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Parent satisfaction when schools from home during the COVID-19 pandemic

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ABSTRACT

The COVID-19 crisis has forced education systems around the world to look for alternatives to face-to-face teaching with learning from home. This kind of education system has never existed before in Indonesia. This condition raises parental concerns and dissatisfaction with learning outcomes and children's achievements, resulting in suboptimal parental support. This study aimed to examine the factors related to the level of satisfaction and the role of parents in providing support during the child's learning process from home. This study employed a cross-sectional design involving 130 parents who have children attending the Klaten District State Elementary School, Indonesia. The sampling technique was using proportional simple random sampling. Data were analyzed using simple and multiple logistic regression tests with type one error rates=5%. The results showed that the determinant factor influencing parental dissatisfaction was their perception of the lack of teacher support during the implementation of the home learning system. The low education of parents, their low perception of the learning system from home, and the decreased value of children's knowledge affect parent satisfaction when schools from home (SFH). These factors contributed 65.42% affect parental support in assisting children when studying during pandemic COVID-19.

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1. INTRODUCTION

In response to the COVID-19 crisis, many countries around the world have closed schools and universities to stop the spread of the virus. According to data from United Nations Educational, Scientific and Cultural Organization (UNESCO), the peak of school closures began in early April 2020. At that time, around 1.6 billion students, or 90% of the total students in 194 registered countries felt the impact of the spread of this virus [1]. This number includes approximately 45 million students in Indonesia or about 3% of the global affected student population [2]. The sudden closure of schools has forced education policymakers, principals, and teachers to look for alternatives to face-to-face teaching to ensure that children's right to education is fulfilled. Many systems have adopted online teaching and learning on an unprecedented scale, often in combination with widespread distance learning materials such as television or radio [3]. Until an effective vaccine or therapy for Coronavirus is not available, learning activities in schools may continue to be disrupted. Based on the current developments of the pandemic, schools need to prepare for the possibility of repeated and prolonged class suspensions over the next two years [4]. Even now, Indonesia is experiencing

the second wave of the spread of COVID-19, so school closures are reinstated and the New Normal discourse is canceled. Most areas in Indonesia are in the red zone so the Implementation of community activity restrictions levels 3 and 4 continues to be extended [5].

The response to this situation is the emergence of instructions for learning methods from home to use a digital system so several schools have begun to implement and develop various online learning methods that can be accessed through web-based technology devices [6]–[8]. The aim is for children to learn at home during school closures and ensure that formal learning for them is not sacrificed, as it will have long-term consequences [9], [10]. The biggest challenge is that teachers, students, and parents have to adapt to this situation. Some are concerned that digital learning may be less than an optimal substitute for face-to-face teaching due to the absence of universal access to infrastructure (hardware and software) [11]. There are still many geographic areas in Indonesia and unserved population groups, especially children living in rural and remote areas with low-income parents [12], [13].

Another challenge of the home learning method is the support and assistance of parents in assisting children during the learning process because most Indonesian children are not familiar with the online learning system from home [14], [15]. However, the support provided by parents varies greatly depending on the available resources and readiness to accompany children when implementing online learning. This support is strongly influenced by the satisfaction of parents with the learning system from home. Previous research has stated that when parents feel that the school is unsupportive and unresponsive to their children's needs both in teaching and collaborating, then parents experience a loss of need or desire to actively participate in learning methods from home [16]. This condition because it manifests in dissatisfaction [17], [18] which in turn can negatively affect their judgment, thus having a long-term impact on children's educational problems [19]-[21].

Recent studies on the application of learning methods from home show that parents experience higher levels of stress because they find it more difficult to support children's learning than before the pandemic [22]. Another study showed that having younger children at home can be stressful for parents and online learning can be perceived as a challenge as parents are generally unprepared or untrained to support online learning for their children [23], [24]. Learning from home for young children requires a high time commitment from parents, so they generally consider online learning time to be time-consuming and burdensome [24], [25]. However, as long as face-to-face learning cannot be done, parents have no choice but to provide support for learning from home. This system is an alternative to ensure that their children continue to learn and can meet the expected knowledge and skill competencies [26]. Therefore, this study aims to explore and prove the factors related to the satisfaction of parents in Indonesia with the learning system from home.

