

## Research article

# Teacher's Self-rated Health in Muhammadiyah Schools in Jakarta, Indonesia

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**Abstract.**

Self-rated health (SRH) is a simple, easy-to-measure indicator of general health and the best predictor of service utilization, cost, and mortality. Moreover, it is a valid and reliable measurement, notably for cognitive impairment. This study explores the determinant of the SRH of teachers in DKI Jakarta, Indonesia. The authors used a cross-sectional research design, which collects independent and dependent variables at a time. The research respondents were teachers from Muhammadiyah schools, which include elementary, middle, high, and vocational schools, in DKI Jakarta Province. The sampling technique was carried out purposively, with a total sample of 141 teachers. Data collection was carried out in July–August 2021. The results showed that only 2% of the respondents had a poor SRH and 2% had good SRH. Women were 2.3 times more at risk of being in poor SRH than men. In addition, respondents who do not have national insurance (BPJS) have a 2.4% more chance of being in poor SRH compared to those with insurance.

**Keywords:** self-rated health, teachers, DKI Jakarta

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## 1. Introduction

COVID-19 has put multiple stresses on people's lives. They start from fears of contracting COVID-19, worrying about dying and losing family members and friends to stress due to being laid off, and experiencing a decrease in income. On the other hand, media reports constantly reporting on the numbers and circumstances of the sick and dead add to the fear and stress. So that person who did not experience anxiety or depression before the pandemic became excessively worried and depressed during the pandemic[1]. DKI Jakarta has the highest number of COVID-19 infections in Indonesia. The number of conditions in July 2021 cumulatively, there were 814,653 cases with 3,327 new cases[2].

The number of civil servant teachers in DKI Jakarta is the highest in DKI Jakarta, 33,037[3]. Meanwhile, the Muhammadiyah School in DKI Jakarta is a private school under the management of the Basic Education Council and the Middle Board of the

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Muhammadiyah Region. There are 89 schools, ranging from elementary to high school levels[4].

The level of anxiety and depression of the Indonesian population during the COVID-19 pandemic at the end of May 2020 was 55% experiencing anxiety disorders and 58% experiencing depression. Populations who are vulnerable to anxiety and depression are women, young people (20-30 years old), people with low education, high school or less, residents who have been laid off/laid off/unemployed or decreased in income, and residents who are located in areas with cases of COVID-19[5].

Self-rated health (SRH) is a simple, easy-to-measure indicator of general health also the best predictor of service utilization, cost, and mortality. Moreover, it is a valid and reliable measurement, notably for those who do not have cognitive impairment [6]. Several population studies have shown that indicators of physical health status, such as chronic health problems, have the strongest association with SRH. As one of the arrangements in health promotion programs in institutions, schools are essential in forming healthy behavior and reducing risky behavior.

Health promotion in schools is one of the WHO concepts, part of a health promotion strategy in various settings. The success of health promotion efforts in many countries has been shown to positively impact changes in the individual, school environment, and public health status, including various problems in schools, such as not smoking, healthy eating, physical activity, and others [7, 8]. SRH also called self-reported health, self-rated health, or perceived health) refers to a single question such as "in general, would you say that your health is very poor, poor, fair, good or very good? And a survey questionnaire in which participants assessed various dimensions of their health. This survey technique is commonly used in health research for its ease of use and power in measuring health. Indonesia has the fourth largest education system globally, with a teacher population of 2.7 million people and 45.3 million students.

The role of teachers is vital in health promotion programs at school. The WAVE study intervention in the U.K. found that teachers felt restricted in the resources devoted to achieving and encouraging obesity prevention at school. But, the interventions should be hands-on, easy to manage, and flexible to the needs of individual schools[9]

## 2. Method

The research design is cross-sectional, which collects the independent and dependent variables at a time. Research respondents were teachers from Muhammadiyah schools in DKI Jakarta Province which consisted of elementary, middle, high, and vocational

schools. The sampling technique was carried out purposively, with a total sample of 141 teachers. Data collection was carried out in July-August 2021. The measuring instrument used was a questionnaire distributed via google-form. Respondents answered the questions after first reading the informed consent. Ethical clearance for this study was obtained from the Ethics Commission of Universitas Muhammadiyah Prof Dr. HAMKA (Ref No 03/21.07/01246).

