**Fulfillment Of Safety And Comfort Needs In Urinary Catheter Patients : Literature Review**

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***Abstract***

***Background:*** *Using urinary catheter will affect to quality of life of patients such as biological or physical, psychological, socio cultural, environmental and spiritual.*

***Objective:*** *The aims of this study to describe how the fulfillment of safety and comfort needs in urinary catheter patients.This journal use literature review study.*

***Method:*** *This study use literature review. The database PubMed, Wiley Online Library and SAGE journals. Were used. This study use main keywords experience AND “urinary catheter\*”. Only fourteen journals met the eligbility criteria and were review by two researchers.*

***Result:*** *The Results of article that catheter impact on several aspect of patients such as social aspect patient have limited social interaction, difficut to adaptation. In psychological aspect, patient feel embarrassed, dissatisfaction, frustation, anxiety, low self esteem. In physical aspect, patient feel blocking their movement, increase the risk of infection, painful, discomfort, iritation.*

***Conclusion:*** *The finding of article has positive and negative impact for patient’s life when urinary catheter inserted. The review provides insight that can be useful for nurses in pay attention to patient’s need about safety and comfort especially patients with urinary catheters.*

***Keywords:*** *comfort, experience, safety, urinary catheter.*

**INTRODUCTION**

 Elimination is human physiological need. Elimination can be disrupted can cause urinary system disorder that cause discomfort in life and activities. One of nursing actions that can be done by nurses for fullfilment of elimination need is by catheter placement (Prastia, 2015). Catheter is a tube, hollow, flexible tube that is inserted into the urinary tract and bladder to drain urine (Sunshine Coast Hospital and Health Service, 2017). Around 15-25% patients treated in hospital recieve urinary catheter intervention while in hospital (Centers for Disease Control and Prevention [CDC], 2015). In NHSN 2011 surveillance report, about 45-79% patients treated in critical care unit used indwelling catheters, 17% in general wards, 23% in surgical wards and 9% in rehabilitation units (Nicolle, 2014).

 Urinary catheter placement indication is urinary retention, for urine culture, inserting contrast material as radiological examination, monitoring urine production or fluid balance, measuring urine residue. Urinary catheter placement has contraindications such as urethral stricture, urethral rupture, and urinary tract infection, etc (Nuari & Widayati, 2017). Patients are felt discomfort from urinary catheter. About 75% patients with catheter are discomfort, and a half report pain. Patients many activities feel more discomfort, especially in men (Wilde, 2002). Discomfort often occurs when urinary catheter placement and also removal of catheter (Canterbury Continence Forum, 2013).

 Using urinary catheter will affect to quality of life of patients such as biological or physical, psychological, socio cultural, environmental and spiritual (Fumincelli et al., 2017). In general, the effect of catheter use on life has an impact on the physical domain of patients such as patients complaining of pain, sick and discomfort (Bai et al., 2015; Wilde, 2002). The psychological aspect for users to make adaptation of psychologically, impact on self-esteem (someone's intimate relationship). Social aspects, patients feel that something is blocking and does not enjoy do social activities, embarrassment when meet other people (McClurg et al., 2018).

 Patient also need safety according to basic human need of Abraham Maslow consists of pyhsiological need, love, self esteem, self actualization and safety.(Kemenkes RI, 2016). Feeling safe is a form of feeling that if not controlled, it can raises of anxiety.

 Based on the research articles, there is one article with a systematic review design and a qualitative metasynthesis review discusses neurological diseases in which it discusses urinary catheters. The title "Bladder management experiences among people living with neurologic disease: a systematic review and metasynthesis of qualitative research" (Welk et al., 2019). The research article explores the psychosocial problems of the patient and has not discussed all aspects of the patient's life. Based on this, researcher are interested to conduct literature review about fulfillment of safety and comfort needs in urinary catheter patients.

