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# Quality of Life in Elderly with Stress Urinary Incontinence at Elderly Posyandu Dempo Health Center Palembang

**Namira Amalia[1], Amir Fauzi[2], Hadrians Kesuma Putra[2*]**

[1]Undergraduate Student of Medical Program, Faculty of Medicine, Universitas Sriwijaya, Palembang, Indonesia
[2]Department of Obstetrics and Gynecology, Faculty of Medicine, Universitas Sriwijaya, Palembang, Indonesia

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***Corresponding author:**
Hadrians Kesuma Putra

**E-mail address:**
hadrianskesuma@fk.unsri.ac.id

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**ABSTRACT**

**Introduction**. Urinary incontinence is the loss of a person's ability to control urination. This condition is a common health problem that is often found in the elderly, especially in women. Stress urinary incontinence is one of the urinary incontinence that is often found due to increased intra-abdominal pressure. Urinary incontinence can have a negative effect on the quality of life of the elderly. This study aims to provide an overview of the quality of life in elderly women with stress urinary incontinence. **Method**. This study is observational descriptive research. The data was obtained from interviews with elderly women at the Elderly Posyandu Dempo Health Center Palembang in the period October – November 2022, who met the inclusion and exclusion criteria. **Results**. The samples in this study have more demographic characteristics of the elderly group at the age 60-69 years (70%), last education level in elementary school (47.5%), married (57.5%), and normal BMI (53.8%). This study found elderly women with a history of parity ≥ 2 (81.3%), and vaginal delivery (75%). It was found that elderly women with stress urinary incontinence had a moderate quality of life (82.5%) and moderate results in all domains of quality of life, namely physical health (46.3%), psychology (62.5%), social relations (53.7%), and the environment (62.5%). **Conclusion**. Elderly women with stress urinary incontinence at the Elderly Posyandu of the Dempo Palembang Health Center have a moderate quality of life and moderate impact on the domains of physical health, psychology, social relations, and the environment.

## 1. Introduction

As people get older, humans will experience aging.[1] Aging is a progressive process related to decreased structure and function of the human body. Aging is not a disease. The normal aging process generally does not cause symptoms but increases the susceptibility to disease.[2] Health problems in the elderly are commonly known as geriatric syndromes, one of which is urinary incontinence.

Urinary incontinence is the incapability of an individual to control urination.[3] Urinary incontinence is a common health problem that is often found in the elderly, especially occurring more frequently in women.[4] The prevalence of urinary incontinence in elderly women ranges from 37% worldwide, but most of these cases were not reported because the patient considered urinary incontinence to be a normal part of the aging process and was embarrassed to consult.[4–6] The most common type of urinary incontinence in women is stress urinary incontinence which occurs due to increased intraabdominal pressure, followed by urgency urinary incontinence due to increased contraction of the bladder detrusor muscle of the bladder, and mixed urinary incontinence is a combination of stress and urgency urinary incontinence symptoms.[7]

Urinary incontinence is not a life-threatening condition. However, this condition can lead to a negative effect on the quality of life of the elderly.[6] The World Health Organization (WHO) defines the quality of life as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns.[8] Quality of life consists of four domains: physical health, psychological, social relationship, and the environment.[9]

Urinary incontinence can significantly decrease the quality of life in patients. A study in Riyadh reported a person with urinary incontinence sufferers experienced limitations in social life (36.3%), negative impacts on physical activity

(18.5%), and decreased personal hygiene (21.8%). Besides that, urinary incontinence also has negative impacts on the ability to travel (26.6%), visit other people or be visited by them (37.9%), decreased self-esteem (32.3%), and urinary tract infections (62.1%).[10] A systematic review study was reported 18.8% of the elderly experienced skin irritation caused by using diapers.[11]

Decreased quality of life of the elderly drives it impossible to enjoy old times and can cause depression in the elderly, along with a reduced desire to live.[12,13] Hence, understanding the quality of life of the elderly is important to improve treatment and service for the elderly with urinary incontinences[14]

This study aimed to evaluate the quality of life of the elderly with stress urinary incontinence which is necessary for monitoring and treating stress urinary incontinence to prevent a decrease in the quality of life of the elderly.

