

# Relationship of sociodemography characteristics to knowledge level, attitude and behaviour of community self-medication during the pandemic

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## ABSTRACT

Self-medication is always done by people as the first action when having not severe diseases such as flu, headache, cough, digestive complaints and pain. There are still many people who do not have enough knowledge about medicines and about self-medication during the pandemic. This study intends to identify the connection between sociodemography characteristics to the knowledge level, attitudes and behaviours of self-medication in the community throughout the Covid-19 pandemic. It is an observational analytic study with a cross-sectional model. The sampling technique used purposive sampling with the respondent's number 85. Univariate and bivariate analysis data testing using chi-square. The majority of respondents are aged 18-29 years (41.3%), with female gender (55.3%), married status (74.1%), work as private employees (34.1%), high school education equivalent (49.4%), with an income of Rp 1,500,000 per month (67.1%). The number of respondents with sufficient knowledge level is 45 (52.9%), with the right attitude as many as 58 respondents (68.6%), and the appropriate behaviour as many as 61 respondents (71.8%). The study indicated that there was a relationship between age, gender, status, occupation, education and income, with the knowledge level of community self-medication throughout the pandemic. There is no relationship between age, gender, status, occupation, or income with community self-medication attitude throughout the pandemic. As well as there is a relationship between gender, status, occupation, education, and income with the behaviour of the community self-medication throughout the pandemic.

**Keywords:** Knowledge level, Attitude, Behaviour, Self-medication

## Introduction

The 2019 coronavirus disease (Covid-19) outbreak, which originated in Wuhan, China, has now spread to more than 215 countries spread across the continent. The Indonesian government is trying to make various efforts to suppress the chain of COVID-19 spread, including social restrictions starting from the micro and macro sectors. These restrictions make various activities carried out at home starting from the implementation of studying, working, and worshipping at home.

Signs and symptoms related to COVID-19 include fever, flu, cough, headache, fatigue, joint pain, nausea, vomiting, and diarrhoea [1].

The confirmed cases of COVID-19 caused people to be worried that they would not want to check themselves into the hospital environment for fear of COVID-19 and choose self-medication for minor illnesses. Self-medication efforts are carried out by the community as the first action if they feel symptoms of illness that are considered mild such as flu, headache, cough, digestive complaints and pain. According to the World Health Organization (WHO), self-medication is the act of selecting and using drugs such as synthetic drugs, herbs, and traditional medicines by an individual to treat disease or symptoms of disease [2, 3].

Self-medication is in accordance with the rules, namely if the method of using the drug is per the rules listed on the package. Drugs that are safe to be used in self-medication efforts are limited to over-the-counter and over-the-counter drugs [4-6]. These over-the-counter medicines can be obtained at food stalls, pharmacies, and supermarkets [7-9]. Based on the Central Statistics Agency (BPS) data in 2014, the data obtained about self-

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medication in Central Java for modern medicine was 90.55% while traditional medicine was 17% [10, 11]. Self-medication if done rationally can be beneficial for the patient, namely, it can help the patient to prevent and treat mild symptoms independently [12-14]. Self-medication will cause new problems if done incorrectly [15, 16].

There are still many people who do not have enough knowledge about drugs and also about self-medication during the COVID-19 pandemic. Sufficient knowledge will influence a person's attitude and behaviour. Based on a study conducted by Harahap *et al.* it was stated that the level of community knowledge greatly influences the rational use of self-medication [17, 18]. Based on this background, research was conducted on the relationship between sociodemography characteristics to the knowledge level, attitudes and behaviour of self-medication throughout the Covid-19 pandemic in Dukuh Sendang Sampir, Kwangen Village, Gemolong District, Sragen Regency, Central Java.

## Materials and Methods

This study is a quantitative observational analytic with a cross-sectional design. Data was obtained from the answers to the questionnaire given to the respondents.

The questionnaire used in this study consisted of, the first part, namely informed consent that stated consent became the subject of the study after receiving an explanation from the researcher. The second part is about the sociodemographic characteristics of the respondents which contain gender, age, marital status, latest education, occupation, and income. The third part is the respondent's knowledge level about self-medication throughout the pandemic. The fourth part is the respondents' attitude about self-medication throughout the pandemic. The fifth part is the respondent's behaviour regarding self-medication throughout the pandemic. The results of the questionnaires, were later on, tested by validity and reliability tests.

The population in this study was the people of Dukuh Sendang Sampir, Kwangen Village, Gemolong District, Sragen Regency. Pursuant to the inclusion and exclusion criteria, samples were taken from as many as 85 people. The inclusion criteria consist of participants who are able to read and write and have ever conducted self-medication. Sampling technique using non-probability samples, i.e. method Purposive sampling where sampling is only on individuals based on certain considerations and characteristics.

