

## ORIGINAL ARTICLE

# What Family Determinants Are Associated With the Duration of Hallucinatory Disorders in the City of Surabaya, East Java, Indonesia?

Andrei Ramani<sup>1</sup>, Jayanti Dian Eka Sari<sup>2</sup>, Riris Diana Rachmayanti<sup>3</sup>, Aninditya Ardhana Riswari<sup>3</sup>, Diansanto Prayoga<sup>2,4</sup>, Syifa'ul Lailiyah<sup>2</sup>

<sup>1</sup> Faculty of Public Health, Jember University, 68121 Jember East Java Indonesia.

<sup>2</sup> Public Health Study Program, Faculty of Health, Medicine, and Life Sciences (FIKKIA), Universitas Airlangga, 60015 Surabaya East Java, Indonesia.

<sup>3</sup> Division of Health Promotion and Behavioral Sciences, Faculty of Public Health, Universitas Airlangga, 60015 Surabaya East Java, Indonesia.

<sup>4</sup> Doctoral Student of the Public Health Doctoral Study Program, Faculty of Public Health, Universitas Airlangga, 60015 Surabaya East Java, Indonesia.

## ABSTRACT

**Introduction:** The prevalence of patients with mental disorders in Indonesia in 2013 was 1.7 per mile and there was an increase in the number to 7 per mile in 2018. Based on East Java health profile data in 2021 the number of ODGJ (People With Mental Disorders) with serious disorders was 72,041 and the highest number was the city of Surabaya with the number 5,546 cases. **Materials and methods:** This research uses descriptive analytics. The sample was 104 families of patients with hallucinations in Surabaya. Data analysis used bivariate analysis using the independent sample t-test, Pearson correlation test and one-way ANOVA test. **Results:** Significance was found in different durations of hallucinatory disorders based on age group (sig 0.0001), mostly sufferers aged 18-25 years have a shorter period of hallucinatory disorders than sufferers aged 26 years and over; there is a difference in the duration of hallucinatory disorders between those treated by parents and family (sig 0.001) and between those treated by siblings and others (sig 0.014); There is a significant difference in the length of time people suffer from hallucinatory disorders based on the age of the patient's companion, 18-25 years and 26-49 years (sig 0.046) and the age of the patient's companion 18-25 years and 50 years and above (sig 0.012). **Conclusion:** This study aims to analyses the determinants that determine the duration of hallucinations in patients with mental health disorders in Surabaya City. Determinants that influence the length of time a patient has hallucinations include age, the sufferer's companion, and the companion's age. More optimal family functioning can reduce the amount of time of patient experiences hallucinations.

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## Corresponding Author:

Jayanti Dian Eka Sari, S.KM., M.Kes.

Email: jayantidian@fkm.unair.ac.id

Tel : +62-812-3467-558

## INTRODUCTION

The World Health Organization states that mental health is when a person is in good health and can feel happiness and is able to face life's challenges, has a positive attitude towards himself and others and can accept other people (1). Mental health is the condition in which an individual develops mentally, spiritually, physically, and socially so that he is aware of his own abilities, able to overcome the pressure, work productively and contribute to his community, but if the condition of the individual's development is not appropriate it is called a mental disorder (2).

1 hour ago mental health cases are increasing. The prevalence of patients with mental disorders in Indonesia in 2013 and 2018 was 1.7 per mile and 7 per mile respectively (3). Based on those data, there were increasing patients with mental disorders. The prevalence of people with mental disorders in Indonesia reaches 15.3% of Indonesia's 259.9 million population. Based on data from 33 Mental Hospitals (RSJ) throughout Indonesia, it is stated that around 2.5 million people suffer from serious mental disorders (3). In 2019 the number of shackles against ODGJ (People with Mental Disorders) reached 4,989 people. In 2021, the number of ODGJ will reach 2,332 people. In 2020 it reached 6,452 people. This figure is the highest in the last four years. In 2022, the practice of shackling ODGJ will still be carried out by the Indonesian people, as many as 4,304 ODGJ. In 2023 the total number of ODGJ in Indonesia has reached 500 thousand people (4).

Hallucinations can present in a wide variety of psychiatric disorders (such as psychosis, major depression, anxiety, and borderline personality disorder) and medical conditions (tinnitus, tumors, kidney failure, and urinary tract infections). Early examination of hallucinations can provide better treatment for people with mental disorders. The family is assumed to be the closest person to ODGJ, has a very important role in early examination (5).

