Relationship between Cognitive Ability and Storytelling in Posyandu Lansia Sejahtera Mojosongo Surakarta

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Abstract

Storytelling is a form of spoken language used to convey information or experiences experienced by the communicator to others. Storytelling activities call on cognitive functions such as the ability to think, absorb, capture, and concentrate. Declining cognitive functions certainly have a major impact on older people's ability to think, remember, learn, and use language. This study aims to determine whether there is a relationship between cognitive ability and the ability to tell stories in the elderly. The research design used was cross-sectional. The respondents in this study were 38 people aged 60, and the collection technique used was purposive sampling. The data analysis used was the contingency coefficient test. The results of this study showed a significant value of 0.003 ($p<0.05$), meaning that there is a relationship between cognitive ability and storytelling ability in the elderly.

Keywords: Cognitive Ability, Elderly, Storytelling

1. Introduction

People 60 years of age or older are considered elderly.[1] Elderly people go through several growth and development processes as human beings, including aging.[2] However, aging is more than simply physical; older people's bodies undergo changes in some systems, making them more susceptible to illnesses and other health issues. One of the changes in the aged is related to the neurological system, which affects diminished cognitive performance.[3] As people age, the percentage of cognitive decline rises.

The ability to think, remember, learn, and use language is influenced by cognitive function.[4] Cognitive decline undoubtedly has a significant impact on older adults' ability to think, remember, learn, and use language. Furthermore, language has a crucial role in all daily activities since it is a communication tool that allows people to exchange ideas, sentiments, and messages.

Spoken language and written language are separated by the media or means. Syahputra et al. assert that the two languages are distinct.[5] Written language is a language created by writing or in the form of written materials like books, periodicals, newspapers, and the like. Spoken language is a type of communication that uses words that are uttered together using the oral organ and is used in direct conversation. A spoken language technique called storytelling is used to share knowledge or experiences that the communicator has had with others. Storytelling is a function of language that facilitates interpersonal communication. According to research by Julianto, older adults who can tell stories are happier because they can communicate their emotions.[6]

In addition to the description given above, the growing number of older persons in recent years is another factor that motivates this study. WHO states that the world's old population is growing quickly, especially in emerging nations.[7] One billion people were considered elderly in 2019, and that number is predicted to rise to 1.4 billion in 2030, or perhaps 2.1 billion in 2050. In the upcoming years, this increase will pick up

speed. The number of senior persons in Indonesia increased to 18,015 in 2010, accounting for 7.6% of the country's total population, according to the population census data.[8]

Six provinces in Indonesia have the highest percentage of elderly people, according to the results of a population census conducted by the Central Statistics Agency in March 2020. These provinces are Yogyakarta Special Region (14.71%), Central Java (81%), East Java (13.38%), Bali (11.58%), North Sulawesi (11.51%), and West Sumatra (10.07%) (Bagou et al., 2023). According to Esprensa et al, there are 54,564 senior persons in the Surakarta city region, which makes up 10.6% of the city's total population in the Central Javan province.[2]

The rationale provided above encourages researchers to investigate the connection between older adults' cognitive ability and storytelling skills. At Posyandu Lansia Sejahtera Mojosongo in Surakarta, this study was carried out. As per the data collected, between 60 and 70 senior citizens participated in the events held by Posyandu Lansia Sejahtera Mojosongo Surakarta. The researcher will investigate the connection between the senior residents of Posyandu Lansia Sejahtera Mojosongo Surakarta's cognitive ability and narrative skills based on this description.

2.   Methods

A cross-sectional study using a correlational design is the result of this kind of research. The study's sample comprised 38 elderly residents of Posyandu Sejahtera Mojosongo who were 60 years of age or older. Purposive sampling was the method employed in this investigation. The Cognitive and Linguistic Assessment Test and the Test of Aphasia for Diagnosis of Rehabilitation Information (TADIR) in the narrative portion served as the study's tools.

3.   Results

Table 1 shows that 13 (34.2%) of the respondents were male and 25 (65.8%) were female. Data on the cognitive abilities of the elderly were obtained from the results of cognitive language assessment tests carried out on 38 elderly people at Posyandu Lansia Sejahtera Mojosongo. Based on the results in Table 2, the frequency distribution of respondents' cognitive abilities yielded a frequency of 21 (55.3%) seniors with above-average cognitive abilities and 17 (44.7%) seniors with below-average cognitive abilities.

Table 1. Frequency distribution of respondents by gender

Gender	Frequency	Percentage
Male	13	34,2%
Female	25	65,8%

Table 2. Frequency distribution of cognitive ability

Cognitive ability	Frequency	Percentage
Above average	21	55,3%
Below average	17	44,7%

Data on the cognitive abilities of the elderly were obtained from the results of the TADIR Sub Storytelling survey of 38 elderly people in Posyandu Lansia Sejahtera Mojosongo. According to the results in Table 3, the frequency distribution of storytelling ability showed that the elderly with fluent storytelling ability 20 (52.6%) and the elderly with nonfluent ability 18 (47.4%).