2. RESEARCH METHOD

2.1. Data collection

This study uses a survey method with a cross-sectional design to determine the factors that influence parental satisfaction and support for learning from home during the COVID-19 pandemic. This survey was conducted between July 3, 2021 to July 25, 2021. The date range is when Klaten District is still at the COVID-19 Emergency status level 4, so learning activities at school are not allowed. The survey was conducted in Gergunung 1 and Gergunung 2 State Elementary Schools, Klaten District, Central Java. These two schools were chosen because they are located in the red zone area and the characteristics of these two schools are the same. The sample size is calculated based on the population survey formula with a random system using an expected frequency of 50%, a confidence limit of 5%, and statistical power of 95% so that the target sample size is 130 parents [27]. The sampling technique uses proportional random sampling with frame sampling based on the number of students in each class. The characteristics of the sample are mothers who have children in one of the elementary schools that are the research location, active students and children's education levels are in grades 1-6. The sampling procedure through direct interviews could not be carried out, so the researchers chose to use an online survey using the Kobotoolbox Platform.

2.2. Study instrument

The instrument to measure parental satisfaction and support for learning from home during the COVID-19 Pandemic was modified from the instrument of the Ministry of Education and Culture of the Republic of Indonesia regarding the Learning Readiness Survey in the COVID-19 Pandemic Period [28]. The questionnaire is divided into 6 themes, namely: demographic characteristics, parents' perceptions of the home learning system, parents' perceptions of teacher support during children's learning from home, children's learning achievement during learning from home, level of parental satisfaction regarding the learning system from home that has been provided by the school, parental support during the learning process from home.

Mother's education is classified into three categories, namely basic education (not completing Elementary School, Elementary School, and Junior High School), secondary education (Senior High School),

and higher education (Academy and Bachelor's Level). Parents' income is classified into 2 categories, namely: below the Klaten District Minimum Wage (Rp <2,011,514), and above the Klaten District Minimum Wage (≥Rp 2,011,514) [29]. The assessment of parents' perceptions about the home learning system and teacher support is classified into 2 categories, namely low/negative if the value <50% and high/positive if the T value ≥50% [30]. The results of the assessment of children's learning achievement and parental satisfaction with online learning are classified into two categories, namely: decreasing, static, and increasing. Parental support for learning from home is reclassified into two categories, namely less/not supportive.

The instrument contents from the Ministry of Education and Culture of the Republic of Indonesia [28] used Indonesian and consulted with a linguist so that respondents could understand it. The internal consistency of the question items in the questionnaire used a reliability test with Cronbach's alpha coefficient of 0,829. These results according to Groenhuijsen, then the question items are considered adequate and reliable [31].

2.3. Statistical analysis

Data were analyzed in three stages, namely univariate analysis through the distribution of frequency, percentage, and proportion values. Bivariate and multivariate analysis used simple and multiple logistic regression tests with type one error rates=5%. This analysis is also used to select the determinant variable as a model for increasing parental satisfaction and support for the learning system from home during the COVID-19 pandemic or in the future based on a p-value of less than 0.25 [32]. The analysis was continued with a multiple logistic regression test with the backward method to get the determinant variable. The model quality assessment was carried out to determine the value of discrimination based on the area under curve (AUC) using the receiver operating curve (ROC) method, while the model calibration used Hosmer and Lemeshow [33].

2.4. Ethical approval

This study has obtained permission from Gadjah Mada University through the Directorate of Community Service Number 674/UN1/DPM/YANMAS/PM/2021.