Data analysis in this study used a correlation test with Chi-square to see the relationship between variables with data categories. And test spearman rank to determine the connection between the independent and dependent variable. To find out whether there is a connection or not, it can be seen from the significant value and how big the relationship can be seen with the r value. A variable that has a significant P value of <0.05 ( $\alpha$ ) can be stated that have a significant connection.

## Results and Discussion

### Overview of self-medication knowledge level

The majority of respondents are aged 18-29 years (41.3%), with female gender (55.3%), married status (74.1%), work as private employees (34.1%), high school education equivalent (49.4%), with an income of Rp 1,500,000 per month (67.1%). The description results of the knowledge level based on respondents' answers are grouped into three categories, namely good

knowledge, sufficient knowledge and less knowledge. A good knowledge level means that respondents have a good understanding of self-medication throughout the pandemic. Sufficient knowledge level means that respondents have sufficient understanding of self-medication throughout the pandemic and less knowledgeable level means that respondents have a low or poor understanding of self-medication throughout the pandemic.

**Table 1. Distribution respondents' knowledge level**

Knowledge	Frequency	Percentage (%)
Good	16	18.8
Sufficient	45	52.9
Less	24	28.3
Total	85	100

Based on **Table 1**, most of the respondents with sufficient knowledge were 45 respondents (52.9%), while 24 respondents had less knowledge (28.3%) and 16 respondents (18.8%) had good knowledge.

### Overview of self-medication attitude

**Table 2. Distribution of respondents' attitude**

Attitude	Frequency	Percentage (%)
Right	58	68.8
Bad	27	31.8
Total	85	100

Based on **Table 2**, most of the respondents with the right attitude were 58 respondents (68.6%), while the respondents with the bad attitude were 27 respondents (31.8%).

### Overview of self-medication behavior

**Table 3. Distribution of respondents' behaviour**

Behaviour	Frequency	Percentage(%)
Appropriate	61	71.8
Inappropriate	24	28.2
Total	85	100

Based on **Table 3**, most of the respondents with the appropriate behaviour were 61 respondents (71.8%), while the inappropriate behaviour was 24 respondents (28.2%).

### Sociodemographic relationship with self-medication knowledge level

The analysis results using the chi-square test derive p-value of 0.000, then there is a connection between age and the knowledge level of self-medication in the community during the Covid-19 pandemic. This result is in accordance with a study conducted by Wulandari *et al.* which declares that age is a component of sociodemographic characteristics that affect the level of knowledge about self-medication (p 0.001). Along with increasing age, the mental development process in a person will get better [19-22].

The analysis outcome using the chi-square test declare a p-value of 0.007 <0.05, it can be shown that there is a connection

between gender and the knowledge level of self-medication in the community throughout the pandemic. This result is strengthened by research conducted by Wulandari *et al.* which shows that sociodemographic factors, including gender, have an effect on the level of self-medication knowledge, which is indicated by each variable having a significance value of 0.047. This shows that the variable level of knowledge of self-medication has a significant relationship between the gender variables [19, 23-25].

The analysis results using the chi-square test derive p-value of  $0.007 < 0.05$ , so there is a connection between marital and the knowledge level of self-medication in the community throughout the pandemic. In this case, the researcher has not received any research that mentions the relationship between marital status and level of knowledge.

The results of the analysis using the chi-square test obtained a p-value of  $0.003 < 0.05$ , which can show that there is a connection between occupation with the knowledge level of community self-medication throughout the pandemic. These results are in accordance with a study conducted by Dharmawati *et al.* The results of statistical analysis showed a significant connection between occupation and knowledge level [26, 27].

The statistical results using the chi-square test derive a p-value of  $0.000 < 0.05$ , so it can show that there is a connection between education and the knowledge level of self-medication in the community throughout the pandemic. According to research conducted by Dharmawati *et al.* there is a connection between the education level and the knowledge level ( $0.037 < 0.05$ ). There is a connection between the education level and the knowledge level because it cannot be denied that the person's higher education, they get more information and have more knowledge in the end. On the other, if someone has a low education level, they hinder the person's attitude development towards receiving information and the values introduced newly [26, 28].

The statistical results using the chi-square test derive the p-value of  $0.000 < 0.05$ , it is said that have a connection between income and the knowledge level of community self-medication throughout the pandemic. This research is in line with a study conducted by Ilhamdani, which declares that a person with a higher income, will choose the health services that have quality and facilities better [23, 29-31].

### *Sociodemographic relationship with self-medication attitude*

Analysis test conclusion using chi-square derive a p-value of  $0.586 > 0.05$ , which can show that there is no connection between age and the attitude of community self-medication throughout the pandemic. This result is in accordance with the study conducted by Ilhamdani, which found that age characteristics had no relationship with self-medication attitudes [29, 32-34].

