

# Standard Competence of Medical-Surgical Nursing Based on The Level of Clinical Competency Outcome in DIII Vocational Students of Nursing

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**Abstract—** *This research are aimed to know: 1) the achievement level of clinical competence of medical-surgical nursing among DIII vocational students of nursing, 2) the standard competence of medical-surgical nursing based hospital among DIII vocational students of nursing. The reseach methed was using descriptive qualitative. The subjects of the study were diploma III vocational students from three health education institutions with totaling of 155 people. Quantitative descriptive data analysis was used to answer the research questions. The research instrument had been validated by medical surgical nursing specialists, experts of assessment evaluation, and vocational education experts. The results of the study found that (1) The level of competency achievement of all competencies with average level was between 3 to 4; (2) there were 33 major competency types at levels of 3 and 4 considered as the standards competence of medical surgical nursing. Based on the results of the research, the level and competence of medical surgical nursing standard can be used as a reference in practice learning of DIII vocational students of nursing in hospital.*

**Keywords:** *level of competence, standard competence, medical surgical nursing)*

## I. INTRODUCTION

The government improve the quality of human resources on health by increasing the number of nurses through adding nursing education institutions. The increasing number of nursing education institutions and the varying quality of the institution with its various limitations can result in different quality of the graduates. In addition, the assessment of learning outcomes through the student competencies mastery from each institution is varied. (Pusdiknakes, 2010)[1]

The government through the Ministry of Health has tried to improve the quality by applying the vocational curriculum of the competency-based for nursing diploma III in 2006 (MOH, 2006), followed by 2014 curriculum based on KKNI (Indonesian National Qualification Framework). (AIPDIKI, 2014)[2]. With the enactment of Vocational curriculum, the diploma 3 of nursing is expected to obtain competent graduates in accordance with the demands of stakeholders (health service units, especially in hospitals, and puskesmas/ Center for Society's Health).

The survey results of Health Professional Education Quality (HPEQ) [3] by Directorate General of Higher

Education Ministry of Education in 2010 at 33 provinces, found that 70% of the content management or vocational learning process of nursing was still low, especially in the curriculum application (AIPDIKI, 2014). Whereas, the quality nursing services should be supported by nurse resources from qualified educational institutions.

Based on the survey in several vocational education institution of diploma III of nursing in Yogyakarta, the achievement of the applied competence varies according to the institution's perception. The characteristics of practice (internship) location will determine the achieved competence, especially there is no certainty to what extent the level of competence obtained by students DIII nursing during the practice in the hospital as well as the standard competencies that must be achieved. Whereas, this is important in determining the qualifications and quality of the students based on the level of education.

Based on the above phenomena, it is necessary to identify the main skill as the parameters of student's graduation in clinical practice. It should reflect the level of the required competence mastery as well as representing the skills in the medical surgical nursing area.

### A. Vocational Education

In relation to the principle of vocational education, Prosser & Quigley (1950)[4] have elaborated 16 basic principles of vocational education, and there are three basic principles which are identical to the concepts of this study. The first is the attention to the real learning environment as a place for students learning, i.e. the clinic (hospital). Secondly, an exercises in the nursing laboratory (labskill) which is almost similar to the clinical situation in case of the equipment, phantom model and action procedure, so it is expected the students do not feel awkward if they practice in the actual clinical setting in order to minimize error of any action procedure of to be performed. Third is the habituation of repeated acts (repetition) to a certain extent ("skill load") becoming the target of competence mastery in order to make that students really competent in the real sense i.e. without assistance or supervision, based on the authority in each level of education in order to create future professional nurses.

### B. Nurses Competence

According to Spencer & Spencer (1993): 9-11)[5] "A competency is an underlying characteristics of individual that is causally related to criterion refereced effective and or superior performance in a job or situation. It means competency as the individual characteristic related to standard of performance. It is illustrated as iceberg and divided into five dimensions of competence such as: (1) motive; (2) trait; (3) self concept; (4) knowledges; and (5) skills. The model outlined that the dimensions of knowledge and skills will appear on the surface.