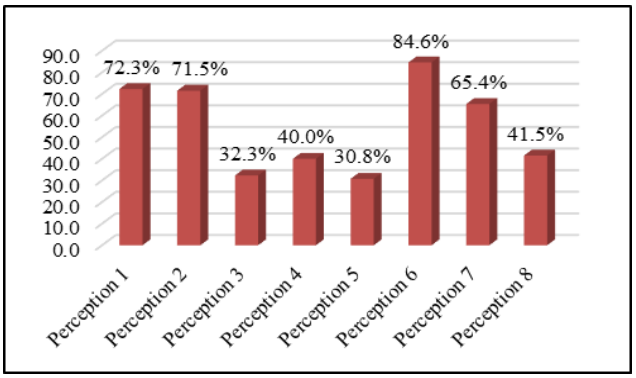
3. RESULTS AND DISCUSSION

3.1. Characteristics of parents

There were 130 parents of students who participated as respondents in this study. The average age of the respondents is 39 years (standard deviation=6.49 years), Mother's education level is in the middle category (high school or vocational high school) as many as 56 people (43.1%) and basic education (elementary school and junior high school) as many as 50 mothers (38.5%). Parents' income per month is mostly IDR <2,000,000 or below the Klaten Regency Minimum Wage for as many as 105 people (80.8%).

3.2. Parents' perception of the learning system from home

The description of parents' perceptions (n=130) of the learning system from home during the COVID-19 pandemic is explained in Figure 1.



Notes: Perception 1: Children cannot understand the subject matter well. Perception 2: Children cannot concentrate during the online learning process. Perception 3: Children cannot use media and offline learning resources properly (TV/Radio/Modules). Perception 4: Environmental conditions at home do not support children's learning concentration. Perception 5: The teacher does not provide sufficient assistance to parents in assisting children. Perception 6: Parents assume that online learning requires a high cost. Perception 7: The process of learning from home can be applied in the future. Perception 8: Children cannot use online learning tools well.

Figure 1. Parents' perceptions of the learning system from home during the COVID-19 Pandemic

Figure 1 shows that parents think that learning from home with an online system requires a high cost (84.6%) and children tend not to be able to understand the subject matter well (72.3%). Children cannot concentrate during learning (71.5%), and they do not agree that learning from home will continue to be applied in the future when the pandemic is under control (65.4%).

3.3. Parents' perceptions of teacher support during the learning process from home

The description of parents' perceptions (n =130) about the support and attention of teachers during children's learning from home during the COVID-19 pandemic is explained in Figure 2.

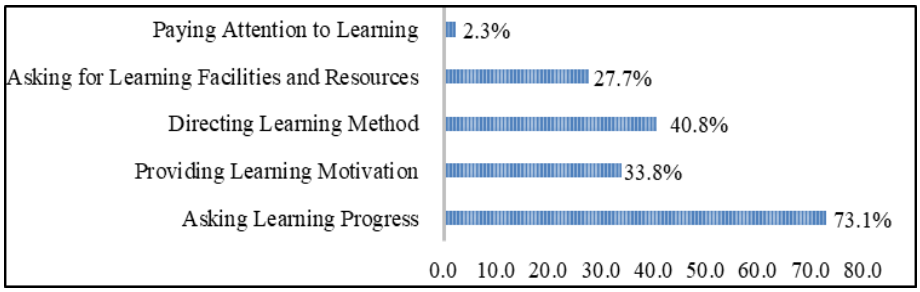


Figure 2. Parents' perceptions of teacher support and attention during children's learning from home

Figure 2 shows that parents said that so far the teacher's support for children during learning from home was only focused on asking about their learning progress (73.1%). Only a small proportion of teachers direct their paying attention to learning and ask questions about children's learning methods at home (2.3%), their directing of learning (40.8%), providing motivation (33.8%), need for learning facilities and resources by the school (27.7%).

3.4. An overview of the value of children's knowledge and skill values when learning from home (FY 2019/2020) and while learning from school (FY 2020/2021)

The description of the value of knowledge and the value of children's skills in several subjects while learning from school and when learning from home can be observed in Table 1.

