research is Tiam model and Functional model, but they still cannot provide the maximal healthcare service as expected.

The effort on excellence healthcare in Mitra Amplas General Hospital needs to redesign model on nursing through arranged structure and process on integrated model; structure (total of nurses, determination types of workforce, and nursing standard), method (use of integrated model from primary and functional modification). The relations between horizontal and vertical integration of professional nurses (PPP) on nursing along with maintain sustainable service to fulfil patient's necessities.

The problem for this research is to give significant influences in determine excellence healthcare to patients. But based on data from inpatients, nurse performance is still low in giving healthcare services.

The problem that assess in this study; are there any differences patients' satisfactory level with implement integrated model and inpatients without integrated model for inpatient.

Methodology

The purpose of this research is to design and implement the nursing model on inpatient along with acknowledging patients satisfactory level based on excellence nursing using integrated model and without integrated model. Figure 1 is quasi experiment research, using static group comparison design; research design that utilizes two group subject. By using two group subjects; one subject group with treatment, while another group without treatment.

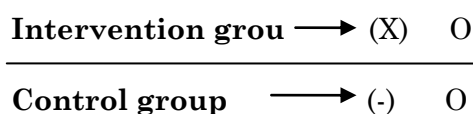


Figure 1: Research Design

The research location is in Mitra Medika Amplas General Hospital, inpatient 3rd floor and inpatient 2nd floor. The population in this research area is in the internal medicine department inpatient with minimal 77 people samples in each subject group. The sample taken uses consecutive sampling with the inclusion criteria; the patient has been treated for ≥ 3 days and without severe diagnoses. To identify the difference in patients' satisfactory level, this research use t test.

Result

Before the integrated model applies to patients, there are some steps to do, which are: preparation, implementation and evaluation. Readiness will set if the components are complete; types of nursing staff, implementation integrated model practice, guidance to PPA primary in doing discussions and presentation with functional PPA and other PPA, providing orientation to primary PPA with different functional PPA, advising PPA about patients and families' orientation, exploit care plan to primary PPA, guiding patients care service manager about maintaining sustainable care, giving direction to all PPA about nurse documentation.

After three days of implementation, there will be an evaluation for the team and patients. If there are some obstacles, there will be an immediate solution or guidance from PPA coordinator, primary PPA, and functional PPA. After the implementation model got processed for three months, then some questionnaires will be given to the patients and families to evaluate.

Respondents' characteristic in the intervention group and the control group shown both groups are even. Therefore, if one of the groups gets interventions, then the conclusion will be the effect of the given intervention. Respondents for patients satisfaction level describes in Table 1 that shows the satisfaction level respondents in the intervention group with the implementation integrated model. There are 17 people (22 %) stated that they aren't satisfied, but 60 people (7%) said they are satisfied. Patient satisfactory level in the control group without implementation integrated model consist of 73 people (95 %) that stated they aren't satisfied and the others, four people (5 %) are satisfied.

There are some differences between nursing services indicator with implementation integrated model and without implementation integrated model from July to September 2019 in Mitra Medika Amplas General Hospital. Table 2 shows there are outcome differences in nursing indication with implementation integrated model and without. On the patient identification indication before medical insertion, the difference is quite significant in July and August.

Still, there are no significant differences in patient identification before nutrition insertion, transfusion, cito specimen sampling, radio diagnosing, along with time indicator to report laboratory clinical test results. While for washing hands obedience, there are some differences, but it is not too significant. Lastly, for fast complain response indicator, implementation integrated model group has higher positive responses.

The differences in patients' satisfaction level according to implementing integrated model and without implementing integrated model shown in table 3.

Table 3 shows the significant differences from paired sample t test shows on tangible value $p= 0.001$ ($p<0.05$), empathy with $p= 0.001$ ($p<0.05$), reliability $p= 0.001$ ($p<0.05$), responsiveness $p= 0.001$ ($p<0.05$), assurance

$p= 0.001$ ($p<0.05$) which the significant amount from tangible, empathy, reliability, responsiveness, and assurances was obtained ($p<0.05$).