According to the Singapore Nursing Board (Board, 2016)<sup>6</sup> the competence of nurses is the nurse's ability to demonstrate the knowledge, skills, judgments and attitudes which is required to perform activities within the scope of practice at acceptable levels based on their expertise. Meanwhile, competent is able to demonstrate the required capabilities, in case of knowledge, skills and attitudes on the whole domain of competence in the specified standards when the nurse is being tested. The same notion is also given by Jordan, Carlile, & Stack (2008): 203)[7] that distinguishes between competence and competent. Competence is the ability to perform a set of tasks that require the integration of knowledge, skills, and attitudes while competent is the ability to perform roles effectively in a context.

According to Gonczi (1992)[8] the important characteristics of competency-based education models include: (1) a documented list of competencies accompanied by specific standards and conditions for each competency; (2) the student may be assessed for the achievement of his/ her competence any time when they are ready; (3) the learning run with the module format related to each competency; (4) assessment by certain standards in the form of competence statements; (5) most of assessments are based on real demonstrated skills; (6) students may have an exceptions from the learning section and proceed to the next unit of learning based on the competencies already achieved; (7) student learning outcomes are recorded and reported in statements of competence.

In the field of health education, especially in clinics both for doctors and nurses, in their education process is considered competent if they are able to carry out a series of tasks from the professional body as a necessary condition to serve as an independent nurse or physician (Amin & Eng, 2009)[9]. In Indonesia the professional body is performed by the National Nurses Association of Indonesia (PPNI, 2011)[10], in the competence of the Vocational level nurse diploma III is performing the actions under the supervision of Ners (PPNI, AIPNI, AIPDIKI, 2013).

Competencies formed by educational institutions which emphasizes on achieving the required competencies and practice skills in the real environment. The time it takes and

how the lesson is done is less important. This is a new paradigm that the most important is the structure of models and processes in achieving competence to produce professional nurses. (Carraccio, Wolfsthal, Englander, & Carraccio, 2002)[11].

The implications of competency-based curriculum lies in the learning experience, learning process, and assesment system which is in line with the characteristics of the curriculum used. Characteristics of a competency-based curriculum is the learning outcomes expressed by the ability or competence that can be demonstrated or displayed. All learners must achieve mastery learning, namely mastering basic competencies. The pace of learners is not the same, and the assessment uses criterion references (Lindpaintner, Bischofberger, Brenner, & Knuppel, 2009)[12].

### C. Medical-Surgical Nursing

According to Prayetni (2007)[13], there are 5 categories of clinical nurse of medical surgical but the relevant category and close to the competency of vocational student is clinical nurse I (WE I / Beginner / novice), with the requirement of having WE I certificate with Education and work experience (WE) SPK + WE <10 years or D III vocational Nursing + WE 2 years or bachelor of nurshing plus ners + WE 0 years

Referring to the description of competence, clinical nurse 1 medical surgical nursing requires strict supervision even to perform basic skills, to have routine patient care, and to develop nursing assessment skills.

Nursing services to patients must meet international quality standards, which can ensure the safety and comfort for clients and their families. Nurses are required to be professional in providing nursing care for patients and able to cooperate with various parties to provide comprehensive services to fulfill the basic needs, such as biological, psychological, sociological and spiritual needs of clients. Nursing services is based on the given authority because of the expertise in accordance with the public health needs, the development of science and the demands of globalization (Health Law, 2009)[14].

the Ministry of Health (2015)[15] has clearly stated about the duties and authority of nurses in their nursing practice, specifically for vocational nursing can be described as follows: (1) conducting assessment; (2) conducting a referral; (3) providing counseling.

