Correlates of Parents' Readiness towards In-person Schooling among Senior High School Students during COVID-19 Pandemic in Central Java, Indonesia

Novia Handayani[1*], *Aditya* Kusumawati[1], *Syamsulhuda* B. Musthofa[1], and *Pimonpan* Isarabhakdi[2]

[1] Faculty of Public Health, Universitas Diponegoro, 50275 Semarang, Indonesia
[2] Institute for Population and Social Research, Mahidol University, 73170 Nakhon Pathom, Thailand

Abstract. During the COVID-19 pandemic, in-person schoolings has been allowed since July 2021, especially for senior high schools. However, school clusters of COVID-19 happened in Central Java Province. This study aimed to analyze factors correlated to parents' readiness toward in-person schooling during the COVID-19 pandemic. A cross-sectional study was conducted for 2 weeks on June-July 2021. The population was parents with senior high school students in Central Java Province. The questionnaire's link was shared through Education Office's parents' networks throughout Central Java. There were 1,520 respondents participated. Most respondents permit their children to in-person schooling (75.66%). Respondents were from 14 cities in Central Java, and most of them were from Pemalang (41.1%). Most respondents have good knowledge of COVID-19 (73.3%), good perception of COVID-19 (59.4%), high self-efficacy (57.2%), and sufficient parents' readiness (64.4%). The Chi-Square test showed that education level (p=0.000), occupation (p=0.008), city of origin (p=0.000), and self-efficacy (p=0.000) were correlated to parents' readiness. The multivariate analysis showed that education level (OR=1.246), occupation (OR=0.683), city of origin (OR=1.032), and self-efficacy (OR=1.263) affecting parents' readiness. After controlling the education level, occupation, and city of origin, self-efficacy remains contributing to parents' readiness for in-person schooling.

1 Introduction

The COVID-19 pandemic has struck many countries since it first emerged in 2019 in China [1]. Specifically, Indonesia has the highest COVID-19 cases in Southeast Asia [2]. The cases spread in all provinces, one of which is in Central Java Province [3, 4].

* Corresponding author: novia.handayani@live.undip.ac.id

This infectious disease can be transmitted to everyone at any age and of any sex, causing disabilities and even death [1, 5–9].

Strategies to combat and prevent COVID-19 cases have been done in many ways. One of the recommendations from WHO (World Health Organization) is to stop any activities that will be the potential to gather a crowd. The recommendation is meant to prevent any physical contact between humans [2, 8, 10, 11].

Based on UNESCO, 850 million students worldwide have been affected by school closures due to the COVID-19 pandemic [12, 13]. The Indonesian government has imposed a temporary suspension of schools to prevent COVID-19 transmission in schools since the first case of COVID-19 was found in Indonesia [14]. However, the COVID-19 pandemic is dynamic. The cases of people infected by COVID-19 also kept increasing [15]. As such, the schools cannot be closed for too long since students need education. In order to give access to education to students and prevent COVID-19 transmission at the same time, the Indonesian government has also imposed online schools to minimize students' mobilization [16].

To that end, the implementation of online school needs collaboration between students, teachers, and parents [17, 18]. Parents are required to monitor their children's learning process. During online school, students also need some facilities that should be provided by parents. However, not all parents could provide the facilities needed by their children for an online school. In addition, various responses from parents were expressed regarding online school implementation in Indonesia [18, 19].

Some previous studies have shown that online school has many obstacles, such as the unavailability of devices or gadgets for every student, limited signal accessibility, the inability of parents to provide credit or internet quota, homework for students considered a burden for both students and parents, the inability of parents in accompanying their children for the learning process, and the inability to achieve the learning goals due to students' incompetence in capturing learning materials [18, 20, 21]. Therefore, many schools considered that online school could not be implemented optimally.

In November 2020, considering the COVID-19 situation, the Indonesian government imposed a Joint Decree of the Minister of Education and Culture, Minister of Religion, Minister of Health, and Minister of Home Affairs Number 04/KB/2020, Number 737 of 2020, Number HK.01.08/Menkes/7093/2020, and Number 420-3987 of 2020 concerning Guidelines for the Implementation of Learning in the 2020/2021 Academic Year during the 2019 Coronavirus Disease Pandemic. The joint decree ruled that every region could submit a request for in-person schooling if they fulfilled the requirements. The schools allowed for the trial were also only senior high schools [14].