The analysis results using the chi-square test got a p-value of  $0.232 > 0.05$ , it is said there is no connection between gender and the attitude toward self-medication in the community throughout the pandemic. These results follow the study conducted by Mukarromah, most of the respondents are female and they have a good attitude. Mentions that females are more concerned about health than men, so in self-medication, they are more involved. Females are to be careful about taking medication on themselves and have better knowledge about drugs than males [35-38].

The analysis results using the chi-square test got a p-value of  $0.216 > 0.05$ , it is said that no connection between marital status and the self-medication attitude of the community throughout the pandemic. This result conforms to Mukarromah's, that the study obtained no relationship between marital status and the attitude of the respondents. This condition illustrates that there is no difference in attitude in terms of differences in the marital status of the respondents [35, 39].

The analysis results using chi-square analysis derive the p-value of  $0.363 > 0.05$ , it is said there is no connection between occupation with the self-medication attitude of the community throughout the pandemic. This is per the study done by Mukarromah which declares that occupation has significant results on attitudes towards self-medication [35, 40].

The analysis aggregate using the chi-square test got a p-value of  $0.010 < 0.05$ , it can show that there seem to be a significant correlation between the education level and the attitude toward self-medication in the community during the pandemic. The results of this research are in line with the study of Ilhamdani which declares that education is influential and can shape attitudes [29, 41].

The analysis results using the chi-square test derive the p-value of  $0.136 > 0.05$ , it is said there is no connection between income and the attitude of self-medication of the community during the pandemic. The results of this research are in accordance with a study conducted by Ilhamdani that declares that a person's income does not affect self-medication attitude [29, 40].

### *Sociodemographic relationship with self-medication behaviour*

The analysis quotient using the chi-square test got a p-value of  $0.060 > 0.05$ , so it is said that it lacks a relationship between age and self-medication behaviour during the COVID-19 pandemic. In this study, the majority of respondents were young. Older respondents do not guarantee that self-medication is better than younger respondents. In forming positive behaviour or actions, can be formed through a process and takes place in human and environmental interactions, for that behaviour will develop in accordance with the knowledge that has been obtained and also one's own experience.

The analysis results using the chi-square test got a p-value of  $0.005 < 0.05$ , then there is a connection between gender and community self-medication behaviour during the Covid-19 pandemic. This is in line with Widayati's research, that there is a significant correlation between gender and self-medication behaviour [42].

The analysis results using the chi-square test got a p-value of  $0.000 < 0.05$ , then there is an interrelation between marriage and behaviour of self-medication throughout the pandemic. According to Widayati, marital status is related to treatment-seeking behaviour, namely that the recommendation from the husband or wife can be a strong impetus for a person to decide whether to seek treatment, for example, whether it will be a self-care effort or a referral/consultation effort to another party [42]. The analysis results using the chi-square test got a p-value of  $0.032 < 0.05$ , it is said that there is a connection between occupation with the behaviour of the community's self-medication throughout the pandemic. These results are in accordance with the study conducted by Ilmi *et al.* which said that there was a intercorrelation between work and self-medication behaviour [43].

The analysis results using the chi-square test got a p-value of  $0.000 < 0.05$ , then there is a relationship between education and behaviour of community self-medication throughout the pandemic. The results are in accordance with research conducted by Ilmi *et al.* that there is a significant relationship between education and self-medication behaviour [43].

The analysis results using the chi-square test got a p-value of  $0.009 < 0.05$ , then there is an interconnection between income and behaviour of community self-medication throughout the pandemic. According to Suffah, the cost of treatment is a consideration for people with low-income levels, so they tend to seek health assistance according to the ability of their income. The level of income affects the community's efforts to prevent, treat and improve family health [44].

## Conclusion

The results of this study are the majority aged 18 – 29 years (41.3%), with the majority gender being female, namely 47 respondents (55.3%), married status is 63 respondents (74.1%), the majority occupation as private employees, namely 29 respondents (34.1%), moderate education is equivalent to high school as many as 42 respondents (49.4%), with an income of Rp 1,500,000 per month as many as 57 respondents (67.1%). Sufficient knowledge is 45 respondents (52.9%) with the right attitude 58 respondents (68.6%) and with appropriate behaviour as many as 61 respondents (71.8%). There is a connection between age, gender, marital, occupation, education, and income with the knowledge level of self-medication in the community during the COVID-19 pandemic. There is no relationship between age, gender, marital, occupation, and income, with the attitude toward community self-medication throughout the Covid-19 pandemic. There is a relationship between gender, marital, occupation, income and education level, with the behaviour of community self-medication throughout the Covid-19 pandemic.

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