However, on the other hand, there is family awareness to carry out treatment or seek mental health care in hospitals. One of the special referral hospitals for ODGJ is the Menur Hospital, East Java, located in Surabaya. Including Surabaya residents who experience mental disorders, hallucinations and other disorders will receive treatment at this hospital. Based on East Java health profile data in 2021, the number of ODGJ with serious disorders was 72,041. The prevalence rate for mental disorders in East Java is number 12 in Indonesia. Mental disorders are divided into 2 parts, namely serious mental disorders and people with mental problems (OMK). According to Riskesdas in 2018, it was stated that the estimated number of serious mental disorders in East Java reached 0.19% of the total population of East Java 39,872,395 (6). The limited number of beds in two mental hospitals in East Java, namely RSJ Malang and RSJ Menur, which can only accommodate 1000 beds, of course has an impact on the provision of services at the community health center level as facilities providing mental health services. The highest number is the city of Surabaya with 5,546. In 2022 the number of outpatients with hallucinatory disorders will be approximately 6,000 patients. Mental disorders are often caused by problems in the family such as parental migration, relationship gaps with the family, financial problems, communication failures, family conflict, and domestic violence (7,8).

The family is the smallest unit in society where interaction occurs between children and their parents. Family comes from the Sanskrit *kulu* and *warga* or *kuluwarga*, which means members of a group of relatives (9). A family contains two or more people who are connected by blood, marriage and adoption, live in one family, interact with each other, and create and maintain culture in their respective roles (9). Good family function will speed up the patient's recovery and healing rate. the importance of the role, function of the family and family intervention in the comprehensive care of psychiatric patients (10). This study analyzes the determinants that determine the duration of hallucinations in patients with mental disorders in Surabaya City.

## MATERIALS AND METHODS

This research is quantitative research with descriptive

analytics. The research population was patients with hallucinations who were outpatients at Menur Mental Hospital, East Java. The research sample was 104 patients with hallucinations who were undergoing outpatient treatment. The research was carried out in January-September 2022. The research location was carried out at Menur Hospital, Surabaya City. The dependent variable is the duration of the hallucination while the independent variables are the age of the sufferer, the gender of the sufferer, the function score of the family caring for the sufferer, the age of the family caring for the sufferer, family status, and the basic function score of the family of the patient suffering from hallucinations (12 basic family function question items from the McMaster questionnaire Family Functioning Scale)(11). Calculation of the family function score by adding up the 12 question items. Descriptive analysis of text and graphics, bivariate analysis using independent samples t test, Pearson correlation test, and One Way Anova test. Significance value  $P < 0.05$ . This research has received ethical clearance from the ethics commission of Menur Mental Hospital, East Java Province with number 070/4102/104.8/2022.

## RESULTS

### Respondent Characteristics

#### Descriptive

The duration of hallucinatory disorders is in the range of 1-9 years with an average duration of disorders of 5.28 years. Based on gender, it is known that hallucinations occur more often in male sufferers (53.8%) than in women (46.2%). Previous studies have investigated sex differences in the prevalence of AVH (Auditory Verbal Hallucinations) among adolescents; nevertheless, the results are contradictory. A study suggests that developed psychotic disorders in men are at higher risk than women (12). Kelleher et.al., (2012) reported that psychotic symptoms (which were not specified) were usually more common in middle adolescent boys than in girls (13,14).

#### Age

Classification of the human age group in this research can be divided into four groups: children (6-11 years old), teens (12-25 years old), adults (26-45 years old) and older adults (46-65 years old) (15). Based on age, the majority of people with hallucinatory disorders are aged over 26 years (66.4%) compared to those aged 25 years and under (33.7%). According to research in the journal *Epidemiological Studies of Schizophrenia*, symptoms of schizophrenia frequently appeared in young adulthood or late adolescence (16). Onset in men and women are different. Symptoms in men are usually between 15-25 years and in women between 25-35 years. This proves that teenagers or young adults are very vulnerable to experiencing schizophrenia mental disorders, if they are

not balanced with good coping mechanisms.