**METHOD**

1. Search Method

 A search was carried out for articles containing the keywords ((((((((((experience) OR impression) OR expression) OR need) OR living) OR perception) OR feeling)) OR ((((satisfaction) OR comfort) OR convenience) OR ease)) OR ((((secure) OR safe) OR calm) OR peace)) AND ((((((“urinary catheter\*”) OR “Foley Catheter\*”) OR “Ureteral Catheter\*”) OR "Bladder Catheter\*”) OR “Urethral Catheter\*”) OR “Transurethral catheter\*”) using PubMed, Wiley Online Library and SAGE Journals. The search was restricted to English language articles and limited to last 5 years (2014-2019). Articles should be related to research about fulfillment of safety and comfort needs in urinary catheter patients.

1. Extraction and Data Review Method
2. Article Selection

Two researchers performed an inital literature screen independently. Articles did not meet the search eligbility criteria were excluded. Articles that meet the inclusion criteria reviewed to see the quality of the research articles.

1. Evaluation of Articles

The findings were discussed until the researchers final selection articles.

**RESULTS**

1. *Search Results*

 From total database, only fourteen articles enrolled inclusion criteria. This figure is article search process.

Articles were excluded by title (1.965)

1. Not related to nursing
2. Not match with topic (safety and comfort needs in urinary catheter patients)

Articles identified through the search (n=2.207)

1. PubMed : 1061
2. Wiley Online Library: 293
3. SAGE journals:673

Identification

1. Duplicate data
2. Journals cannot be accessed in full text, only abstract
3. abstract does not match (n=37)

Articles are valued by abstract (n=62)

Screening

Articles selected by inclusion criteria (n=25)

Eligbility

Exluded by full text (n=11)

The literature which we used for literature review (n=14)

Include

Figure 1. Article Search Process.

1. *Patient’s Experience*

 This literature review focuses onpatient’s need about safety and comfort especially patients with urinary catheters. The result obtained are attachment of urinary catheter are urinary retention, post stroke or trauma, incontinence, post urology surgery, etc (Darbyshire et al., 2016; Laan et al., 2019). Patients with urinary catheter feel embarrassed, discomfort, painful, unfree, blocking their movement (Darbyshire et al., 2016; Laan et al., 2019; Trautner et al., 2019). This in supported by research from Safdar et al., (2016). This table is related to fulfillment of safety and comfort needs in urinary catheter patients.

 Patients also feel with urinary catheter will increase the risk of infection. With insertion of foley catheter, patient feel dissatisfaction, barriers to social interaction, frustation and pain (Gidaszewski et al., 2018; Kandadai et al., 2016). Other hand, some patients feel comfortable with urinary catheter because they have difficulty urinating (Cobussen-Boekhorst et al., 2016; Trautner et al., 2019). Some patients have intermittent catheterization this that it is scary and painful. But it did not turn out as thought (Cobussen-Boekhorst et al., 2016). Respondent assume that they do not need to go to bathroom to urinate (Safdar et al., 2016). According to Logan (2017) that when inserting, 81% feel pain, 59% describe more comfortable, while 70% said it was comfortable when catheter was removed. According to Logan (2015), 93% had no pain during catheter placement, 93% had no pain when removing, 86% rarely or never experience discomfort. Compared with male patients, women report greater convenience and comfort when use urinary catheter (Hu et al., 2019). This is different from Laan et al (2019) that there is no difference in symptoms and pain statements between age and sex.

 Patients prefer suprapubic catheter than urethral catheter (Chapple et al., 2015). That is supported by Fowler et al (2014), female patients feel urethral catheter cause discomfort when sitting so they turn to suprapubic catheter. Single use catheter (SUC) is more convenient than multiple use catheter (MUC). But patients who have stoma in abdomen are more comfortable using MUC than SUC (Park et al., 2017). Patients have experienced infections when this catheter is inserted, such as fever, pain, fatigue, spasms in the leg area so they have to go back and forth to the hospital. Initially, some patients said they were afraid the first time they would undergo the catheterization process. The catheter insertion process scared her because there were several catheter products that were stiff so that when the catheter was inserted it caused blood to flow in the urethra. With a community, patients feel more open, share information with each other so that patients can share knowledge as long as they do the catheterization themselves and how the catheter is processed. Patients can travel to places they want to go (Goldstine et al., 2019).

