CHARACTERISTICS OF URINARY INCONTINENCE AMONG ELDERLY PEOPLE IN NURSING HOME

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Abstract: **Urinary incontinence can be described as involuntary leakage of urine due to some factors which acts as variables that affects urinary incontinence. Failure to control urine in the bladder due to loss of voluntary control over the urinary sphincter arising in the involuntary passage of urine. The prevalence of urinary incontinence reported in population-based studies ranges from 9.9% to 36.1%, and is twice as high in older women as in older men. Prevalence rates are even higher in the elderly and amongst nursing home patients. It is estimated that the national prevalence of urinary incontinence in Indonesia is relatively high. The aim of this study is to determine the characteristics of urinary incontinence among elderly people in Tresna Werdha Wana Seraya Nursing Home, Denpasar. This research was conducted from October to November 2020. This research was conducted by descriptive method using cross-sectional study. Samples were selected from the population based on inclusion and exclusion criteria. The elderly people's characteristics were described based on age, gender, relative factors and types. The results that we can find in this study is urinary incontinence among elderly people were mostly found in the elderly aged 60-74 years old (63.6%). Urinary incontinence among elderly people was more common in females (90.9%) than males (9.1%). Based on the body posture obese people (50.0%) are mostly affected by urinary incontinence. Furthermore, urinary incontinence dominates among women who are menopause 100,0%) than who does not. The underlying disease that mostly caused urinary incontinence among elderly people were diabetes mellitus (54,5%). This finding is useful because it can provide information about the characteristics of urinary incontinence among elderly people in Tresna Werdha Wana Seraya Nursing Home.**

Keywords: **Urinary Incontinence, Elderly People, Characteristics.**

1. INTRODUCTION

According to World Confederation for Physical Therapy in the year 2012, they defined elderly people based on their typical feature comprises of chronological age, development in social role and differences in functional capabilities. Change in social role such as change in work patterns, adult status and menopause. Moreover, change in capabilities include invalid status, senility and change in physical characteristics. Whereas, based on World Health Organization (WHO), they concluded that at this time there is no United Nations Standard numerical proof yet, but the UN acknowledge that 60+ years to refer as elderly people.[1] The population of elderly people ages 60 and above increasing every year in Indonesia. Referring to the World Bank data it is clearly stated that in the year of 2000, the reading was 4.709 % of total population. In the year of 2004, the reading was 4.813 % of total and it increases to 4.941 % in the year of 2012. And the latest reading was 5.202 % of total in the year of 2016.[2] Elderly people can be divided into 3 main stages.

(i)   Elderly (60-74 years)

(ii) Old (75-90 years)

(iii) Very old (90 and above)

As we getting older there are a lot of changes in human body not only physically and mentally but also physiologically and pathologically. In the human body, there are systems that provide different functions and help the body to operate more efficiently. One of the most important system is urinary system where it is designed to help the body remain free of excess that we no longer need. The urinary tract is the drainage system used for removing wastes and extra water. So, this urinary system leading to various kind of diseases. Comparing all the diseases urinary incontinence categorized as the one of the dangerous diseases occurs in all age groups but it is most common in elderly people. According to the National Kidney Foundation at least 10 million Americans suffer from urinary incontinence, where they are not able to control the times when they urinate.

Furthermore, Continence Foundation of Australia concluded that incontinence is a phrase that explains about any coincidental or uncontrolled loss of urine from the bladder or bowel motion, feces or wind from the bowel. Incontinence can be allocated as transient and chronic. Transient incontinence can be described as urinary leaking that immediately reverses after the hidden cause is settled whereas chronic incontinence is does not usually solved spontaneously.[3] The first step in identifying transient incontinence is transient or changeable causes of urinary incontinence. Changeable incontinence normally has an unexpected attack and will be exist for less than six weeks at the time of interpretation. The mnemonic DIAPPERS is beneficial for reminding the common reversible causes of urinary.[3]

Table 1. The Reversible Causes of Transient Urinary Incontinence

Differential Diagnosis of Transient Causes of Urinary Incontinence	
D	Delirium
I	Infection (Acute Urinary Tract Infection)
A	Atrophic Vaginitis
P	Pharmaceuticals
P	Psychological disorder, especially depression
E	Excessive urine output (Eg : Hyperglycemia)
R	Reduced mobility (Eg : Functional Incontinence)
S	Stool impaction

In between, characteristics of urinary incontinence play an essential part in relating with comorbidities among elderly people. Urinary incontinence can have a serious collision on the healthcare system and elderly people's daily life. The presence of characteristics of urinary incontinence among elderly people with the described comorbidities, so it is easier to give measures on handling it So, the researcher interested to conduct a research on "Characteristics of Urinary Incontinence among Elderly People in Nursing Home".