### D. Level of Competency Mastery in the Clinic

George Miller (Delany & Molloy, t.th)[16] & (Dornan, Mann, Scherpbier & Spencer, 2011) & (Hays, Southgate, & Paice, 2006)[17] proposed a scheme/ framework for assessing clinical competence, as "Miller Pyramid" which consists of 4 tested levels of "know", "knows how", "show" and "does" (figure 1)

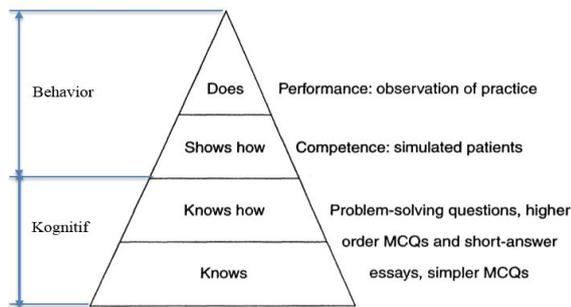


Figure 1. Miller Pyramid

"Knows" is identical to factual knowledge and "knows how" is interpreted by an understanding, both in pyramid miller include in the cognitive level. In the higher level of behavior, "show Shaw" or the way a competence is performed (simulation in the laboratory of skills), while the highest peak is "does", the actual competency performed with the patient/ real situation. The level of competence, the more pinned to the pyramid the more authentic and better to assess the skills, while the more base of the Pyramid, the test is claimed to be more objective.

According to Dent, Harden, & Hallock (2009): 345)[18] there is an additional rating used to conduct assessments in each clinical procedures, namely:

- Level 0 - actions observation
- Level 1– not able to perform all procedures under supervision
- Level 2 - able to perform all procedures under supervision
- Level 3 - not require supervision but may need occasional help
- Level 4 - competent to perform without supervision

Meanwhile Canadian Association of Schools of Nursing and Kwantlen University College (2016)[19] assess the competence of nursing students in the medical surgical area through self-assessment, by providing attributes as performance code, as follows:

- Code 1: I have no experience with this skill
- Code 2: I have done this skill with help
- Code 3: I have done this skill under supervision
- Code 4: I have done this skill independently

Nurse Agency (2016) assess the activity of medical surgical nurse by giving notation A, B, C or D with grade as follows:

- often doing, good skills
- sometimes doing, enough skilled
- rarely doing, limited skills
- never, only observing

College (2016)[20] assesses the competence of medical surgical nursing students using self-assessment by placing the level according to the appropriate circumstances to what the student really experienced or doing while having clinical practice, including: Level 1: Independent, little or no supervision, Level 2: need help, medium supervision, and Level 3: no experience

### E. Practical Learning Model

The main practical learning of nurse is in the clinic (hospital) that it can be described as a medium where the nurse perform a specific set of abilities based on theory and nursing practice to meet the client's health needs. This capability consists of cognitive, psychomotor, and dynamic affective behaviors. In addition, this ability is a combination of all these behaviors into a holistic framework called the nursing process, a practice methodology.

The success of clinical education also depends on the availability of practical place in the hospital as a clinical learning environment. The place must meet the requirements, including: (1) conducting good services or nursing care (good nursing care); (2) a conducive environment; (3) adequate role model; (4) adequate facilities, infrastructure and staff; and (5) complete nursing service/ meet nursing standard (Reilly & Obermann, 2002)[21]. According to Kane, the quality of measurement is determined by 3 things, namely: 1) generalization limit; (2) measurement conditions such as item usage and number of assessor (more than One); and (3) standardization of measurement procedures to give relatively similar results (Wing & Chiu, 2001)[22].

The hospital is a clinic / practice learning center that focuses on direct involvement with patients and the various problems. In this Environment, students learn to become a real nurse. Students learn a lot about various skills, such as communication with patients, physical, psychological, social and spiritual examination and assessment as well as other required clinical skills. Knowledge of nursing science and nursing professionalism can be applied to patients directly so that students are more motivated to learn (Saedon, Saedon, & Aggarwal, 2010)[23].

Some theoretical concepts and models of clinical learning are relevant to practical learning, including: (a) work-based learning, (b) experience, (c) situational, (d) cognitive internship in the workplace.