## 2. Methods

The research was conducted using a descriptive observational method with a cross-sectional design. This study used primary data in the form of interviewing the subject using a questionnaire. This research was conducted in the *Elderly Posyandu* (Integrated Community Health Care Service Of Elderly) Dempo Health Center Palembang. The following questionnaires used were Questionnaire Urinary Incontinence Diagnosis (QUID) and the abbreviated WHO Quality of Life questionnaire (WHOQOL). The QUID was used for a screening diagnosis of urinary incontinence and determining the type whether it is stress, urgency, or mixed urinary incontinence. The WHOQOL allowed for an evaluation of the patient's quality of life in four domains: physical health, psychological, social relation, and environment.

The consecutive sampling method was used for sampling this research. The sample in this study is elderly women in *Elderly Posyandu* Dempo Health Center Palembang who met inclusion and exclusion criteria. The inclusion criteria in this study were women who registered as elderly in *Elderly Posyandu* Dempo Health Center Palembang, willing to participate in this study, and elderly women with stress urinary incontinence by QUID questionnaire.

Of 124 elderly women who participate in the study, 44 were not met the inclusion criteria. The final study sample consisted of 80 elderly women with SUI.

The research variables to be studied were demographic characteristics (age, last education, marital status, BMI), gynaecologic characteristics (parity, delivery mode), quality of life, domain quality life, and also a cross-tabulation between demographic and gynaecologic characteristics with quality of life.

## 3. Results

Data from 80 subjects are used for the analysis. Based on their demographic characteristics, most of the subjects are young–elderly age (60–69 years) (70%), had completed Primary education (47.5%), more than half of the subjects are married (57.5%), and have normal BMI (53.8%). Based on gynaecological characteristics, the majority of subjects had previous parity ≥ 2 parities (81.3%) and vaginal delivery (75%) (Table 1).

The quality of life of the subjects is presented in Table 2, most of them have a moderate quality of life (66,3%). It can be seen in Table 3, the domain of quality of life is divided into physical health, psychologic, social relations, and environment. Most of the subjects have moderate in all domains of quality of life: physical health (46,3%), psychologic (62,5%), social relations (63,7%), and environment (62,5%).

Table 4 describes the quality of life by each characteristic of the subject. Young-age elderly (50%) have a better quality of life than middle or old-age elderly. Subjects with better education (8,75%) had a better quality of life than subjects who had lower education. Regarding marital status, 37,5% of the subjects reported having a high quality of life for married women. Women with more than 2 parities (8,75%) had a better quality of life than less than 1 parity. More than half of the subjects (52,5%) who had done vaginal delivery had a better quality of life.

**Table 1. Distribution of Respondents Based on Demographic and Gynecological Characteristics**

| Characteristic | Number | (%) |
|---|---|---|
| Age | | |
| - Young-age elderly | 56 | 70.0 |
| - Middle-age elderly | 20 | 25.0 |
| - Old-age elderly | 4 | 5.0 |
| Last education | | |
| - Not go to school | 2 | 2.5 |
| - Primary education | 38 | 47.5 |
| - Junior high education | 15 | 18.8 |
| - Senior high education | 19 | 23.8 |
| - D1/D2/D3 | 3 | 3.8 |
| - D4/S1 | 3 | 3.8 |
| - S2/Professional | 0 | 0 |
| - S3 | 0 | 0 |
| Marital status | | |
| - Not married | 9 | 11.3 |
| - Married | 46 | 57.5 |
| - Divorced | 25 | 31.3 |
| BMI | | |
| - Severe underweight | 4 | 5.0 |
| - Underweight | 5 | 6.3 |
| - Normal | 43 | 53.8 |
| - Overweight | 14 | 17.5 |
| - Obesity | 13 | 17.5 |
| Parity | | |
| - Nulliparity | 11 | 13.8 |
| - 1 parity | 4 | 5.0 |
| - ≥ 2 parities | 65 | 81.3 |
| Delivery History | | |
| - Pervaginam | 60 | 75.0 |
| - Caesarean Section | 3 | 3.8 |
| - Both (≥ 2 parity) | 6 | 7.5 |
| - Never delivery | 11 | 13.8 |

**Table 2. Distribution of Respondents Based on Quality of life**

| Quality of life | Number | (%) |
|---|---|---|
| High | 7 | 8.8 |
| Moderate | 53 | 66.3 |
| Low | 20 | 25.0 |