2. MATERIALS AND METHODS

This study is a descriptive cross-sectional study to determine the characteristics of urinary incontinence among all elderly people in Tresna Werdha Wana Seraya Nursing Home, Denpasar. This study utilizes an instrument from an online research questionnaire entitled Incontinence Impact Questionnaire-7 (IIQ-7), Urogenital Distress Inventory-6.[4] The target population used in this study were all elderly people in Tresna Werdha Wana Seraya Nursing Home, Denpasar. Accessible population of this research were all elderly people in Tresna Werdha Wana Seraya Nursing Home, Denpasar in 2020. Samples were taken from affordable populations based on inclusion and exclusion criteria. Inclusion criteria were all elderly people in Tresna Werdha Wana Seraya Nursing Home, Denpasar as respondents who agree to follow this research, will fill the questionnaire given by the researcher. Exclusion criteria was the elderly people as respondents who disagree to follow this research, will be excluded from this sample of research. The sample size of this study will used all elderly people in Tresna Werdha Wana Seraya Nursing Home, Denpasar met the inclusion criteria. (n=37 samples). The research variable: age, gender, relative factors (menopause, obesity, body posture based on BMI, weight, knee height, underlying disease, and types (UDI-6 and IIQ-7 scoring is a parameter to determine the severity of urinary incontinence. If UDI-6 score demonstrates more than 14, and IIQ-7 score is more than 15, an elderly is inclined to develop urinary incontinence): stress urinary incontinence, Urge urinary incontinence, Overflow urinary incontinence, mixed urinary incontinence, and functional urinary incontinence. Data collected from and will be statistically analysed using SPSS version 26 for descriptive analysis and the analysis correlation is between characteristics and types of urinary incontinence. This research has obtained permission from the Research Ethics Commission of the Faculty of Medicine, Udayana University with Ethical eligibility Number: 2157/UN14.2.2.VII.14/LT/2020 dated 02 November 2020.

3. RESULTS AND DISCUSSION

Research Results:

This research was conducted during the COVID-19 pandemic condition so that there were several changes to adjust to these conditions, where the collection of questionnaires at the Tresna Werdha Wana Nursing Home, Denpasar was collected by a representative from medical faculty and, was supervised by the researcher. This study was carried out in Tresna Werdha Wana Nursing Home, Denpasar from October to November 2020. Sampling was done by using total sampling technique and research subjects determined by the inclusion and exclusion criteria that have been defined. Based on the inclusion and exclusion criteria, there were 37 geriatric patients with urinary incontinence and at the same everyone does agree to take part in this research. So that the total medical records used were 37 data, then samples were collected using a questionnaire and analyzed using SPSS version 26.

Characteristics of Research Subjects in Tresna Werdha Wana Seraya Nursing Home

Based on interviews using the Urinary Distress Inventory, Short Form (UDI-6) and Incontinence Impact Questionnaire, Short Form (IIQ-7), it was found that the proportion of elderly people with urinary incontinence (59,5%) is more than those who did not experience urinary incontinence (40,5%).

TABLE 2. CHARACTERISTICS OF RESEARCH SUBJECTS

Values						
Characteristics	**Normal (n=15)**		**Urinary Incontinence (n=22)**		**Total (n=37)**	
	n (%)	**Mean (SD)**	**n (%)**	**Mean (SD)**	**n (%)**	**Mean (SD)**
Age (years old)						
60-74	7 (46.7)	74.87±7.33	14 (63,6)	74.64±8.72	21 (56,8)	74.73±8.08
75-90	8 (53,3)		8 (36,4)		16 (43,2)	
Gender *						
Male	9 (60,0)		2 (9,1)		11 (29,7)	
Female	6 (40,0)		20 (90,9)		26 (70,3)	
Menopause *	6 (40,0)		20 (100,0)		26 (100,0)	
Weight (kg)						
41-50						
51-60						
61-70		75.40±13.62		83.18±8.50		80.03±11.37
71-80						
81-90						
91-100						
Knee Height (cm)						
46-50						
51-55						
56-60		62.80±5.44		57.27±5.03		59.51±5.82
61-65						
66-70						
BMI ($kg/m2$) *						
Normal	12 (80,0)		4 (18,2)		16 (43,2)	
Overweight	3 (20,0)		7 (31,8)		10 (27,0)	
Obesity	0 (0,0)		11 (50,0)		11 (29,7)	
Underlying Diseases *						
Diabetes Mellitus	4 (26,7)		12 (54,5)		16 (43,2)	
Stroke	3 (20,0)		7 (31,8)		10 (27,0)	
Spinal Trauma	0 (0,0)		3 (13,7)		3 (8,1)	
No illness	8 (53,3)		0 (0,0)		8 (21,6)	