Table 1: Description of patients' satisfaction level with implementing integrated model and without implementing integrated model

Nursing Model		Satisfaction level				Total	
		Not satisfied		Satisfied			
		n	%	n	%	n	%
Implementing model	integrated	17	22	60	78	77	100
Without integrated model	implementing	73	95	4	5	77	100

Table 2: The differences of nursing quality indication with implementing integrated model and without implementing integrated model period July-September 2019 in Mitra Medika Amplas General Hospital 2019

Indications (patients' identification)	Target %	July %	August %	Sept %
Before medication insertion	100			
Implementing integrated model		92,02	93,59	
Without implementing integrated model		48,10	46,70	42,49
Before nutrition insertion	100			
Implementing integrated model		100	100	100
Without implementing integrated model		100	99,89	100
Before transfusion	100			
Implementing integrated model		100	100	100
Without implementing integrated model		100	100	100
Before cito specimen sampling	100			
Implementing integrated model		N/A	100	N/A
Without implementing integrated model		N/A	100	N/A
Before radio diagnosing	100			
Implementing integrated model		100	100	100
Without implementing integrated model		100	100	100
Time to report laboratory test results	100			
Implementing integrated model		78	100	100
Without implementing integrated model		67	100	100
Washing hands obedience	100			
Implementing integrated model		94,80	95,20	90,25
Without implementing integrated model		87	88	88,50
Fast complain responses	100			
Implementing integrated model		92,36	94,59	95,67
Without implementing integrated model		82	85	87

Table 3: The differences of patients' satisfaction level with implementing integrated model and without implementing integrated model

Qualities	Implementing integrated model and Without implementing integrated model			
	Mean	SD	t test	p value
<i>Tangible</i>	6,16883	6,48562	8,346	0,001
<i>Empathy</i>	7,83117	8,16024	8,421	0,001
<i>Reliability</i>	7,11688	7,64332	8,171	0,001
<i>Responsiveness</i>	3,72727	6,27786	5,210	0,001
<i>Assurance</i>	10,48052	12,1402	7,575	0,001

Discussion

There are differences in nursing indications with implementing integrated model and without implementing integrated model from July until September 2019 in Mitra Medika Amplas General Hospital. From four healthcare indications, all of it shows a better outcome with implementing integrated model, especially from medical insertion indication and fast complain response indication.

The significant difference from patient identification indication before medication insertion is it has shown more improvements in using implementing integrated model than without implementing. Such as, sustainable nurses are more consistent in identifying problems and patients' cooperation.

From fast complaint response indication shows more improvements with implementing integrated model better than without, because nurses who are involved with the patients will respond faster and able to identify the problem and collaborate in finding the solution for the patient. In contrast, treatments without implementing an integrated model, nurses will consume more time to identify the source of the problem and finding solutions for the complaints from the patients.

The patients' satisfaction level based on tangible, empathy, reliability, responsiveness, assurance with implementing integrated model in the intervention group and without implementing integrated model in the control group is significantly different, from the result of paired sample t test shows with the value $p = 0,001$ ($p < 0,05$). The result of implementing integrated model proves by the increase inpatient quality, nursing quality,

and patients' satisfaction along with families in the intervention group. The integrated model is to redesign/ train professional nurse development with services that focus on the patient through structure arrangement and process, patients' perspective, integrated horizontal, vertical, and sustainably. Structure arrangements in integrated model are; the number of nurses' provisions based on patients' dependency from Gilles formulas [7].

The requirements of the responsibility for every type of healthcare professions need to be clear so it can be differentiated. The arrangements for types of integrated model staff occur in many professional jobs such as; DPJP, chief, manager of patients' service, primary nurse giver, functional nurse giver and other PPA's. Structure arrangement integrated model is about responsiveness, one of the essential factors to increase professional healthcare performance for patients' satisfaction. This nursing skill can be applied through professional nursing implement model (MAKP). The analysis result shows that professional nursing model directly proportional to excellence quality along with patients' satisfaction in the hospital.

Process arrangement in integrated model give a nursing role model to enable healthcare professions acknowledge the patients' development in details. The doctor, who is in charge of the healthcare and as the head of the healthcare team, will integrate patients care as an internal and inter-discipline team along as interprofessional collaboration with patient development notes. The manager plays an essential role in the integration by having proper communication with PPA.

In many healthcare processes, patients' necessities need to fulfil from hospital resources and outside resources (if it's required). Sustainable healthcare will run well if the entire nurses have all the information about patients' before and current health condition to provide the best solution.

The nursing model has given sustainable care until the nurse knew the patients' development without fragments. The outcome of the research reach 66.6% of nurses doing the procedure performance MAKP cases well, and 60% patients' satisfaction level include in the top category.

The integrated model is a structure arrangement, including the nursing process, to increase patients' satisfaction. According to Suwanto research results, MAKP is a system (structure and process) that enable professional nurses to arrange the healthcare service. Still, based on most patients feel not satisfied with the nurse care because it's not optimal; research result shows there are relations between MAKP Tim models with patients' satisfaction.⁸

Process arrangements in the integrated model use IAR pattern in patients' assessment so nurses can process healthcare plan on every patients' standard. The result has shown that there is a significant effect on healthcare satisfaction and standard nursing performance before and after the application of the professional nursing practice model.