 From Atakro et al. (2017), All patients said their level of activity was disturbed. The patient said it was uncomfortable and painful with this catheter inserted. The patient says that his sexual life is limited. Patients feel that their sexual activities are impeded by the presence of a catheter. The patient also tries to hide the catheter from his partner. With the catheter in place, patients reduce their social activities for fear of creating odors that can cause embarrassment. Patient preferred to stay at home. In the work environment patients say the catheter has a negative effect for them. Many patients experience economic hardship due to the insertion of this catheter so they have to depend on their family and partner. So that patients feel that this catater makes the role of patients seeking money obstructed. Even though the patient is elderly, the patient says that he wants to work.

**DISCUSSION**

1. *Types of Catheter*

 There are two methods of urinary catheter (indwelling catheter and intermittent catheter) (Sari & Satyabakti, 2015) . Single use catheter (SUC) is more convenient than multiple use catheter (MUC). But patients who have stoma in abdomen are more comfortable using MUC than SUC (Park et al., 2017). The large size of the urinary catheter causes discomfort and the length of the catheter affects the patient's satisfaction to urinate (Kelly et al., 2014). Patient reported symptoms show that a SPC is more comfortable and better tolerated than a urethral catheter. Usually a urethral catheter is the first choice when external bladder drainage is decided to be necessary. Some respondents were satisfied with or preferred a urethral catheter; others preferred a suprapubic catheter because they perceived that suprapubic catheters led to fewer infections, were more hygienic, more comfortable, improved self-image, allowed a sense of control, and were better suited for sexual relations (Chapple et al., 2015).

1. *Physical Aspect*

 Patients have experienced infections when this catheter is inserted. Patients with urinary catheter feel discomfort, painful, unfree, blocking their movement. The patient also said that it was difficult to determine the position of the catheter or urine bag because of the fear of falling, especially when traveling, so the patient preferred to stay at home. The patient thinks that the urinary catheter is addictive and this makes the patient obstructed in physical activity (Jaquet et al., 2009). In contrast, Respondent assume that they do not need to go to bathroom to urinate. the patient does not experience pain, especially the patient feels safe at night (Ramm & Kane, 2011). Patients are freer because their urinary problems are resolved. Urinary catheter is advantageous for patients in need of elimination (physiological) (Nyman et al., 2013).

1. *Psychological Aspect*

 The catheter insertion process scared her because there were several catheter products that were stiff so that when the catheter was inserted it caused blood to flow in the urethra. Patient feel dissatisfaction, frustation, anxiety. Anxiety when the urinary catheter leaks so that the patient does not feel free (Kelly et al., 2014). The patient says that his sexual life is limited. Patients feel that their sexual activities are impeded by the presence of a catheter, it make the patient's self-esteem decreased. The symptoms are not presumed during intercourse. For men, pain during intercourse because something sticks to the penis area. For female, when moving, the catheter moves along and causes friction, causing pain. Spinal cord injury results in desexualization, a reduced feeling of femininity / masculinity coupled with insertion of a urinary catheter. Some patients say sex is very important and the catheter really affects it. catheter affects self-esteem, loss of confidence in sexual intercourse plus the disease experienced causes disability, loss of muscle strength (Chapple et al., 2014). Patient also tries to hide the catheter from his partner so that when the partner finds out the situation the patient often quarrels with his partner. With the catheter in place, patients reduce their social activities for fear of creating odors that can cause embarrassment. When inserting a catheter, the opposite sex makes the patient uncomfortable because it shows the intimate part (Nyman et al., 2013).