Note : (*): p < 0.05

In determining the characteristics of urinary incontinence in elderly people based on age, the sample was grouped into three stages of age, namely elderly aged 60-74 years, old aged 75-90 years and very old aged 90 and above. Based on the

results of the study, 21 patients (56,8%) were 60-74 years old and 16 patients (43,2%) aged 75-90 years Based on the outcome, 14 patients (63,6%) were 60-74 years old with urinary incontinence whereas only 7 patients (46,7%) are normal. Moreover 8 patients (36,4%) aged 75-90 years with urinary incontinence and 8 patients (53,3%) are normal. In this study it can be seen that urinary incontinence in geriatric patients are more common among elderly people, namely the age range of 60-74 years as many as 14 patients (63,6%). For the mean value of urinary incontinence obtained was 74,64 and the standard deviation is 8,72 whereas for the normal state the mean value was 74.87 and the standard deviation was 7.33. For the *p*-value obtained is 0.247 where it is more than 0.05 and age factor has no relationship with urinary incontinence (p > 0,05).

In this study, it can be seen that elderly people with urinary incontinence are divided according to gender, namely male and female. Where as many as 11 males (29,7%), while 26 people (70,3%) were female. 2 males (9,1%) who are affected by urinary incontinence while for non-urinary incontinence 9 males (60,0%) were affected. In addition, female with urinary incontinence were 20 females (90,9%) whereas from non-urinary incontinence category there are only 6 females (40,0%). Based on the results of this study, it was found that there were more female patients, namely 20 patients (90,9%) who are affected with urinary incontinence. Moreover, for the p-value obtained is less than 0.05 and gender characteristics has a strong relationship with urinary incontinence and it is known as significant (p < 0,05).

Table 2 represents the distribution of menopause among elderly people of urinary incontinence. The study shows 26 female (100,0%) who suffer from urinary incontinence are menopause. This shows that all the females who are in Tresna Werdha Wana Seraya nursing home are already menopaused. The study shows 20 female (100,0%) who suffer from urinary incontinence are menopause whereas for those who are normal there are 6 female (100,0%) who are menopause. This shows that all the females who are in Tresna Werdha Wana Seraya nursing home are already menopaused. Besides that, for the p-value obtained is less than 0.05 and menopause characteristics has a strong relationship with urinary incontinence and it is significant (p < 0,05).

Body posture is regarded as the classification of the body weight based on Body Mass Index (BMI), is a statistical measure which compares a person's weight and height, which is comprised of underweight, normal, overweight and obese. The current value settings are as follows: underweight individuals are those with BMI lower than 18,5 kg/m2, normal type with BMI ranged from 18,5-24,9 kg/m2, overweight with BMI ranging from 25,0 – 29,9 kg/m2 and obese with BMI is higher than 30 kg/m2. Table 2 represents the distribution body posture among elderly people of urinary incontinence. The study indicates 16 elderly people (43,2%) who suffer from urinary incontinence demonstrate normal body mass index, 10 elderly people (27,0%) of them are in overweight state whereas 11 elderly people (29,7%) suffering from urinary incontinence are in obesity state.

Referring to the table 2, to calculate the BMI (Body Mass Index) weight and knee height are needed. Back to the table again, the mean weight obtained according to the data was 80,03 kg and the standard deviation was 11,37. According to the data who are affected by urinary incontinence the mean value obtained was 83,18 kg and the standard deviation was 8,50. Additionally, for those who are normal the mean value was 75,40 kg and the standard deviation was 13.62.