Table 1. Description of the value of children's knowledge and skills when studying at school (FY 2019/2020) and when learning from home (FY 2020/2021)

Value description	Value of knowledge		Value of skills	
	Learning from school	Learning from home	Learning from school	Learning from home
Mean	81.8	80.1	79.9	79.6
Standard deviation	5.2	5.4	5.0	5.8
Minimum	69.0	67.0	63.0	62.0
Maximum	93.0	97.0	94.0	91.0

Table 1 shows that there was a decrease in students' skill scores from 81.8 when learning at school was still being implemented (FY 2019/2020) to 80.1 after the rules for learning from home were implemented (FY 2020/2021) with a wider standard deviation value between students. The value of students' knowledge when learning from home also decreased from 79.9 to 79.6 with a wider standard deviation value.

3.5. Parents' satisfaction with the learning method from home

This study shows that 20% of parents stated that they were not satisfied with the learning method from home provided by the teacher during the COVID-19 pandemic. Students may no longer have an internet connection, a device to use, or a space to learn. Some students may not be available to meet at specific times and virtual classrooms are often confusing and contain too much-tracked information.

3.6. Parental support for children when learning from home

Description of parental support during children's learning from home during the COVID-19 pandemic can be seen in the following Figure 3. This figure explains that most parents provide support to children when learning from home by checking (80.8%) and asking for the completion of the tasks done by

the children (63.1%). However, only a small number of parents communicate with children regarding learning difficulties (38.5%), consult with the teacher regarding children learning barriers (21.5%), and lack monitoring during children's learning (0.8%).

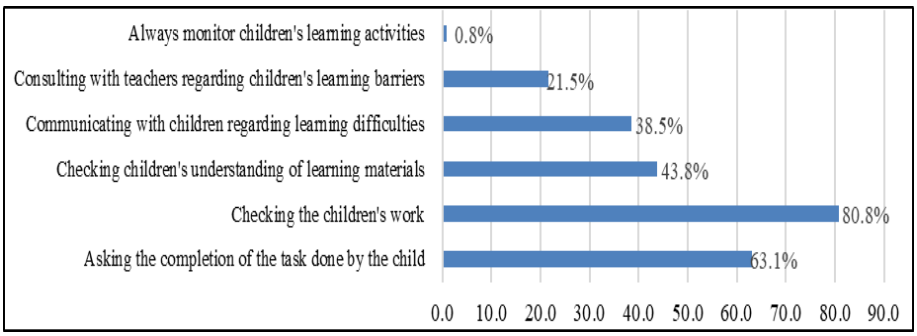


Figure 3. Parental support for children when learning from home

3.7. Factors related to the level of satisfaction and parent support for learning from home during the COVID-19 Pandemic

Factors related to the level of parent satisfaction with children's learning from home during the COVID-19 pandemic could be seen in Table 2. Table 2 shows the results of the correlation between mother education, parent's income, parent's perception of teacher support during learning from home, achievement of the score of knowledge and skills during learning from home with mother satisfaction about learning from home.

Table 2. Factors related to the level of satisfaction of parents with children's learning from home during the COVID-19 Pandemic

Research variable	Mother satisfaction with learning from home						RP (CI 95%)	p-value
	Not satisfied		Satisfied		Sum			
	n	%	n	%	n	%		
Mother's education								
- Higher education*	2	1.5	22	16.9	24	18.5		
- Middle education	6	4.6	50	38.5	56	43.1	1.2875 (0.2792-5.9212)	1.000
- Primary education	18	14.0	32	24.6	50	38.5	4.3200 (1.0896-17.128)	0.013
Parent's income								
- Under the district minimum wage	22	16.9	83	63.8	105	80.8	1.310	0.782
- Above the district minimum wage	4	3.1	21	16.2	25	19.2	(0.495-3.461)	
Parents' perception of learning from home								
- Negative/Less	20	15.4	54	41.5	74	56.9	2.523	0.021
- Positive/Good	6	4.6	50	38.5	56	43.1	(1.085-5.865)	
Parents' perceptions of teacher support								
- Negative/Less support	20	15.4	43	33.1	63	48.5	3.545	0.002
- Positive/Support	6	4.6	61	46.9	67	51.5	(1.523-8.253)	
Achievement of the score of children's knowledge during learning from home								
- Increase*	4	3.1	44	33.8	48	36.9		
- Unchanged	1	0.8	5	3.8	6	4.6	2.000 (0.265-15.082)	0.459
- Decrease	21	16.2	55	42.3	76	58.5	3.316 (1.212-9.071)	0.011
Achievement of the score of children's skills during learning from home								
- Increase*	7	5.4	52	40.0	59	45.4		
- Unchanged	2	1.5	5	3.8	7	5.4	2.408 (0.617-9.404)	0.241
- Decrease	17	13.1	47	36.2	64	49.2	2.239 (1.000-5.013)	0.044
Total	26	20.0	104	80.0	130	100.0		