Integrated model in collaboration capability between nurses and other healthcare professions needs to be critical in understanding and developing patients to maintain action and patients' education. Nurses don't only take action and report the patients' vital signs such as; blood pressure, body temperature, and respiratory rate. But according to Zimmerman, nurses need to inform the doctor about the analysis result of patients' problem until nurses feel satisfied with doing their duty and improve their performance that affects patients and families satisfaction [9]. The horizontal integrated profession in each PPA needs to contribute crucially so the professional nursing development increase, able to autonomy in decisions along with increasing

nursing quality and patients' satisfaction. According to outcome research from Ribeiro, the advantage from practice professional nursing model, positive perception is connected to nursing quality, interaction, taking a decision, autonomy, and job satisfaction [10]. The benefit to patients is satisfaction in receiving service and information. Professional nurses' development also increases along with the improvement reports that shown nurses acknowledge their own treated patients and all their care plans [11]

The involvements with patients' enable nurses to be more responsible and professional. Nurses believe that fixing patients conditions is based on consistent also sustainable treatments, along with the initiative to identify the problem as soon as possible and taking actions that are needed to make sure the problem handled well. Harmony with the patients' will increase skills of handling problems and optimize patients' health. Horizontally integrated with PPA also gives healthcare analysis assessment result, which becomes information for taking action plan to the patients.

Conclusion

This research obtains a particular nursing model called integrated model. An Integrated model is a form of healthcare that focused on patients who have the characteristics: 1. Respect and prestige perspective, share information, participation and collaboration. 2. Sustainable and coordination service by patients' management service (MMM). Horizontal integrated contribute to each PPA, and the contribution needs to be equal. Vertical integrated tiered service through different kinds of healthcare unit until reach different service level.

Integrated model can increase healthcare service that gives satisfaction effect on patients and families. The effect model of integrated evaluation in internal medicine department concludes inpatients healthcare indication has increase (patient identification, the importance of washing hand habits, report on critical laboratory result test, and fast response on patients complains) with implementing integrated model.

There are differences of patients satisfaction level based on tangible, empathy, reliability, responsiveness, assurance between implementing integrated model and without implementing integrated model where paired sample t test shown on tangible, empathy,

reliability, responsiveness, assurance with the value $p = 0.000$ ($p < 0.05$). The result shows there are significant differences; higher patient satisfaction level on implementing integrated model than without implementing integrated model.

References

1. Millenson ML, Shapiro E, Greenhouse PK & DiGioia AM (2016) Patient- and Family-Centered Care: A Systematic Approach to Better Ethics and Care. American Medical Association Journal of Ethics. Volume 18, Number 1:49-55
2. Owaidh AO, Alqarni AlA, Alzahrani SA, Alzahrani MA, Alghamdi MA, Alzahrani AA, Alzahrani, MH (2018) Patients' Satisfaction with Health Care Services in Southern Saudi Arabia. The Egyptian Journal of Hospital Medicine, 72(1):3857-3860.
3. Shahvali EA, Hakimeh M, Mahsa H, Akram H (2018) Investigating the Relationship between Nurses' Moral Sensitivity and Patients' Satisfaction with the Quality of Nursing Care. Eurasian Journal of Analytical Chemistry. 13(3):em12.
4. Wattimena I (2014) Menelusur Pemeriksaan Kesehatan dan Pengobatan Ke Luar Negeri: Jurnal Ners LENTERA, 2:48-56.
5. Donabedian A (1980) The Definition of Quality and Approaches its Assesment, Ann Arbor Michigan , Health Administration Press Vol I.
6. Komisi Akreditasi Rumah Sakit (2017) Standar Nasional Akreditasi Rumah Sakit (Edisi ke-1). Jakarta
7. Gillies (2006) Manajemen Keperawatan Suatu Pendekatan Sistem. Edisi kedua. Terjemahan Illiois W.B. Saunders Compny
8. Suwanto T, Yulisetyoningrum (2017) Analisis Hubungan Penerapan Model Asuhan Keperawatan professional Tim dengan kepuasan pasien. The 6th university Research Colloquium, Universitas Muhammadiyah Magelang
9. Zimmerman Blanch I (2007) Comparing Functional and Team Nursing Models of Care Delivery on Patient Outcomes. Mountain State University.
10. Ribeiro OMP, Martins MM, Tronchin DMR (2016) Nursing professional practice models: an integrative literature review. Journal of Nursing Referencia serie IV. Jul/Aug/Sep 2016.
11. Ardakani M, Sharifabad M, Bahrami M, Abargouei A (2019) The effect of communication skills training on the self-efficacy of nurses: a systematic review and meta-analysis study. Bali Medical Journal 8(1):144-152. DOI:10.15562/bmj.v8i1.1315