Based on this study, the mean knee height obtained according to the data was 59,51 cm and the standard deviation was 5,82. According to the data who are affected by urinary incontinence the mean value obtained was 57,27 cm and the standard deviation was 5,03. Additionally, for those who are normal the mean value was 62.80 cm and the standard deviation was 5,44.

Table 2 shows the underlying diseases of elderly people in Tresna Werdha Wana Seraya nursing home. The disruption of this nervous system can also cause occurrence incontinence. Stroke sufferers can find complaints of urinary incontinence as much as 10 of them (27,0%) whereas for spinal trauma is 3 elderly people (8,1%). In the study it can be seen that 16-elderly people (43,2%) with history of diabetes mellitus. There are 8 elderly people (21,6%) got no underlying diseases. Stroke sufferers can find complaints of urinary incontinence as much as 7 of them (31,8%) those who are affected with urinary incontinence whereas 3 of them (20,0%) are normal. Additionally, for spinal trauma is 3 elderly people (13,7%) from urinary incontinence category whereas no people are suffering from spinal trauma from non-urinary category. In the study it can be seen that 12-elderly people (54,5%) in urinary incontinence whereas only 4 elderly people (26,7%) who are normal suffering with history of diabetes mellitus. 8 of them who are normal experiencing no illness and also there are no one from urinary incontinence side who got underlying disease. Furthermore, for the p-value obtained is less than 0.05 and underlying diseases has a strong relationship with urinary incontinence and it is significant (p < 0.05).

Urinary incontinence is one of the conditions which occasionally could be extremely bothersome. The urinary incontinence can be divided into non-incontinence and also incontinence. Stress incontinence is an involuntary or uncontrollable loss of urine that occurs during physical activity, such as coughing, sneezing, laughing, exercise or putting too much efforts or energy that leads to increased abdominal pressure.[5,6,7] Urge incontinence is an involuntary or uncontrollable loss of urine which is accompanied with urinary urgency (Summit 1992).[6] Urinary urgency is a sudden, compelling urge to urinate. UDI-6 and IIQ-7 scoring is a parameter to determine the severity of urinary incontinence. If UDI-6 score demonstrates more than 14, and IIQ-7 score is more than 15, a woman is inclined to develop urinary incontinence.

Figure 1. The Prevalence of Urinary Incontinence Among Elderly People in Tresna Werdha Wana Seraya Nursing Home Based on The Status of Urinary Incontinence (N = 37)
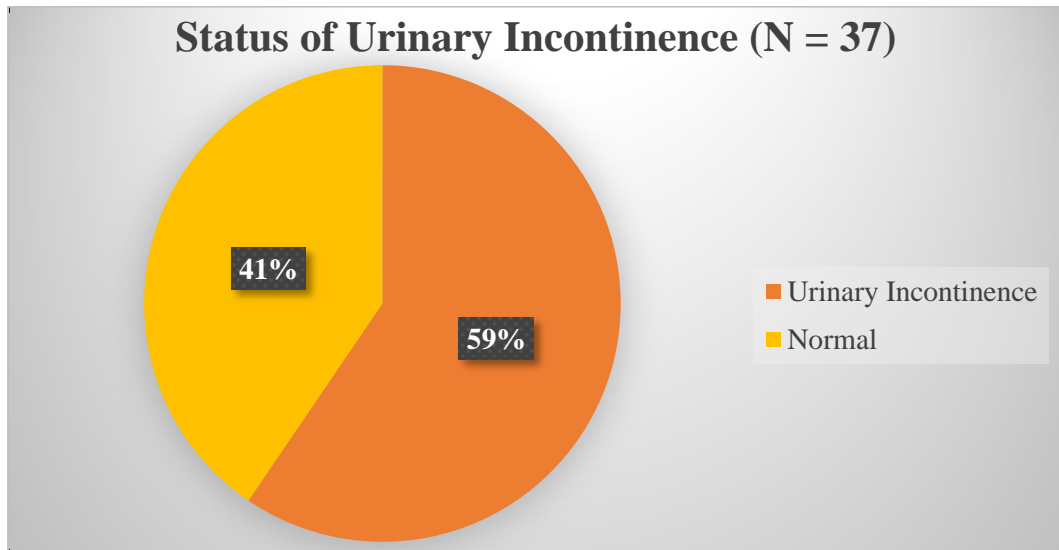

Figure 1 shows the prevalence of urinary incontinence among elderly people in Tresna Werdha Wana Seraya Nursing Home. The study shows 22 of elderly people (59.5%) who suffer from urinary incontinence and 15 elderly people (40.5%) who are not suffering from urinary incontinence and they are normal. This study reveals 22 male and female are experiencing urinary incontinence.