## II. METHOD

This study can be categorized as evaluation research with a quantitative descriptive approach. Quantitative research with survey technique is used to obtain data about students' types of competencies, the level of competencies mastery that have been obtained. The purposes of this study are as follows:

1. Finding out the level of achievement of medical surgical nursing competency by Vocational Diploma III nursing when undergoing clinical practice in hospital.

2. Finding out the type of medical surgical nursing competence that becomes the standard competency for the students of Vocational Diploma III nursing in the hospital.

This study was conducted in two places, i.e. (1) the hospital as students' medical surgery nursing clinic, and (2) nursing education institution. The object of the study was the clinical competence of vocational diploma III students during the medical surgical nursing practice. There were three types of respondents as subjects in this study, namely: (1) vocational students of diploma III Nurdin in the fifth semester from three

health colleges in Yogyakarta; (2) hospital supervisors (clinical preceptor) in 8 hospitals of the student practice; (3) academic supervisors in 3 health education institutions in DIY. Data collection technique was using questionnaires, the form of instruments used for students was using self assessment, while for academic preceptor and clinical preceptor was using self perception.

**A. Instrument Validity dan Reliability**

The Assessing the validity and reliability of the instrument was using the experts' validity in the field of vocational education, i.e. assessment and evaluation from the expert of Universitas Negeri Yogyakarta (UNY) and the Head of Nursing Association (specialist) of Medical Surgical Nursing of Indonesia (HIPMEBI) of Yogyakarta Province as Chairman of the Association of Vocational Education Institutions of Nursing Indonesia (AIPVIKI) of DIY Province. The results of the validity and reliability assessment can be seen in the following table.

Meanwhile, to calculate the validity coefficients Aiken's validity coefficient formula (Aiken, 19850[24] was used. With reference to the above criteria, the overall average value of the instrument rating was above 0.8 so that the research instrument had declared good. Reliability coefficient was calculated by using Cronbach Alpha formula (Widoyoko, 2014: 163-166)[25], it was obtained reliability coefficient  $r_{11} = 0,91$ , dus, the instrument was declared reliable. Nunnaly (1981) had shown a coefficient of  $r_{11} 0.7$  to be an acceptable reliability coefficient.

**B. Data Analysis Technique**

Data analysis technique was using descriptive quantitative. Determining the level of competence achievement in each type of competence was determined based on the average number of what had been done by the students based on their experience in accordance with the obtained level. Each clinical preceptor and academic preceptor provided a perception of the competence level that should be able to achieve optimally in hospital. The formulation of mean level was used to determine the intended level, as follows:

$$RL = \frac{\sum_{l=1}^n L \cdot n_l}{n}$$

Where:

RL : Level Mean

$\sum_{l=1}^n L \cdot n_l$  :  $L_1 + L_2 + L_3 + \dots + L_n$

$n$  : the number of respondent (student/ clinical preceptor/ academic preceptor)

The determination of the main types of competence (as a standard) is based on the highest number of competencies achieved by students at levels 4 and 3, while the support competencies are based on the most achievement of competencies obtained by students at level 2 and 1. Penentuan jenis kompetensi utama (sebagai standart) didasarkan pada jumlah capaian kompetensi terbanyak yang diperoleh mahasiswa pada level 4 dan 3, sedangkan kompetensi pendukung didasarkan pada jumlah capaian kompetensi terbanyak yang diperoleh mahasiswa pada level 2 dan 1.