### 3. Result

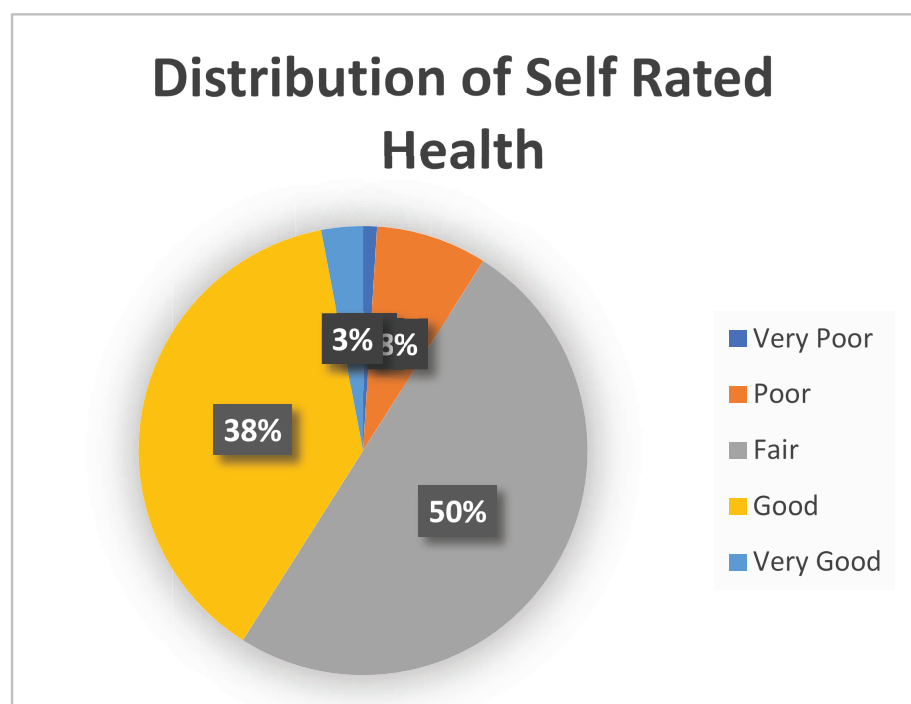


Figure 1: Self Rated Health.

Figure 1 shows the distribution of self-rated health of respondents. Most of them (50%) perceived fair condition. The other respondents (8% ) were poor and (1%) very poor. Those categories (59%) were then put in one group, poor SRH. All of the 38% respondents rated that they were in good condition and 3% in excellent condition. The last two categories then count in group Good SRH, 41%.

Table 1 shows that most respondents are female, as much as 70.9%, and male, 29.1%. Based on the age of the respondents, 58.9% were young respondents, and 41.1% were old. Based on the length of work category, it was dominated by new teachers as much as 61.7% and senior teachers as much as 38.3%. Respondents with national insurance

TABLE 1: Characteristic of Respondent.

Variable	Frequency	Percentage
<b>Sex</b>		
Female	100	70,9
Male	41	29,1
<b>Age</b>		
Young	83	58,9
Old	58	41,1
<b>Length of Working</b>		
Junior teacher	87	61,7
Senior teacher	54	38,3
<b>National Insurance</b>		
None	44	31,2
Active assurance	97	68,8
<b>Vaccined</b>		
None	21	14,9
One or two-dose	120	85,1

are 68.8%, and those who do not have national insurance are 31.2%. Based on the vaccine category, most respondents had already vaccinated as much as 85.1, and those who had not been vaccinated were 14.9%. What if you look at the health conditions (self-rate health) that have high health conditions as much as 41.1% and have low health conditions as much as 58.9%.

Table 2 shows the data above indicate that young respondents have poor health conditions than young people. The distribution of women was 65% in poor SRH and 35% in good SRH. Women are 2,373 more at risk of being in poor SRH than men. Based on the results of the analysis above,  $P\text{-Value} > 0.05$ , it can be concluded that there is no relationship between health conditions and the age factor with a value of 0.180. The data shows that most new teachers' health conditions are lower than those of old teachers. At the same time, the high health conditions are generally new teachers compared to senior teachers.

Based on the results of the analysis above,  $P\text{-Value} > 0.05$ , it can be concluded that there is no relationship between health conditions and length of work with a value of 0.669. The data above shows that respondents with low health conditions do not have national insurance as much as 72.7%, and respondents who have high health conditions do not have BPJS as much as 27.3%. Respondents with BPJS with poor SRH are 52.6%, and increased health conditions are 7.4%. Based on the results of the analysis above,  $P\text{-Value} < 0.05$ , it can be concluded that there is a relationship between health conditions

TABLE 2: Bivariate Analysis.