Note: RP= Ratio prevalence; CI= Confidence interval; *= Reference group

Table 2 explains that the mother's primary education (not graduated from elementary school, finished elementary school and junior high school) has a risk of 4.3200 (1.0896-17.128) times causing dissatisfaction with the learning method from home, and statistically there is a significant difference compared to the group of mothers with higher education (academic/bachelor/master). Mother's education in the middle category (senior high school) has a risk of 1.2875 (0.2792-5.9212) times causing dissatisfaction with the learning method from home, but statistically, there is no significant difference with mothers with higher education. There are so many obstacles that can hinder parents' satisfaction with the learning system from home, one of which is the difference in parental education. Another study showed that parents with primary education were less supportive of their child's learning efforts during the lockdown and were partly influenced by the fact that parents felt less able to help their child during learning [34]. Parents, especially mothers with primary education, tend to express dissatisfaction with learning from home, thereby underestimating the importance of providing support for skills development and monitoring their children's work [35].

The perception of parents who think that the learning system from home is less than optimal in providing understanding to children is at risk of 2.523 (1.085-5865) times of their dissatisfaction with this system, and statistically, there is a significant difference compared to the group of mothers who have a good/positive perception as shown in Table 2. The findings in this study indicate that the emergence of negative perceptions from parents about the learning system from home is due to concerns about their children's education. They think that the learning system from home requires a high cost and they are worried that they will not be able to provide the internet needs and appropriate computer/laptop/tablet devices for children as shown in Figure 1. If it cannot be fulfilled, it will affect students' academic achievement, knowledge acquisition, and some skills (competencies) which are significantly difficult to achieve [36].

The results of the Public Policy Manager Saiful Mujani Research and Consulting (SMRC) study also support the study that the high costs incurred by parents related to learning from home affect their satisfaction with the learning method [37]. Parents also have difficulty balancing time between daily work and assisting children's learning activities at home. Parents claimed that it was so complicated to direct their children to concentrate on learning material [38], [39]. Other difficulties are the inability to learn effectively in online formats and a distracting home environment or lack of access to appropriate children's study spaces. Virtual classrooms are often confusing and contain too much-tracked information, uncertain deadlines, confusing assignments, and challenging exams for students to study [40].

Parents' perceptions of teacher support that are less than optimal during the learning process are at risk of 3.545 (1.523-8.253) times leading to dissatisfaction with the learning method from home and statistically there is a significant difference compared to the group of mothers who have a good/positive perception as shown in Table 2. Parents who show dissatisfaction with the home learning system because they judge the teacher's attention to their children during learning from home to be less than optimal. Parents are ultimately obliged to provide internet needs, check student worksheets and help children clarify the subject matter obtained from the school. This situation is further complicated by the lack of communication between teachers and parents, especially concerning providing motivation, monitoring, or asking for facilities, sources, methods, and methods of learning children while at home as presented in Figure 2. In particular, the most effective practices relate to how teachers stimulate students' reading desire by asking questions that motivate them to actively participate [41], [42]. Directional instruction (such as clear learning objectives, asking questions to check if students understand the material, and presenting a summary at the beginning of each lesson before class starts) [43], [44]. Teacher support significantly improves student performance in schools, so it is very relevant to be applied in the context of learning from home.