Figure 2. Types of Urinary Incontinence Incontinence Among Elderly People in Tresna Werdha Wana Seraya Nursing Home (N = 22)
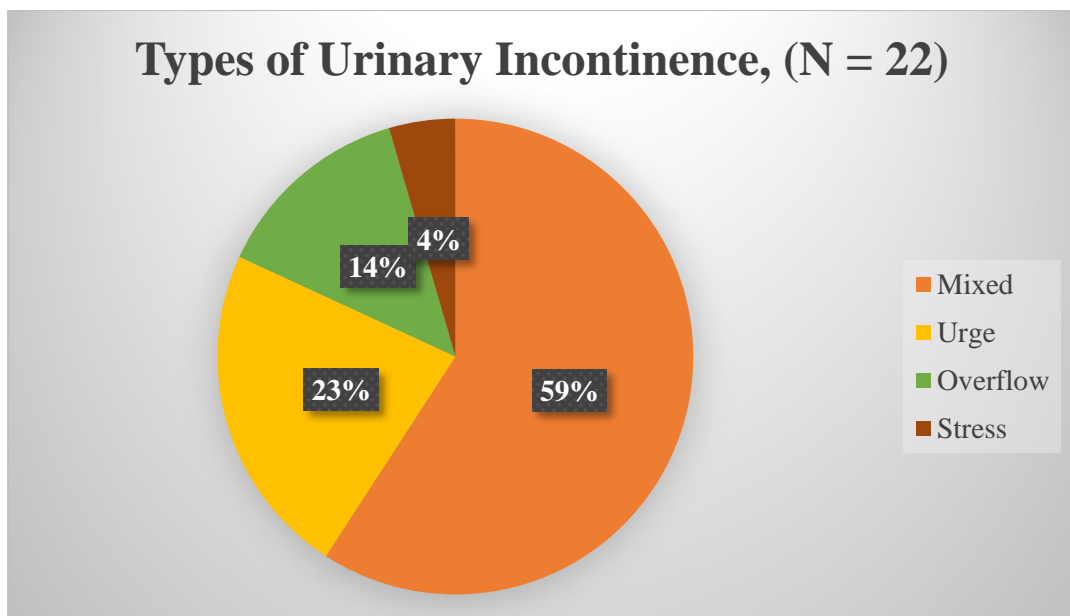
Figure 2 shows the types of urinary incontinence among elderly people in Tresna Werdha Wana Seraya nursing home. Characteristics of urinary incontinence among elderly people can be determined by types such as stress, urge, mixed, functional and overflow. The study shows 13 patients (59,1%) who suffer from mixed urinary incontinence and there 5 patients (22,7%) who suffer from urge urinary incontinence whereas for overflow urinary incontinence there are 3 patients (13,6%). There is only 1 patient (4,5%) who suffering from overflow urinary incontinence. For the p-value obtained is less than 0.05 and types of characteristics has a strong relationship with urinary incontinence which is significant (p < 0.05).

Discussion:

Table 2 shows the characteristics of urinary incontinence among elderly people in Tresna Werdha Wana Seraya Nursing Home, Denpasar based on risk factors where the reading shows 22 of elderly people (59.5%) who suffer from urinary incontinence and 15 elderly people (40.5%) who are not suffering from urinary incontinence and they are normal.

Table 2 shows the characteristics of urinary incontinence among elderly people in Tresna Werdha Wana Seraya Nursing Home, Denpasar based on age where the urinary incontinence mostly takes place among the elderly people whose age from 60-74 years old, as many as 14 patients (63,6%). The results obtained are in accordance with research conducted by Amelia (2020) at the PSTW Sabai Nan Aluih Sicincin Kabupaten Pariaman Sumatera Barat, which found 7 (50,0%) elderly people who are affected by urinary incontinence at the age of 60-74 years old.[8] According to Sherina Mohd Sidik (2010) that at the age of 60-74 years, aging brings about the diminished size of the urinary bladder, creating a diminished bladder volume and a requirement for more continuous bladder discharging (urinary frequency).[9] Numerous elderly people experience early detrusor contractions, even at low bladder volumes. These outcomes as it were of urgency to purge the bladder.