### Based on place

Research shows that there are 3 major regions with the most hallucinatory disorders, namely: North Surabaya (26.9%), East Surabaya (23.1%), and Central Surabaya (21.2%). The North Surabaya region is a coastal area where most of the population comes from Surabaya and the Madurese tribe, while the East Surabaya region is an industrial area and there are many immigrants from outside the city of Surabaya (17). The most sufferers from hallucinatory disorders were in North Surabaya (28 respondents), the least in West Surabaya (13 respondents). North Surabaya also has the largest age gap for sufferers of hallucinatory disorders, namely 35 years, while East Surabaya has the smallest age gap for sufferers of hallucinatory disorders, namely 22 years. The youngest sufferer from hallucinatory disorders comes from South Surabaya and the oldest sufferer from hallucinatory disorders comes from North Surabaya. South Surabaya has the youngest average age for hallucinatory disorders (27.41 years), while Central Surabaya has the oldest average age (30.77 years).

Population density in Surabaya municipality in 2023 reached 8,958 people/km<sup>2</sup>. The highest population density is located in Simokerto District, Center Surabaya. that is 35,511 people/km<sup>2</sup> and the lowest density in Benowo District is 2,752 West Surabaya (18).

### Patient companion

Companions with hallucinatory disorder were mostly accompanied by parents and siblings or nuclear family (78.8%) and accompanied by other people (21.2%). The family has an important role in efforts to cure hallucinatory patients. Based on previous research, it is known that there are 3 levels of the family's role in reducing signs of hallucinatory symptoms in schizophrenic patients. Firstly, the families must be able to concern and care about maintaining parental closeness and the patient's needs. Secondly, families must be able to be involved in groups that provide support and provide financial support for patient care. Lastly, families must develop relationships properly to concern hallucinatory patients to change their behaviour and attitudes (19).

### Patient companion status

Companions with hallucinatory disorders were mostly accompanied by married couples (72.1%) and others are accompanied by unmarried or widowed persons. The status of a married companion is allegedly able to play an important role in monitoring and shaping health-related behavior.

### Family functioning scores

Family function is in the score range 15 – 34 with an average score of 26.56. A scatter plot depiction of family function and the duration of hallucinatory disorders experienced by the patient can be seen in Figure 1.

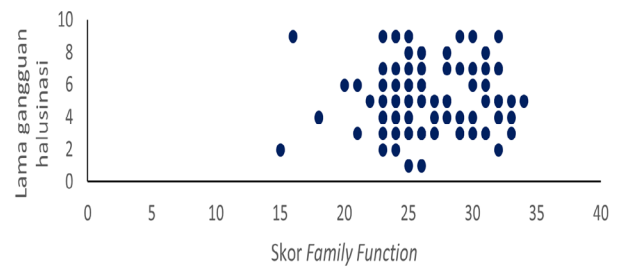


Figure 1: Family function score VS Time suffering from hallucinatory disorders.

### Differences in the age of the respondent (family) and the duration of patient's hallucinatory disorders

In this study, the age range for hallucinatory disorder sufferers was divided into 2 age categories, namely 18-25 years and 26 years and over. Based on the statistical analysis carried out, it is known that there is a significant difference in the duration of hallucinatory disorders based on age group (sig 0.0001). A boxplot of the age of the respondent (family) with the duration of the patient's hallucinatory disorder can be seen in Figure 2.

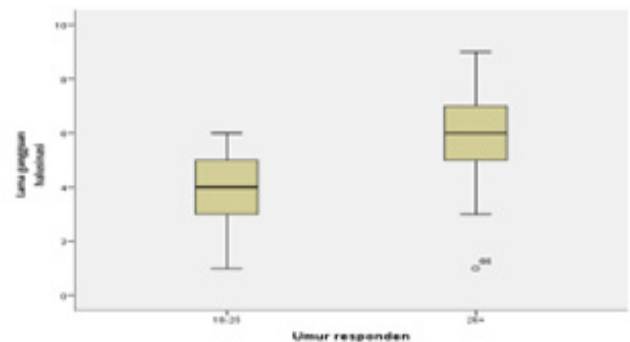


Figure 2: Boxplot image of the age of the respondent (family) with the duration of the patient's hallucinatory disorder.