**Table 3. Distribution of Respondents Based on Quality Of Life Domain**

| Quality of life Domain | Quality of life | | | | | |
|---|---|---|---|---|---|---|
| | High | | Moderate | | Low | |
| | n | % | n | % | n | % |
| Physical Health | 8 | 10 | 37 | 46.3 | 35 | 43.8 |
| Physicology | 18 | 22.5 | 50 | 62.5 | 12 | 15 |
| Social Relation | 4 | 5 | 51 | 63.7 | 25 | 31.3 |
| Environment | 17 | 21.3 | 50 | 62.5 | 13 | 16.3 |

**Table 4. Distribution of Respondents Characteristics and Quality of Life**

| Characteristic \ Quality of Life | High | | Moderate | | Low | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| **Age** | | | | | | |
| - Young-age | 7 | 8,75 | 40 | 50 | 9 | 11,25 |
| - Middle-age | 0 | 0 | 12 | 15 | 8 | 10 |
| - Older age | 0 | 0 | 1 | 1,25 | 3 | 3,75 |
| **Last Education** | | | | | | |
| - Not go to school | 1 | 1,25 | 1 | 1,25 | 0 | 0 |
| - Primary education | 3 | 3,75 | 22 | 27,5 | 13 | 16,25 |
| - Junior high education | 0 | 0 | 12 | 15 | 3 | 3,75 |
| - Senior high education | 2 | 2,5 | 13 | 16,25 | 4 | 5 |
| - D1/D2/D3 | 0 | 0 | 3 | 3,75 | 0 | 0 |
| - D4/S1 | 1 | 1,25 | 2 | 1,25 | 0 | 0 |
| - S2/Professional | 0 | 0 | 0 | 0 | 0 | 0 |
| - S3 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Marital** | | | | | | |
| - Not married | 0 | 0 | 5 | 6,25 | 4 | 5 |
| - Married | 7 | 8,75 | 30 | 37,5 | 9 | 11,25 |
| - Divorced | 0 | 0 | 18 | 22,5 | 7 | 8,75 |
| **BMI** | | | | | | |
| - Severe underweight | 0 | 0 | 2 | 2,5 | 2 | 2,5 |
| - Underweight | 0 | 0 | 4 | 5 | 1 | 1,25 |
| - Normal | 5 | 6,25 | 24 | 30 | 14 | 17,5 |
| - Overweight | 1 | 1,25 | 10 | 12,5 | 3 | 3,75 |
| - Obesity | 1 | 1,25 | 13 | 16,25 | 0 | 0 |
| **Parity History** | | | | | | |
| - Nulliparity | 0 | 0 | 6 | 7,5 | 5 | 6,25 |
| - 1 parity | 0 | 0 | 4 | 5 | 0 | 0 |
| - ≥ 2 parities | 7 | 8,75 | 43 | 53,75 | 15 | 18,75 |
| **Delivery History** | | | | | | |
| - Pervaginam | 5 | 6,25 | 42 | 52,5 | 13 | 16,25 |
| - Caesarean Section | 0 | 0 | 3 | 3,75 | 0 | 0 |
| - Both (≥ 2 parity) | 2 | 2,5 | 2 | 2,5 | 2 | 2,5 |
| - Never delivery | 0 | 0 | 6 | 7,5 | 5 | 6,25 |

## 4. Discussion

### Frequency Distribution of Respondents Based on Demographic and Gynecological Characteristics

Elderly ages are divided into three groups based on Statistic Indonesian Statistic, which are young elderly (60-69 years), middle elderly (70-79 years) and old elderly (≥80 years).[1] Most of the respondents in this study were young elderly (age 60- 69 years) (70%). This is in line with research by Asmaa, et al (2021) in a group of elderly women who experienced stress urinary incontinence, 40% in the 60-64 year age group and 44% in the 65-69 year age group.[15] The research has done by Mohammed, et al (2021 ) also found elderly women with stress urinary incontinence aged 60-65 years (40%) and 65-70 years (44%).[16] However, different results were found in the study of Fouad, et al (2017) showing more urinary incontinence found in elderly women aged more than 75 years (52%).[17] During the aging process changes in bladder muscle tone and capacity, hormonal changes associated with menopause, and the presence of comorbid chronic diseases are factors that can increase the incidence of stress urinary incontinence in the elderly.[16]