According to the research by Amelia (2020) found that there were 14 patients (23,73%) of urinary incontinence and 7 patients (50,0%) aged 65-74 years, followed by 6 patients (42,85%) aged > 75 years.[8] This is in accordance with research conducted by Wilson et al., in Bethania Lembean nursing home in 2016 that the elderly is experiencing urinary incontinence mostly in the age range of 71-80 years.[10] This is upheld by the hypothesis which expresses the more established an individual is getting in danger of encountering this urinary incontinence because of a reduction in effectiveness and capacity of organs physiologically because of aging cycles.[8]

Table 2 shows the characteristics of urinary incontinence among elderly people in Tresna Werdha Wana Seraya Nursing Home, Denpasar based on gender, namely urinary incontinence among elderly people, which occurred more in 20 females (90,9%) compared to male elderly which is only 2 people (9,1%). A research conducted by Aggazzotti G (2000) at 14 nursing homes also obtained the results that the overall prevalence of urinary incontinence was (54,5%), higher in women (59,8%) than in men (39,2%).[11]

Among men, the urinary incontinence prevalence rate found in the SABE Study (11,8%) was lower than in other studies. Diokno et al. 7 found a prevalence of 18,9% and in the other hand, the prevalence rate among women was (26,2%) and it is very similar to the findings of Irwin et al. (27,5%), who used the urinary incontinence definition proposed by the International Continence Society.[12] Females present more serious danger of creating urinary incontinence than do males. The reasons are the distinctions in urethral length, anatomy of the pelvic floor, impact of gestation and birth on the self-control mechanisms and hormonal changes. Furthermore, numerous females wrongly believe urinary incontinence to be a typical piece of aging itself. Additionally, an enormous extent of urinary incontinence grumblings is identified with actual exertion (stress urinary incontinence), which contributes towards the distinctions in commonness rates between the genders.[13]

Table 2 shows the characteristics of urinary incontinence among elderly people in Tresna Werdha Wana Seraya Nursing Home, Denpasar based on body posture, namely urinary incontinence among elderly people mostly can be found in obese people, namely in 11 people (50,0%) and 7 people (31,8%) are under underweight category. The results obtained are in accordance with the research conducted by Auwad (2008) at the end of the study, 14 (22%) women had BMI between 27,2 and 29,9 $kg/m2$ (i.e. overweight) and none had a normal BMI (i.e. <25 $kg/m2$).[14] Obesity is additionally viewed as a factor that advances urinary incontinence, and the conceivable reason for this association might be the expanded intra-abdominal and bladder pressure that happens with expanded BMI. This expanded pressure may make challenges in the mechanism for urethral continence through decreasing the pressure slope between the urethra and the bladder, consequently encouraging or worsening urinary incontinence, albeit hyperactive bladder has also been cited more

frequently among obese women. In the current investigation, in examination with normal BMI, being obese expanded the opportunity of urinary incontinence occurrence by a factor of 1,63.[13]

Table 2 shows that the urinary incontinence among elderly people in Tresna Werdha Wana Seraya Nursing Home, Denpasar based on menopause, namely the characteristics of relative factors which is menopause occurred only among females, amounting to 20 females (100,0%). According to Seputra (2019), based on the results of this study, women (78,3%) experienced more often urinary incontinence compared with men (21,7%).[15] This is because of women experiencing menopause so it happens decrease in estrogen levels that can causes a decrease in basic muscle tone pelvis. This decrease in estrogen levels too is said to cause excitation to central nervous system and causes increased urinary frequency among women who arrive at their menopausal age will in generally experience different adjustments in their day to day existence which is the consequence of lessening creation from of estrogen steadily begins to drop, and furthermore influences the urogenital tract of women who are in this stage. The vaginal canal of the menopausal women would get more limited and smaller in view of the expanded creation of submucous tissues. The vaginal ridge would turn out to be less surprising. Maturation index will separately move to one side because of the reduced estrogen with predominant parabasal and intermediate cells. Menopausal women will in general experience the ill effects of vaginal dryness. The creation of epithelial glycogen and the discharge delivered would diminish, and that adds to the concealment of the Lactobacillus growth, then again, it will build the growth of another microorganism.