 In contrast to the study of (Godfrey, 2008), catheters as part of life without harming their identity, remain confident, feel more relieved, and describe urinary catheters as their friends and become more satisfied, Patients initially considered having a catheter inserted is bad but after some time the catheter was a gift.

1. *Social Aspect*

 Patient have barriers to social interaction. (Kralik et al., 2007) said urinary catheters make patients embarrassed by their social environment. So the patient tries to hide the presence of the catheter. The patient also tries not to tell his friends and neighbors about the existing catheter. The patient said that as long as the catheter was in place, the patient became social isolation. This is supported by Shaw et al. (2008), some patients find it difficult to socialize and become obstacles to socializing. In Contrast to the study of (Goldstine et al., 2019), patient says there needs to be a community for people who have urinary catheters in life. With a community, patients feel more open, can share information with each other so that patients can share knowledge as long as they do the catheterization themselves and how the catheter is processed.

1. *Other Aspect*

 In the work environment patients say the catheter has a negative effect for them. Patients experience economic hardship due to the insertion of this catheter so they have to depend on their family and partner. So that patients feel that this catater makes the role of patients seeking money obstructed.Some patients want to get a lot of information from their doctor regarding the catheter (Logan et al., 2008). In contrast to study of (Shaw et al., 2008b), in the work environment, some patients do not experience difficulties with this catheter, instead catheters help the patient.