**III. RESULT AND DISCUSSION**

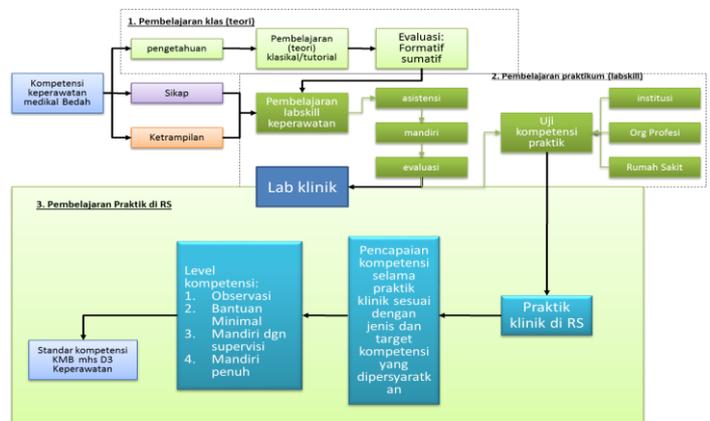


Figure 2. Flow of medical surgical nursing competence achievement in nursing laboratory (labskill) and hospital

**1. Types of Medical Surgical Nursing Competence Based on Proportion of Each Competency Indicator**

The following data presented the largest number of competencies that had been achieved according to the level of achievement to find out how big the distribution of competence on each indicator for the integrity of the competencies that make up medical surgical nursing can be known. From 104 existing competencies, 21 competencies were taken as samples from the highest order to the lowest order.

**a. Achievement level of 4**

In the following table (table 1 and figure 6) showed the distribution that always existed in each indicator, however the percentage of student competency achievement obtained independently from the oxygenation requirement was 10 out of 25 competencies (40%), while the highest percentage should be achieved according to clinical and academic preceptor perceptions is the need for rest and sleep both 63%. Thus the level of difficulty can be known from each level, especially in low percentages (nutritional needs, elimination and the need for secure and comfort)

Table 1. Number Competency Distribution Data on Each Indicator of Medical Surgical Nursing Competence from Three Data Sources at Level 4

No	Indicator	Number			Percentage		
		Student	Lecturer	Nurse	Student	Lecturer	Nurse
1	oxygenation (NIK 1)	10	5	7	40%	20%	28%
2	Luquid (NIK 2)	3	3	2	20%	20%	13%
3	Nutrition (NIK 3)	1	2	1	8%	15%	8%
4	Elimination (NIK 4)	2	1	1	13%	7%	7%
5	Aktiviy (NIK 5)	3	4	3	23%	31%	23%
6	Rest/Sleep (NIK 6)	1	5	5	13%	63%	63%
7	Secure/comfort (NIK 7)	1	1	2	7%	7%	13%

### b. Achievement level of 3

At the level of achievement of 3, the perception of academic reseptor showed that oxygenation need still occupy the highest percentage (44%), and from the students view, it also entered the highest category of all indicators, i.e. 28%. Though, it was equitable for each indicator for students and clinical preceptor, there was a perception from academic preceptor that did not have a level of 3 (minimal assistance), i.e, the need of elimination. Other low achievements at this level also existed in nutritional needs, i.e. 8% for students and academic preceptor perceptions (see table 2 and figure 7)

Table 2. The number of competency distribution on each Indicator of medical-surgical nursing competence from three data sources at level of 3

No	Indicator	Number			Percentage		
		Student	Lecturer	Nurse	Student	Lecturer	Nurse
1	oxygenation (NIK 1)	7	11	3	28%	44%	12%
2	Luquid (NIK 2)	4	5	8	27%	33%	53%
3	Nutrition (NIK 3)	1	1	2	8%	8%	15%
4	Elimination (NIK 4)	1	0	2	7%	0%	13%
5	Aktiviy (NIK 5)	3	2	1	23%	15%	8%
6	Rest/Sleep (NIK 6)	1	1	1	13%	13%	13%
7	Secure/comfort (NIK 7)	4	1	4	27%	7%	27%

### c. Types of Main Competence for Medical Surgical Nursing

Table 10 showed the types of medical surgical nursing competencies based on the highest number of achievements of 4 and 3 from three data sources (students, academic preceptor and clinical preceptor), along with the number of target ranges obtained from all competence levels.