Table 2 shows the characteristics of urinary incontinence among elderly people in Tresna Werdha Wana Seraya Nursing Home, Denpasar based on underlying diseases, namely stroke and diabetes mellitus, which are the most basic diseases that causes urinary incontinence among elderly people, where stroke occurs in 7 people (31,8%) and diabetes mellitus in 12 people (54,5%). Research conducted by Tendean, also found that the most common diseases that can cause urinary incontinence among elderly people are 4 people (5,3%).[4] Autonomous nervous system regulates filling and dispensing urine. Disruption of this nervous system can also cause occurrence incontinence. Stroke sufferers can find complaints of urinary incontinence as much as 10-18%. Whereas for underlying disease of diabetes mellitus the prevalence of incontinence among women with diabetes was 39% compared to 26% in women without diabetes. The women with diabetes had more urge and mixed incontinence. Furthermore, diabetes is a strong danger factor for urinary incontinence, expanding both the predominance and severity of urinary incontinence. Past exploration recommends that 10 – half of more seasoned grown-ups with diabetes experience urinary incontinence. Moderately aged and more seasoned wandering women with diabetes mellitus have expanded chances of having urinary incontinence contrasted with women without diabetes. Women with diabetes mellitus were likewise twice as prone to grow more extreme urinary incontinence with enough spillage to wet external dress contrasted with women without diabetes.[16]

Figure 2 shows the characteristics of urinary incontinence among elderly people in Tresna Werdha Wana Seraya Nursing Home, Denpasar based on types, namely stress, urge, mixed and overflow, which causes urinary incontinence among elderly people, where mixed urinary incontinence takes the high percentage of (59,1%) and 13 patients are affected, secondly urge urinary incontinence with a percentage of (22,7%) and 5 patients are suffering from it. Whereas, stress urinary incontinence there are 3 patients (13,6%) who are suffering from. There are also 3 patients (13,6%) who suffering from overflow urinary incontinence. Such outcome is as per the investigation by Wiratmoko, in which mixed urinary incontinence is the sort most regularly found in elderly people. Comparable outcomes were likewise acquired by Juliana et al in Brazil, where the prevalence of mixed urinary incontinence was 36.2%, urge incontinence was 26.8% and stress incontinence was 24.2%. Past writing clarified that women who has experienced menopause (encountering hypo estrogen state) will encounter urethral mucosa atrophy causing urethral dysfunction and shortcoming of bladder musculature causing bladder dysfunction, which may cause urinary incontinence, particularly mixed urinary incontinence.[17]

Research Limitations

Researchers are aware that this study has the following limitations:

1. Research was conducted only on a small size of sample which is 37 patients only. Therefore, to generalize the results for larger group, this research should have involved more patients from nursing home.

2. Some technical aspects on collecting data due to pandemic covid-19 need more time so that the data obtain will be relevant.

3. Some technical aspects on taking data need more attention so that the respondents fill out the questionnaire seriously.

4. The respondents may not be 100% truthful with their answers. Researcher is aware that this topic may be sensitive and the respondents would want to protect their privacy.

4. CONCLUSION

Based on the results of factual research, urinary incontinence among elderly people in nursing home at Tresna Werdha Wana Seraya Nursing Home, Denpasar were carried out on 37 samples and had met the inclusion criteria, it was concluded that urinary incontinence among elderly people mostly found in the middle-old aged group people, 60-74 years as many as 14 people (63,6%). Urinary incontinence among elderly people were mostly found in females, namely 20 people (90.9%) compared to males, namely 2 people (9.1%). Furthermore, for body posture for the elderly people with urinary incontinence is obesity and 11 people (50.0%) are affected. Menopause is also a variable which contributes in urinary incontinence with a number of 20 females (100,0%). The underlying disease that caused urinary incontinence among elderly people were diabetes mellitus with 12 people (54,5%). Last but not least, elderly people who are affected with urinary incontinence is more compared to the one is not affected with the number of 22 people (59.5%).

5. RECOMMENDATION

Based on the research that has been done regarding the characteristics of urinary incontinence among elderly people in Tresna Werdha Wana Seraya Nursing Home, researchers suggest that research on urinary incontinence with more samples and further analytic research is needed to find the relationship between the incidence of urinary incontinence and variables. According to researchers, this is important to do in order to consider the therapy and prevention that can be given to patients with urinary incontinence.

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