Table 3. Frequency distribution of storytelling skills

Storytelling skills	Frequency	Percentage
Fluent	20	52,6%
Nonfluent	18	47,4%

According to the statistical test of the contingency coefficient in Table 4, used to analyze the relationship between cognitive ability and storytelling ability in the posyandu of prosperous elderly people in Mojosongo

Surakarta, the results of the contingency coefficient (r) are 0.644, meaning that the two variables have a high level of correlation. The significance value (p) is 0.000 and then the p-value <0.05, meaning that there is a significant correlation or relationship between cognitive ability with storytelling ability among the elderly in the prosperous elderly posyandu Mojosongo Surakarta.

Table 4. Contingency Coefficient Statistical Test Results

Variable		Storytelling skills		Total	r	p-value
		Nonfluent	Fluent			
Cognitive ability	Below average	16	1	17	0,644	0,000
	Above average	2	19	21		
Total		18	20	38		

4. Discussion

According to the findings, out of the 38 participants in the study, 21 (55.3%) possessed cognitive abilities that were above average, while the remaining 17 (44.7%) had cognitive abilities that were below average. These findings are consistent with studies conducted by Syafitri & Purnaningrum, which demonstrated that cognitive abilities naturally deteriorate with aging. Some specialists, however, contend that not all older individuals suffer from severe cognitive deterioration. Family history, brain injury, pollutants, sedentary lifestyles, and chronic illnesses like diabetes, heart disease, stroke, and Parkinson's disease are some of the risk factors that contribute to this cognitive decline.[9] This indicates that Mojosongo Surakarta Prosperous Elderly Posyandu's senior citizens have above-average cognitive ability.

A person's gender, medical history, and level of schooling can all affect their cognitive abilities. This supports the idea that gender influences cognitive function in older adults as well.[10] Because post-menopausal women have lower levels of the hormone estrogen, they are more likely than males to experience cognitive impairment. The research findings of Toreh et al., which show a correlation between cognitive ability and education level, illness history, and physical activity, further support these characteristics.[11]

There are two types of outcomes from the study that used the Test of Aphasia for Diagnosis of Rehabilitation Information (TADIR) on the sub-tale of 38 respondents: fluent and non-fluent. There were 18 respondents (47.4%) in the category of non-fluent narrative ability and 20 respondents (52.6%) in the category of fluent storytelling ability. This demonstrates that 47.6% of the 38 senior citizens have diminished storytelling skills. These results are consistent with studies by Syafitri and Purnaningrum, which indicate that cognitive abilities in older adults deteriorate in a typical way as they age. One of a person's four cognitive abilities is language. Fluency, comprehension, repetition, and naming are all components of language function. A range of spoken language skills, including fluency, comprehension, repetition, and naming, are needed when telling stories.[9]

The findings of the investigation on the connection between narrative skill and cognitive ability in senior citizens from Posyandu Sejahtera Mojosongo, Surakarta, indicated that the two are related. The contingency coefficient test was used to evaluate the data. The link between the variables in the nominal scale is ascertained and computed using this test. After processing all of the data from the 38 participants in the study, the significance value (p) was 0.000 and p <0.05, indicating that Ha is accepted and that there is a correlation or association between the two variables under investigation. The contingency coefficient test result (r) is 0.644, indicating a strong link between narrative ability and cognitive capacity.

According to the study's findings, older people's narrative skills improve with increasing cognitive ability. Numerous factors, such as education, medical history, and everyday activities or hobbies that improve cognitive function, influence this. Compared to elderly people who lack cognitive abilities, those who have a background of education or positive activities have superior cognitive abilities. This is consistent with studies on these elements and is further supported by findings from Toreh et al, who found a correlation between cognitive capacities and physical activity, education level, and illness history.[11]

Elderly people's quality of life is negatively impacted by declining cognitive ability since cognitive function affects day-to-day living. In older adults, cognitive performance has a significant impact on independence, quality of life, and functional competence.[12] According to Syafitri & Purnaningrum, cognitive decline in the elderly has an impact on several areas, including language. As the primary means of communication in daily life, language plays a significant role.[9] According to Damayanti et al, language itself is one of the cognitive processes that refers to an individual's capacity for fluency, comprehension, repetition, and naming.[13] According to this argument, a person's linguistic skills are influenced by their cognitive capacities.[14] This is consistent with the findings of a study by Winskel et al, that indicates a strong relationship between language and cognitive capacity. Stronger cognitive skills translate into stronger language. One spoken language type that people use to communicate ideas or experiences to others is storytelling.[15,16]

5. Conclusion

The relationship between cognitive ability and storytelling ability is thus revealed in this study, which shows that older adults who speak a number of languages have stronger storytelling abilities the more cognitively capable they are. Numerous factors, including medical history, educational background, and level of physical exercise, influence this.

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