Based on the Joint Decree of In-person Schooling, some local governments had conducted in-person schooling trials, one of which was in vocational senior high schools of Central Java. However, the trials caused COVID-19 transmission among students, making it a school cluster. As many as 179 students contracted COVID-19 [22]. Other school clusters also happened in many regions in Central Java Province due to in-person schooling trials.

Online school has also affected the learning loss and the inability of the learning goal accomplishment [17, 20, 23]. However, the in-person schooling trials caused many school clusters of COVID-19 transmission. Thus, to prevent new school clusters, all parties have to work together. Schools need to apply the rules imposed by the government. Students should obey the health protocols. Also, parents must monitor and support many things to prevent their children from being transmitted. Therefore, this study aims to analyse factors correlated to parents' readiness for in-person schooling during the COVID-19 pandemic.

2 Materials and methods

This quantitative study used a cross-sectional approach. The population was parents in Central Java Province with senior high school-aged children. The sampling technique employed the purposive sampling method. Samples were selected through some inclusion criteria: having a child aged under 18 years old; the child went to formal schools in Central Java; the child went to conventional school (not home-schooled). The number of the population was unknown; therefore, the minimum sampling calculation utilized the Lemeshow formula. Based on the calculation, using the Z value for 95% confidence and a sampling error of 5%, the minimum samples needed were 385 samples. The data were taken by sharing online questionnaires through the Central Java Education Office and parents' networks. The questionnaire was shared for two weeks, from the last week of June 2021 until the first week of July 2021. As many as 1,663 respondents submitted the forms; however, only 1,520 respondents filled the forms completely. The variables studied were characteristics (sex, age, education level, occupation, and city/district of origin), knowledge of COVID-19 prevention, perception of COVID-19, self-efficacy, and parents' readiness.

The variable of knowledge of COVID-19 consisted of 12 questions about COVID-19 prevention, COVID-19 transmission, and COVID-19 vaccine. Correct answer was scored 2 and wrong answer was scored 1, therefore the total score for this variable was 24. A knowledge score of 21 or less was categorized as bad, and a score of 22 or more was categorized as good.

The variable of perception of COVID-19 was measured by 11 questions about perceived severity, perceived susceptibility, perceived benefits, and perceived barriers. Correct answer was scored 2 and wrong answer was scored 1, therefore the total score for this variable was 22. A perception score of 19 or less was classified as bad and a score of 20 or more was classified as good.

Self-efficacy was consisted of eight questions. Correct answer was scored 2 and wrong answer was scored 1, therefore the total score for this variable was 16. A self-efficacy score of 15 or less was classified as low and a score of 16 was classified as high.

Parents' readiness was measured by eight questions. Seven questions have same scoring that if correct answer was scored 2 and wrong answer was scored 1. And one question about parents' opinion of their readiness was scored 3 for very ready, 2 for usual, and 1 for not ready. Therefore, the total score for this variable was 17. A parents' readiness score of 14 or less was categorized as insufficient and a score of 15 or more was categorized as sufficient.

In addition, this research has obtained ethical approval from the Health Research Ethics Committee, Faculty of Public Health, Universitas Diponegoro Number 184/EA/KEPK-FKM/2021.

3 Results and discussion

3.1 Results

The results showed that 1,520 parents of senior high school children from many cities in Central Java Province were involved as respondents in this study, as shown in Table 1.

Table 1 presents that most respondents were female as much as 59.2%, 44.8% were aged pre-pension (45-54 years old), as many as 34.4% graduated from senior high

school, occupied as entrepreneurs as much as 28.0%, and as many as 71.4% lived in districts. Respondents came from four cities and ten districts in Central Java Province. The cities were Pekalongan city, Semarang city, Surakarta city, and Tegal city. Meanwhile, the districts were Banyumas, Batang, Demak, Pati, Pekalongan, Pemalang, Purworejo, Sukoharjo, Tegal, and Wonogiri. In this respect, most respondents were from Pemalang as much as 41.1%.