	Self-rated health						PR (min-max)	CI	P-Value
	Poor SRH		Good SRH		Total				
	n	%	n	%	n	%			
<b>Sex</b>									
Female	65	65	35	35	100	100	2,373		0,021
Male	18	43,9	23	56,1	41	100	(1,131-4,979)		
<b>Age</b>									
Old	38	65,5	20	34,5	58	100	0,623 (0,312-1,246)		0,180
Young	45	54,2	38	45,8	83	100			
<b>Length of Work</b>									
Junior Teacher	50	57,5	37	42,5	87	100	0,860 (0,430-1,719)		0,669
Senior Teacher	33	61,1	21	38,9	54	100			
<b>National insurance</b>									
Not Active	32	72,7	12	27,3	44	100	2,405 (1,109-5,215)		0,024
Active	51	52,6	46	47,4	97	100			
<b>Vaccines COVID-19</b>									
Not yet	12	57,1	9	42,9	21	100	0,920 (0,360-2,350)		0,862
Vaccinated	71	59,2	49	40,8	120	100			

and BPJS ownership (p-value 0.024). Respondents who do not have BPJS have a risk of 2,405 being in poor SRH compared to those who have BPJS.

The data above shows that most respondents with poor SRH have been vaccinated as much as 59.2%, and respondents with low health conditions have not vaccinated as much as 57.1%. Respondents who have not been immunized with high health conditions are 42.9%, and 40.8% have been vaccinated. Based on the results of the analysis above, P-Value > 0.05, it can be concluded that there is no significant relationship between health conditions and vaccine status (p-value 0.862).

#### 4. Discussion

Good health conditions are the key to carrying out activities comfortably. Family support is one of the main foundations for maintaining physical and spiritual health [10]. Based on research by Abidin et al. (2020), there is a relationship between maintaining

family health and preventing the transmission of COVID-19[11]. The function of health maintenance includes aspects of environmental health, physical needs, nutrition, and personal hygiene. This is where family responsiveness is maintained, affecting family behavior in solving family health problems.

During this pandemic, vaccines are the first line of defense against COVID-19. based on a survey of COVID-19 vaccine receipts in 2020 in Indonesia, 64.8% (n=112.888) have received the vaccine, while 7.6% have refused. (n=112.888). When viewed, the percentage of vaccines based on female sex was 65% (n=53,149) and 65% for male (n=56,248). While the recipients of the covid-19 vaccine, according to BPJS insurance users, were 66% (72,374)[12].

The public's feeling of doubt in following the vaccine is a big challenge to increase acceptance. People need the most reliable source of information about the COVID-19 vaccine. It should prompt further study of the root causes and need for awareness campaigns. Interventions should involve reinvigorating confidence in national health authorities and structured awareness campaigns that offer transparent information about the safety and efficacy of vaccines and the technology used in their production. [13].

Every teacher must always provide maximum learning, even with all the limitations. Without denying, the problem of teachers in carrying out online learning is technology and information. This challenge becomes easy and challenging for every teacher in the learning process, hoping that it will not affect the teacher's health condition[14]. Flexible learning processes in different places made Sadikin and Hamidah (2020) conclude in their research to overcome the effects of distance learning, teachers and lecturers can motivate so that the spirit of independent learning is far from supervision[15].

Based on Gallagher (2016), several factors cause a person's SRH to worsen when associated with several nutritional serological measures, health conditions, and biomarkers of exposure to toluene, cadmium, lead, and mercury. Also, race/ethnicity, income, education, access to health care, food security, exercise, poor mental and physical health, use of prescription drugs, and various health outcome measures (e.g., diabetes, thyroid problems, asthma)[16]. Based on the results above, older people are more likely to have poor health conditions. This is in line with the research of Mildestvedt et al. (2018) that there is an influence of the factor of increasing age with deteriorating health conditions. Sleep problems, somatic health complaints, and unmet needs in interpersonal relationships are all associated with decreased SRH. These factors are all modifiable and can be managed both within and outside the primary care setting to improve SRH[17].

## 5. Conclusion

The distribution of respondents who are in poor SRH is 2%, and good SRH is 2%. Women are 2,373 more at risk of being in poor SRH than men. Respondents who do not have BPJS have a chance of 2,405 being in poor SRH compared to those who have BPJS

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