### Differences in the relationship between respondents (families) and the duration of the patient's hallucinatory disorder

Research shows that there is no difference in the duration of hallucinatory disorders based on the gender of the sufferer (sig 0.744). There is a difference in the duration of hallucinatory disorders between those treated by parents and family (sig 0.001) and between those treated by relatives and other people (sig 0.014). A boxplot of the relationship between the respondent (family) and the duration of the patient's hallucinatory disorder can be seen in Figure 3.



Figure 3: Boxplot image of the relationship between the respondent (family) and the duration of the patient's hallucinatory disorder.

### Differences in the time period of suffering from hallucinatory disorders based on the age of the companion

There is a significant difference in the length of time people suffer from hallucinatory disorders based on the age of the patient's companion, 18-25 years and 26-49 years (sig 0.046) and the age of the patient's companion 18-25 years and 50 years and above (sig 0.012). You can see a boxplot of the age of the respondent (family) with the duration of the patient's hallucinatory disorder in Figure 4.

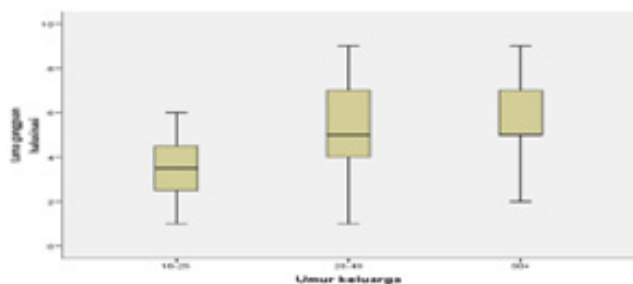


Figure 4: Boxplot image of the age of the respondent (family) with the duration of the patient's hallucinatory disorder.

### DISCUSSION

Based on the data collected, it is known that there is only 1 patient who is over 50 years old, so for statistical analysis purposes, the age group for hallucinatory disorder sufferers was grouped into 18-25 years old and 26 years and over. There is a significant difference in the duration of hallucinatory disorders based on age group (sig 0.0001), sufferers aged 18-25 years have a longer period of hallucinatory disorders than those aged 26 years and over. These results are supported by similar research which states that there is a relationship between the duration of patient hallucinations and the younger age category, which is dominated by male patients. This incident was influenced by the patient's emotional instability and chopping mechanism at that age (20).

There was no difference in the duration of hallucinatory disorders based on the gender of the sufferer (sig 0.744). Patients who are cared for by relatives (brother/sister) have a longer duration of hallucinatory disorders. There is a difference in the duration of hallucinatory disorders between those treated by parents and family (sig 0.001) and between those treated by relatives and others (sig 0.014). The results of this study are supported by previous research which states that the relationship between the caregiver and the hallucinating patient greatly influences the duration of recovery. This is closely related to Asian culture which prioritizes parents as caregivers before other family members (21).

Family support is an important component in the treatment

process of patients with hallucinatory disorders. Family support is related to the way hallucination disorder patients are treated by their caregivers. On the other hand, the way of care is also a form of family burden that is subjective and subjective (22). This is in accordance with the results of a study which states that the main family companion for people with schizophrenia in inpatient psychiatric rehabilitation facilities has a mild to moderate caregiving burden and poor HRQoL (23).

There tends to be a lot of societal stigma towards people with hallucinatory disorders and their families. Research shows that although families are often stigmatized, acceptance within the family remains good. This can certainly be explained by the fact that families consider caring for sick relatives as part of their family responsibilities (24). Collaboration between family support and the use of health services is one of the important keys in efforts to cure people with hallucinatory disorders (25);(26). Psychosocial support, volunteerism and love are one form of such collaboration.

There is a significant difference between the length of time a sufferer experiences hallucinatory disorders based on the age of the patient's companion. Research shows that the older the patient's companion, the faster the patient's recovery period. This is because, psychologically, people who are quite mature have a more well-planned mindset and actions.

There is no significant difference in the length of time people suffer from hallucinatory disorders based on the status of the sufferer's companion (sig 0.208). There is a positive relationship between family function scores and the duration of hallucinatory disorders ( $r=0.754$  sig=0.031).

### CONCLUSION

Determinants that influence the length of time a patient has hallucinations include age, the sufferer's companion and the age of the companion. The more optimal family function is known to be able to minimize the length of time the patient experiences hallucinations. The research recommendation is that the role of the family and its support is needed to help speed up recovery. Intensive care is needed through regular administration of medication by the community health center through mental health services.

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