Table 3. Types of main competence for medical surgical nursing based on achievements level of 4 and 3

No	Target	Competence number	Outcome			Competence Type	Competence Level			
			M	PA	PK		M	PA	PK	R
1	4-6	1.3	64	8	8	Recording Electrocardiography	4	4	3	4
2	5-7	1.5	102	10	11	Intake of venous blood specimen	4	4	2	3
3	4-5	1.6	43	7	10	Physical Examination: Adequacy of oxygen & circulation	4	4	4	4
4	6-7	1.11	142	15	18	Position fowler / semi fowler	4	4	4	4
5	6-8	1.12	146	15	11	Gives oxygen nasal canule	4	4	4	4
6	6-7	1.13	140	15	15	Deep Breath Exercise	4	4	4	4
7	5-6	1.14	112	14	14	Train effective	4	4	4	4
8	4-5	1.17	90	8	10	Installing blood	4	3	2	3
9	6-8	1.18	107	6	11	Provide medication according to theraphythereraptherapprogram	4	3	2	3
10	4-6	1.19	108	10	10	Inhaled therapy	4	4	3	4
11	3-4	1.23	45	10	11	Provide health care to the respiratory	4	4	3	4
12	3-4	1.25	43	8	7	Evaluate oxygen demand	4	3	2	3
13	5-6	2.8	64	6	10	infusion installation	3	4	3	3
14	3-5	2.9	63	7	12	Putting catheter	3	3	2	3
15	5-9	2.10	114	11	12	Provide medication on therapy each	4	4	3	4
16	4-5	2.13	65	13	11	Doing bladder training	4	4	3	4
17	5-7	3.9	113	14	12	Feeding per NGT	4	4	3	4
18	3-5	3.12	44	12	9	Providing Counseling	4	4	3	4

No	Target	Competence number	Outcome			Competence Type	Competence Level			
			M	PA	PK		M	PA	PK	R
19	5-10	4.11	106	8	12	Provide medication on each therapy	4	4	2	3
20	4-5	4.13	47	8	10	Conduct GCS checks	4	4	3	4
21	5-6	5.5	86	15	12	Moving client from TT to seat	4	4	4	4
22	5-7	5.6	66	14	9	Moving clients from TT to another TT	4	4	3	4
23	5-6	5.8	77	14	8	Train ROM (Range of Motion)	4	4	3	4
24	3-5	6.3	38	13	10	Provide Counseling on break/sleep disorders	4	4	4	4
25	3-5	6.4	55	14	15	Evaluate the need for rest and sleep	4	4	4	4
26	2-4	6.7	45	13	11	Implement health training (body temperature disorders)	4	4	4	4
27	3-5	6.8	43	2	13	Conducting evaluation of body temperature disorder	4	4	4	4
28	3-5	7.5	43	0	9	Physical examination: signs of infection / inflammation	4	4	3	4
29	5-6	7.8	61	9	9	Caring for postoperative wounds	3	4	3	3
30	3-6	7.9	44	9	9	Compresses the wound	3	4	2	3
31	4-5	7.10	75	8	10	Restrain Installation	4	4	3	4
32	3-5	7.14	45	12	10	Provide	4	4	4	4
33	3-5	7.15	42	11	11	Carry out a safety / comfort sense evaluation	4	4	4	4

The proportion of seven basic human needs can also be seen in the Table above, i.e from the need for oxygenation till a sense of security and comfort, uneven in all (seven) indicators of competence. The table above also showed that the competency indicator of oxygenation requirement was the highest order (12 types of competence) followed by the need for safe and comfortable, while the nutrient and elimination needs ranked the lowest (each of 2 types of competence). There were 33 types of competence that can be categorized in the main

competencies of medical surgical nursing, therefore this can be said a standard that students must achieve during the period of practice in the hospital.