Respondents in this study had a history of lower education history, which is Elementary School (47.5%). This is in line with research conducted by Binbin, et al (2016) in elderly women who experienced urinary incontinence of the stress type, most of whom were elementary school graduates (45.2%).[18] Similar research by Demir and Erbesler (2017) found that the majority had elementary school education and were able to read (47.8%).[19] However, this is not in line with research by Zhang, et al (2020) found that elderly women with urinary incontinence had the last level of education, namely secondary education (59.1%).[20] Low education level causes low knowledge and concern about health conditions in the management of urinary incontinence in the elderly.[18] Elderly women with higher levels of education are considered to have a lifestyle and perceptions of better hygiene and are more likely to seek solutions to their condition than those with higher levels of education low.[19]

The majority of respondents in this study were married (57.5%). This is in line with research

conducted by Asmaa, et al (2021) found that the majority of elderly women with urinary incontinence were married (46%). Research by Rasha, et al (2020) reported that the severity of urinary incontinence of stress urinary incontinence was higher in married women than in divorced or widowed women.[21] However, the results of this study were not in line with research by Rokaia, et al (2021) showed that the majority are widows (52%).[15,16] Married women report more stress-type urinary incontinence than divorced or widowed women. It can be due to the role of partner awareness to encourage examination or treatment at health services for their condition.[21,22]

Urinary incontinence is more common in someone with a BMI more than normal, overweight, and waist circumference. Weight gain can exacerbate or cause pelvic floor disorders with increased intra-abdominal pressure and continuous pressure on the ligaments and nerves, resulting in overstretching. Yet, normal body weight was found most widely in this study (53.8%). In a study by Chen Xu et al., most elderly women who experienced stress urinary incontinence were found to have normal BMI (71.1%).[23] Also, Tendean found postmenopausal women who experienced urinary incontinence reported that the majority had a normal body mass index (57.3%).[24] Previous studies showed that the BMI of overweight and normoweight women was three times a risk factor for the incidence of urinary incontinence compared to underweight women. Other factors can increase urinary incontinence, such as pelvic organ prolapse, atrophic vaginitis, menopause, constipation, and other factors that cause increased intra-abdominal pressure (35.27%).[23,25]

Parity also believes as a factor influencing the incidence of urinary incontinence, causing excessive bladder activity, poor bladder control, and pelvic floor muscle disorders.[26] A Study by Asmaa et al. showed that 92% of elderly women with stress urinary incontinence had a history of more than two parities.[15] In this research also found most subjects had more than two parities (81.3%). In line with research by Zhou et al., women with urinary incontinence with parity ≥ 2 have a risk of urinary incontinence, and each increase in parity will increase the OR of urinary incontinence by 12%. Nevertheless, in stress urinary incontinence, women with parity ≥ 1 have an increased risk of stress urinary incontinence.[26] In a study by Zhang et al., elderly women with stress urinary incontinence had a history of parities 0-2 children (76, 7%) and ≥ 3 children (23.3%), are not in line with this study due to differences in the characteristics of the population studied.[20]

Method of delivery is a potentially modifiable risk factor for urinary incontinence. The abdominal or cesarean delivery method is believed to provide protection against risk factors for pelvic floor trauma. Otherwise, the vaginal delivery method can increase the risk of trauma. In this study, the most common delivery method found was vaginal delivery (75%). This is similar to a study by Ajith et al. in which postmenopausal women who experienced stress urinary incontinence were found to have a history of vaginal delivery.[27] Also, research by Muñiz et al. in women with an average age of 69 years experienced stress urinary incontinence with a history of vaginal delivery (96.3%).[28] The vaginal delivery method can significantly impact the pelvic floor, weaken the bladder neck, which supports muscles, and interfere with surrounding innervation. A meta-analysis and cross-sectional study found that vaginal delivery almost doubled the risk of long-term pressure urinary incontinence, an absolute increase of about 8% in moderate or severe pressure urinary incontinence when comparing vaginal and abdominal deliveries.[29,30]

**Frequency Distribution of Respondents Based on Quality of Life**

One-third of elderly women with urinary incontinence do not report their condition for several reasons. This is because of an aging process, an embarrassment to consult, especially if a vaginal examination is required, and some women consider stress urinary incontinence not to affect their lives.[22] Although stress urinary incontinence is not a life-threatening problem, it can interfere with a woman's quality of life. These conditions can reduce physical abilities and social restrictions with loss of self-confidence, feelings of helplessness, and depression due to continuous wet pants and irritation.[21] The quality of life in this study found the majority of respondents have a moderate quality of life (66,3%). This is in line with research by Rasha et al. and Mahcube, elderly women with stress urinary incontinence had a moderate quality of life. [21,31] In the Almutairi study (2021) in Saudi Arabia, 47.8% of women with urinary incontinence refused to seek help for their condition due to the embarrassment of consulting a doctor (15.3%).[32] Women with stress urinary incontinence can modify their lifestyle by avoiding heavy lifting objects and/or strenuous exercise, thereby preventing actions that can cause involuntary leakage of urine.[12]