Table 1. Frequency distribution of independent and dependent variables

Variable	Category	N	%
Sex	Male	620	40.8
	Female	900	59.2
Age	Early workers (25-34 years old)	29	1.9
	Middle-aged (35-44 years old)	609	40.1
	Pre-pension (45-54 years old)	681	44.8
	Pension (55-64 years old)	201	13.2
Education Level	Elementary School	348	22.9
	Junior High School	191	12.6
	Senior High School	523	34.4
	Undergraduate Degree	404	26.6
	Postgraduate Degree	54	3.6
Occupation	Employees of State-Owned Enterprises (BUMN)	8	0.5
	Private Sector	281	18.5
	Civil servant	203	13.4
	Teacher/Lecturer	88	5.8
	Entrepreneurs	426	28.0
	Informal Sector	89	5.9
	Unemployed	425	27.9
City/District of Origin	City	434	28.6
	District	1086	71.4
Knowledge of COVID-19 prevention	Good	1,114	73.3
	Bad	406	26.7
Perception of COVID-19	Good	903	59.4
	Bad	617	40.6
Self-efficacy	High	869	57.2
	Low	651	42.8
Parents' readiness	Sufficient	979	64.4
	Insufficient	541	35.6

The result of this study revealed that most respondents had good knowledge of COVID-19 perception as much as 73.3%. Also, more than half of respondents had a good perception of COVID-19 as much as 59.4%, and had high self-efficacy as much as 57.2%. In addition, respondents' readiness was mostly sufficient as much as 64.4%. Further, as much as 75.7% of respondents allowed their children to have in-person schooling.

The Chi-Square test was applied to the characteristic's variables. The results showed that education level, occupation, and city of origin were correlated with parents' readiness, with p-values of 0.000, 0.008, and 0.000, respectively. Conversely, other variables, such as sex (p=0.665) and age (p=0.161), were not correlated with parents' readiness.

Table 2. Result of crosstabs test

Knowledge of COVID-19 Prevention	**Parents' Readiness**				**Total**		**P**
	Sufficient		Insufficient				
	N	%	N	%	N	%	
Good	725	65.1	389	34.9	1114	100	0.364
Bad	254	62.6	152	37.4	406	100	
Total	979	64.4	541	35.6	1520	100	
Perception of COVID-19	**Parents' Readiness**				**Total**		**P**
	Sufficient		Insufficient				
	N	%	N	%	N	%	
Good	577	63.9	326	36.1	903	100	0.616
Bad	402	65.2	215	34.8	617	100	
Total	979	64.4	541	35.6	1520	100	
Self-efficacy	**Parents' Readiness**				**Total**		**P**
	Sufficient		Insufficient				
	N	%	N	%	N	%	
High	631	72.5	239	27.5	870	100	0.000
Low	348	53.5	302	46.5	650	100	
Total	979	64.4	541	35.6	1520	100	

Table 2 displays no relationship between knowledge of COVID-19 prevention and parents' readiness (p = 0.364). The perception of COVID-19 also had no relationship with parents' readiness (p = 0.616). However, self-efficacy statistically had a relationship with parents' readiness (p = 0.000).

Table 3. Multivariate logistic regression test result

Variable	OR	95% CI	P
Education Level Reference: low	1.263	1.147 - 1.391	0.001
Occupational status Reference: Not working	1.032	1.001 - 1.079	0.008
City/District of Origin Reference: District	.683	.529 - .882	0.001
Self-efficacy Reference: low	1.246	1.183 - 1.313	0.001

Multivariate logistic regression analysis was applied and included all variables with $p < 0.05$. The result is shown in table 3. It was revealed that four variables were significantly affecting parents' readiness. If parents' education level is higher, they are 1.263 times more ready compare to those with lower education level. Occupation has 1.032 odds ratio, which means that if parents are working then they are 1.032 times more ready to their children's in-person schooling than those who have no occupation. In addition, if parents live in the city, they are less ready by 0.683 times than those who live in the district. Self-efficacy's odds ratio is 1.246 which means the higher parents' self-efficacy, they are 1.246 times more ready for their children's in-person schooling.

3.2 Discussion

The COVID-19 pandemic has affected not only many children's health aspects but also the educational side, one of which is senior high school students [24–27]. During the COVID-19 pandemic, the Indonesian government thus needs to make a difficult decision regarding school implementation. Since in-person schoolings will increase virus transmission, the Indonesian government has imposed regulations regarding online schools in Indonesia [14].