**d. Types of Supporting Competence for Medical Surgical Nursing**

Under the main competencies, there were competence support taken from the of achievement level of 2 and 1 where in the implementation can only be seen (level 1) and it much be assisted by clinical preceptor (level 2), therefore, it called as support competencies. Table 11 showed that there were 44 types of competencies including supporting competencies. However, the target can still be set as a reference in the assessment of competency achievement. In view of the proportion, oxygenation ranked as the highest (9 competencies), followed by nutritional needs and elimination (6 competencies for each) while the need of rest and sleep occupied the lowest position that only one competence.

**Table 4.** Types of supporting competence for medical surgical nursing based on achievement level of 2 and 1

No	Target	Competence number	Outcome			Competence Type	Competence Level			
			M	PA	PK		M	PA	PK	R
1	3-6	1.1	48	9	11	Anamnesa Respiratory system disorders	1	4	4	3
2	3-6	1.2	63	8	10	Anamnesa Cardiovascular system disorders	1	4	4	3
3	2-4	1.4	84	7	10	Intake of arterial blood specimens	1	2	1	1
4	3-6	1.7	60	7	9	Physical Examination: Change of breath & heart rhythm	1	4	4	3
5	3-5	1.8	56	6	9	Physical Examination: Breath sounds and heart sounds	1	4	4	3
6	2-4	1.15	61	11	7	Postural Drainage	1	4	3	3
7	2-4	1.16	67	7	11	Perform suction of mucus through oral	1	3	2	2
8	2-5	1.22	90	7	14	Interpretation of ECG recording results	1	1	1	1
9	2-4	1.24	43	9	10	Provides a cyst of cardiovascular health	1	4	3	3
10	4-5	2.1	52	10	13	Anamnesis urinary system disorders	1	4	4	3
11	3-5	2.2	58	9	11	Anamnesal disorders of the endocrine metabolic system	1	4	4	3
12	3-5	2.5	47	7	11	Physical examination: dehydration	1	4	3	3
13	3-5	2.6	54	7	10	Physical examination: fluid overload / odema	1	4	3	3
14	2-5	2.14	42	12	11	Provide penkes (urinary & endocrine)	1	4	3	3
15	3-5	2.15	46	9	10	Evaluation of fluid and electrolyte requirements	2	4	3	3
16	3-5	3.1	51	10	13	Anamnesa alley digestive system	1	4	4	3
17	3-4	3.3	48	7	10	Preparation of abdominal ultrasound & endoscopy patients	1	3	2	2
18	2-4	3.4	70	7	8	Physical examination: the condition of the gastrointestinal tract	1	4	2	2
19	3-5	3.5	56	9	9	Physical examination: abdominal shape	1	4	4	3
20	3-5	3.6	40	10	9	Physical examination difficulty	1	4	3	3

No	Target	Competence number	Outcome			Competence Type	Competence Level			
			M	PA	PK		M	PA	PK	R
						chewing / swallowing				
21	3-6	3.7	39	11	10	Physical examination: bowel sounds	2	4	3	3
22	3-4	3.8	64	5	8	Installing NGT	1	4	2	2
23	3-5	3.13	43	10	9	Evaluate nutritional needs	2	4	4	3
24	3-5	4.1	50	9	12	Anamnesa disorders System peryarafan	1	4	4	3
25	3	4.2	45	5	10	Preparation of patients with brain CT / MRI scanners	1	2	2	2
26	3-5	4.5	47	10	9	Physical examination: motor and sensory	1	4	3	3
27	3-5	4.6	59	9	9	Physical examination: physiological reflexes	1	4	3	3
28	2-4	4.7	61	8	8	Physical examination: pathological reflexes	1	4	3	3
29	2-4	4.8	57	8	9	Physical examination: balancing	1	4	3	3
30	2-5	4.14	47	12	8	Provide pend kes kes (digestion & nerves)	1	4	3	3
31	3-5	4.15	44	10	9	Evaluate Elimination needs	1	4	3	3
32	3-5	5.1	49	11	13	Anamnesa gang Musculoskeletal system	1	4	4	3
33	2-4	5.2	54	11	11	Anamnesa gang sense system	1	4	4	3
34	2-5	5.3	53	10	8	Physical examination: body shape and gait	1	4	3	3
35	4-5	5.10	43	11	12	Check muscle strength	1	4	3	3
36	2-5	5.12	37	11	9	Provide pendent (activity disturbance)	1	4	3	3
37	2-5	5.13	46	11	9	Conducting Activity needs evaluation	1	4	3	3
38	2-5	6.1	47	11	12	History history of body system infection	1	4	4	3
39	2-5	7.1	60	11	12	Anamnesa disorders Integumentary system	1	4	4	3
40	2-5	7.2	64	11	10	Anamnesa disorders Immune system	1	4	4	3
41	2-5	7.3	53	10	9	Anamnesan psycho social conditions	1	4	4	3
42	3-5	7.4	46	10	10	Physical examination: skin / tissue integrity	1	4	3	3
43	3-4	7.6	54	11	10	Physical examination of consciousness decline	1	4	3	3
44	3-5	7.7	39	11	12	Physical examination: anxiety sign	1	4	3	3