**Table 1. Data Analysis Matrix for Articles Used in Literature Review.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Autors | Country | Types of Catheter | Design | Sample | Result |
| Darbyshire et al (2016) | United Kingdom | Urinary catheter (general) | Survey research | 50 patients from 17 different ward | Patients feel leaking (32%), embarrassement (24%), inconvenience (26%), , pain (26%), blocking (24%), 8% finding their catheters restrictive. 14% felt have coped without catheter.  |
| Hu et al (2019) | Taiwan | Urinary catheter (general) | Survey research or study investigated | 321 patients | Compared with male patients, females reported greater convenience and comfort use urinary catheter.  |
| Laan et al (2019) | Netherlands | Urinary catheter (general) | RICAT-study | 49 patients had urinary catheter | Symptoms from insertion, patients reported no symptom (75%), pain (14,6%), restriction in daily activities (31,3%). Statements from urinary patients feel satisfied (63,8%), no symptom (50%), rather have no urinary catheter (65,2%). It’s no difference in outcomes of statements and symptoms between age and gender.  |
| Trautner et al (2019) | United States | Indwelling urinary catheter | Descriptive analysis (part of prospective observational study) | 2.819 enrolled to study. But 2.276 patients with indweling urinary catheter. | Positive comments by patients with catheter, patient can sleep at night and sit was a relief to have the catheter. More than 80% negative comments about urinary catheter (pain, irritation, discomfort, interference with activities of daily living) because many patients mentioned the trouble were made by health care provider when insertion and removal.  |
| Chapple et al (2015) | United Kingdom | Long term catheter | Narrative interviews followed by thematic analysis | 36 long term catheter users (men and women) in England, Wales, or Scotland | Some respondents felt that suprapubic catheter would be more hygienic, comfortable and better for sexual than urethral catheter. It can cause all sorts problem because you get pressure sores where catheter is pressing.  |
| Cobussen-Boekhorst et al (2016) | Netherlands | Indwelling catheter | Qualitative multicentre | 124 inclusion criteria patients of a quantitative study with variety diagnoses. | Patients relief their complaints. They need more rest, pain has disappeared and they needed less incontinence material. Before catheterization, almost all male patients thought that it would be painful. But it less painful as expected.  |
| Fowler et al (2014) | United Kingdom | Indwelling catheter | Qualitative research  | 27 community indwelling long term catheter. 14 females (4 urethral, 10 suprapubic) and 13 males (6 urethral, 7 suprapubic). | Respondents linked indwelling catheter to physical discomfort. Women particularly found the urethral catheter uncomfortable beacuse they felt they sat on it for much of the day. This was cited as one of the reasons to change suprapubic catheter. Participants also reported pain when the catheter blocked.  |
| Logan (2015) | United Kingdom | Intermitten catheter | Survey research | 99 male  | When removing the urinary catheter, 93% patients no pain. 82% found catheterization with hydrosil gripper more comfortable. when removing the catheter ,93% experience no pain. After catheterization, 86% rarely experienced discomfort. |
| Logan (2017) | United Kingdom | Intermitten catheter | Survey research | 49 participants were recruited. 9 were not new to ISC. | Almost all women using hydrosil go to do procedure of catheter because it’s easy and comfortable procedure. 81% participants did not feel pain when inserting catheter, describe comfortable (59%) and discomfort (27%). 70% participants were no discomfort after catheter removed. Comparing the result , overall female patients less comfortable than men when insertion and removal of catheter.  |
| Safdar et al (2016) | United States | Indwelling catheter | Qualitative study | 20 patients with indwelling urinary catheter (9 men, 11 women) | 6 out of the 20 (30%) patients reported they aware indwelling urinary catheter increased the risk of infection. 10 out of the 20 (50%) patients reported uncomfortable or painful. 5 out of the 20 (25%) reported feeling sense limitation in mobility. 9 out of the 20 (45%) patients reported indwelling urinary catheter to be convenient because they did not have to ge up and go to bathroom. |
| (Goldstine et al., 2019) | 5 country (United Kingdom, United States, Germany, France, Netherlands) | Intermitten catheter | Qualitative study | 25 adult patient, ≥18 years old | Patients have experienced infections when this catheter is inserted, such as fever, pain, fatigue, spasms in the leg area so they have to go back and forth to the hospital. Patients say catheters are very helpful to them and more practical.Initially, some patients said they were afraid the first time they would undergo the catheterization process. The catheter insertion process scared her because there were several catheter products that were stiff so that when the catheter was inserted it caused blood to flow in the urethra. With a community, patients feel more open, share information with each other so that patients can share knowledge as long as they do the catheterization themselves and how the catheter is processed. Patients can travel to places they want to go |
| (Atakro et al., 2017) | Ghana | Indwelling catheter | Qualitative  | 19 patients (men) were interviewed | All patients said their level of activity was disturbed. The patient said it was uncomfortable and painful with this catheter inserted.The patient says that his sexual life is limited. The patient also tries to hide the catheter.With the catheter in place, patients reduce their social activities for fear of creating odors that can cause embarrassment. In the work environment patients say the catheter has a negative effect for them.Many patients experience economic hardship due to the insertion of this catheter so they have to depend on their family and partner. So that patients feel that this catater makes the role of patients seeking money obstructed. Even though the patient is elderly, the patient says that he wants to work. |
| Park et al (2017) | Korea (Seoul) | Intermitten catheter | Survey research  | 45 pediatric patients who underwent CIC for neurogenic bladder. | Result that patients in all group, gave higher scores in favor of SUC (ease of use, convenience, discreetness, symptomatic benefit), even though they may or may not significant.  |
| Kandadai et al (2016) | United States | Foley catheter and Valve catheter | RCT | 49 subjects. 24 use foley catheter and 25 valve catheter. | Catheter with valve (VC) and foley catheter (FC) users report that it has similar catheter related pain. Feeling of frustation and limited social activities have significant results. |

**CONCLUSSION**

 Conclussion of this literature review show that patients feel shy when using urinary catheter, discomfort, painful, unfree, and there are obstacle to their movement. It also can cause irritation, increase the risk of infection, cause dissatisfaction, disruption of social interaction, frustation when using the urinary catheter. But there are several articles found that patient feel discomfort because they don’t need to go to bathroom to urinate.

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