**Frequency Distribution of Respondents Based on Quality of Life Domain**

Quality of life is a multidimensional health concept representing subjective symptoms, especially those affecting a sense of well-being and daily functioning.[21] The results of this study

indicate that all domains of quality of life have a moderate impact on the incidence of stress urinary incontinence, such as physical health (46.3%), psychological (62.5%), social relationship (63.7%), and environment (62.5%). Research by Sawaqed et al. found that women with stress urinary incontinence had an impact on several aspects of quality of life, such as praying (31.2%), the ability to do household chores (23.4%), recreational activities (22%), social activities (24.4%), ability to travel by vehicle (20.6%), anxiety (28%) and frustration (22.4%).[33] Research conducted by Demir et al. urinary incontinence has a negative impact, especially in the psychosocial domain.[19] About 50% of women with stress urinary incontinence experience symptom of anxiety, and 17.5% have symptom of moderate to severe anxiety. The environmental domain of quality of life includes the availability of infrastructure and financial adequacy; poor economic and social conditions impact low access to health services to find out about urinary incontinence and other health problems.[33]

**Cross tabulation of Characteristics and Quality of Life**

In this study, it was found that young elderly have a moderate quality of life (50%). Primary school education with the highest quality of life being moderate (27.5%) and low (16.25%) compared to respondents with more than junior high school education having a low quality of life (8.75%). Respondents with married status had moderate (37.5%) and high (16.25%) quality of life, while there were no unmarried and divorced/widowed respondents who had a high quality of life. The elderly with normal BMI have moderate (30%) and high (6.25%) quality of life more than those with more than normal BMI (2.5%) who have a high quality of life. The majority of elderly with a history of ≥ 2 parity has a moderate quality of life (53.75%). Elderly woman with vaginal delivery has a moderate quality of life (52.5%).

In a study by Fouad, et al (2017) it was reported that the value of quality of life was higher in young elderly women (60 to 75 years).[17] Study by Juanita, et al (2022) also found young elderly (60-69 years) (60.1 %) have a higher quality of life compared to the middle-aged/very old elderly (> 70 years) who have a lower quality of life (57.7%), which is most likely related to chronic diseases suffered by the elderly.[34] Also, research by Elbana, et al (2018) reported postmenopausal women with urinary incontinence who were married had a better quality of life than those who were not married/widowed.[35] Elderly women without partners tended to have negative coping mechanisms, like avoidance and self-isolation.[18] Research by Elbana, et al (2018) also found a history of high school education has a higher quality of life because of their ability to read and find out about urinary incontinence.[35] Concerning the level of education of the subjects studied, those with a university education had a better quality of life than the other groups. This finding is related to the fact that education is an important factor in improving the health and well-being of individuals. A higher level of education has a positive impact on all aspects of a person's life. In a study by Fouad, et al (2017), it was also found that elderly women with urinary incontinence who had a university education had a better quality of life than other groups.[17] This finding was linked to that education is an important factor in improving individual health and well-being. A higher level of education has a positive impact on all aspects of a person's life. In a study by Nygaard, et al (2018) it was found that more than half of women with urinary incontinence were obese (53.4%), which had a negative impact on quality of life compared to the normal group.[36] Obesity can have adverse health effects, namely increased morbidity of sufferers. Then, a study by Demir, et al (2017) reported no statistical effect of parity in elderly women with urinary incontinence on quality of life.[19] Research by Pukeline, et al (2018) also reported that elderly women with urinary incontinence did not find statistically the impact of parity and method of delivery on quality of life.[37] There have been no previous research reports regarding the impact of the number of parities and methods of delivery on the quality of life in the elderly who experience urinary incontinence, presumably due to parity and childbirth that occurred more than a decade ago.

## 5. Conclusion

Based on the results of a study on elderly women with stress urinary incontinence at the Elderly Posyandu Dempo Health Center, it can be concluded that most respondents are from young age of elderly group, lower education background, married, normal BMI, parity ≥ 2, and history of vaginal delivery. Quality of life found most of them have a moderate quality of life as the impact of their urinary incontinence condition.

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