There were 3 competence of standard medical nursing in this research result, i.e main, supporting and additional medical nursing. It was called main competence because it should be attainable at level of 4 (doing independently with clinical guidance counseling) and level of 3 (doing independently with minimal assistance from clinical counselors). Generally, risky competencies for Unexpected Event or unauthorized competencies were actually can be performed by students and many cases were done for the competence. The results of descriptive analysis showed that there were 33 competencies included in this category. Table 9 showed from 33 competencies, 29 of them included in level of 4 and only 4 competencies included in level of 3, i.e infusion installing, catheters installing, treatment after operation wounds and the wound compressing. For the competence of installing infusions and installing catheters according to the Ministry of Health (2014) has become the Ners authority of, but in the AIPDIKI curriculum (2014) DIII students were also required to achieve this competency. With consideration of unexpected event,

perhaps, clinical preceptor set level of 3 on the competence of infusion installing and level of 2 for the catheters installation.

The second standard of surgical medical nursing was referred as a supporting standar. It was called so because this competency included in level of 2 (performing the competency with much help from clinical counselors) and level of 1 (only observing or observations made by the nurse / clinical adviser). There were 44 types of competencies belong to the supporting competence but when looking at the table of 10 from 44 types of competence only 5 included in the characteristics of nursing action (Postural drainage, mucus sucking through oral, interpretation of ECG recording, NGT installing and muscle strength checking and those five competence was ners authority, although some points become the curriculum obligation (overlapping between D3 and Ners).

From the research findings, it can be concluded that 39 types of supporting competence were all oriented to the competence of anamnesa and physical examination (table 10), although the expectation of clinic and academic preceptor of 4 or 3. The difficulty level of this competence was actually moderate, but it had not become a priority and due to lack of training in laboratory skills, so that the students have not been directed either the achievement of this competence or the target of its competence. The recommendation from the clinical preceptor related to the achievement of competence were: (1) the need for strengthening physical examination; (2) to strengthen pre-clinical skills.

If it viewed from the number of both standards of competence (main and supporting one), there were 77 competencies that must be achieved by students during practice with different levels and targets of competence. However, it was necessary to have a policy of the assessment system on the gained competencies based on the type of standard that had been set. Viewing the number of achieved competencies, it appeared that it was still in good category because it was more than 80 competencies must be filled with students regardless the competency level and its competency target. It was proved that student competence always under perceptions clinical and academic reseptor.

## V. CONCLUSION

The level of competency achievement of all competencies with average level was between 3 to 4 (students performed independently or with minimal assistance from the clinical preceptor assistance). There were 33 main types of medical surgical nursing competencies obtained by students during practice with competency level of 3 and 4, and according to the researcher, it was called as the standard competence of medical-surgical nursing of diploma III vocational students of nursing. In addition there were 44 types of supporting competence with the level of competence of 2 and 1, which was not compulsory to be achieved during practice but as an added value in the students assessment.

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