The online school implementation, however, had some negative impacts on many parties, such as teachers, students, and even parents. On the one side, online school could prevent COVID-19 transmission at school, but on the other side, online school affected the learning loss and the inability of the learning goal accomplishment [17, 18, 20, 24–27]. Therefore, the Indonesian government imposed a Joint Decree of the Minister of Education and Culture, Minister of Religion, Minister of Health, and Minister of Home Affairs Number 04/KB/2020, Number 737 of 2020, Number HK.01.08/Menkes/7093/2020, and Number 420-3987 of 2020 concerning Guidelines for the Implementation of Learning in the 2020/2021 Academic Year during the 2019 Coronavirus Disease Pandemic. The joint decree ruled that every region could submit a request for in-person schooling if they fulfilled the requirements. The schools allowed for the trial were also only senior high schools [14].

By the time the joint decree was imposed, many regions have applied the in-person schooling in their cities. Many parties then need to collaborate to make the in-person schooling successful with zero COVID-19 transmission. For this reason, this study looked at parents' readiness for in-person schooling among their senior high school children. In this research, more than half of the respondents (64.4%) had sufficient

readiness, indicating that they could provide personal protective equipment for their children, such as masks, face shields, hand sanitizer, disinfectant, personal cutlery, personal worship wears and could escort and pick up their children using private vehicles.

In addition, this study found that some demographic variables were correlated with parents' readiness, such as education level ($p = 0.000$), occupation ($p = 0.008$), and city of origin ($p = 0.000$). In this regard, education level mostly indicates the easiness level of people's understanding of new matters. The higher the education, the easier someone to understand the latest information. Some studies have exhibited that education level correlated with parents' readiness [28–30]. For example, a study about parents' readiness for early childhood education programs in Sumenep uncovered that the higher the parent's education, the higher the parents' readiness to provide enthusiasm for children's learning and support children's learning at home following the child's development [28]. However, another study also revealed that education level had no relationship with parents' readiness for online school in Kolam Village [31].

This study also exposed that the variable of occupation had a relationship with parents' readiness. In this case, occupation is strongly related to parents' income. The higher the income, the higher the parents' readiness will be. Parents with higher incomes can also buy personal protective equipment for their children. Previous studies have disclosed that occupation was correlated to parents' readiness and that it also affected students' readiness for school [28, 32].

Moreover, the result of this study showed that city of origin correlated with parents' readiness. Related to that, each city and district often has different public management and different development, including public facilities such as towers for internet providers to support internet facilities. A study about learning utilizing technology among generation Z has found that students in some districts met difficulties with online learning due to signal obstacles [33]. Other studies also uncovered the same result, stating that students in remote areas had difficulties following online learning due to signals [34–36]. In fact, the availability of facilities, such as strong internet signals, will improve students' learning process; therefore, it also affects parents' readiness.

Self-efficacy is defined as a level of confidence about someone's capability to do a specific behaviour [37–40]. In this study, self-efficacy was found to be correlated with parents' readiness. As much as 57.2% of respondents had high self-efficacy. It signifies that more than half of the respondents believed that they could fulfil their children's needs to apply health protocols during in-person schooling. Some studies have also reported that parental self-efficacy was related to children's growth and development, including their learning process [41–44]. In addition, one systematic review study found that parental self-efficacy had relevancies to a child's wellbeing [45]. Those studies support the result of this study that self-efficacy is needed by parents for their children's development, including their learning or school needs.

In this study, as much as 75.7% of respondents permitted their children to have in-person schooling; however, only 57.2% of respondents had high self-efficacy. In this regard, self-efficacy is only a belief if it is not being implemented. Parents who permitted their children to have in-person schooling also need to have high self-efficacy and support their children in in-person schooling [19, 46, 47]. The support itself could be in the form of material and immaterial support. Material support is for example providing personal protective equipment for their children, such as masks, hand sanitizer, disinfectant, face shields, personal cutlery, personal worship wears, and many more. Meanwhile, immaterial support is such as monitoring their children's health

protocol practice, motivating their children to obey the health protocol, and motivating them to study well.

4 Conclusion

Factors related to parents' readiness for in-person schooling among senior high school children in Central Java Province comprised education level, occupation, city of origin, and self-efficacy. After controlling the education level, occupation, and city of origin, self-efficacy remains contributing to parents' readiness for in-person schooling.

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