The knowledge value of children who experience a decrease when learning from home as shown in Figure 4 has a risk of 3.316 (1.212-9.071) times leading to parental dissatisfaction with the learning system compared to parents who have children with increased knowledge values as shown in Table 2. This condition also occurs in skills subjects where the decline in the value of children is at risk of 2.239 (1.000-5.013) times leading to parental dissatisfaction as presented in Table 2. Knowledge assessment of students is seen based on the results of written tests, oral tests, and assignments, while skills assessments are assessed based on performance, projects, portfolios, products, and other techniques [45]. The results of previous studies showed that there was a decrease in students in elementary school scores in the three subject areas studied, namely mathematics, spelling, and reading [46]. This could be because children spend less time studying while at home/lockdown [47], [48].

Parents with income below the minimum wage in the Klaten district are at risk of 1.310 (0.495-3.461) times causing parental dissatisfaction with the learning system from home, but statistically, there is no significant difference compared to high-income parents as shown in Table 2. This can be because most of the parents who are respondents have almost the same income (homogeneous). Expenditures of parents with income below the minimum wage can still facilitate children's learning from home because schools choose a blended approach (online, offline, or a combination of both) following the availability and

readiness of facilities and infrastructure. Teachers also still facilitate distance learning using television/radio media. The results of the next analysis show that there is a relationship between parents' satisfaction with the online learning system and their support in assisting children during learning from home. The results of the analysis can be seen in Table 3.

Table 3 shows that parental dissatisfaction with the home learning system has a risk of 1.804 (1.419-2.294) times having an impact on their support when providing learning assistance to children and statistically there is a significant difference compared to the group of mothers who expressed satisfaction with the learning method from home. Parental support is very important during learning from home because elementary school-aged children are still very dependent on the help of others in accessing and completing online learning as shown in Figure 4. This study shows that parental support is strongly influenced by online learning system satisfaction. This satisfaction is formed because of the education of parents, their perception of learning from home, teacher support, and the results of children's achievements in the value of knowledge and skill.

Table 3. The relationship between parents' satisfaction with the learning from home with parental support during learning from home

Research variable	Parental support for learning from home						RP (CI 95%)	p-value
	Not support		Support		Sum			
	n	%	n	%	n	%		
Parents' satisfaction with learning from home								
- Not satisfied	23	17.7	3	2.3	26	20.0	1.804	0.000
- Satisfied	51	39.2	53	40.8	104	80.0	(1.419-2.294)	
Total	74	56.9	56	43.1	130	100.0		

Note: RP=Ratio prevalence; CI=Confidence interval

3.8. Determinant factors related to parental dissatisfaction with the learning system from home

Multivariate analysis to determine the determinant factors that affect parental dissatisfaction with the learning system from home. There are six variables selected in the bivariate analysis because the p-value <0.25 and considering the variables that contribute to parental satisfaction with the learning system from home based on the theory and relevance of the results of previous studies. These variables are the mother's level of education in the primary category, parents' low perception of learning from home, low parental perception of teacher support during the learning process from home, children's knowledge and skills values that have decreased. Table 4 shows that the determinant factor related to parental dissatisfaction with learning from home is the perception of parents who are still low on teacher support for children during the learning process from home (Exp β=3.227). This factor is also reinforced by mothers who have a basic education level (elementary school or junior high school) (Exp β=3.169), decreased value of children's knowledge during learning from home (Exp β=2.156), and perceptions of parental uncertainty about the effectiveness of learning from home on children's competence achievement (Exp β=2.243). The following are the probability values and equations to predict parental dissatisfaction with the home learning system.

Table 4. Determinant factors related to parental dissatisfaction with the home learning system

Variable	β	Sig.	Exp (β)	95% C.I.for Exp (β)	
				Lower	Upper
Mother's Education	1.119	0.025	3.169	1.366	11.325
Parents' perception of learning from home	1.225	0.048	2.243	1.262	5.297
Parents' perceptions of teacher support during learning from home	1.337	0.011	3.227	1.332	7.295
Achievement of the score of children's knowledge during learning from home	1.218	0.021	2.516	0.063	0.768
Constants	-4.257	0.008	2.025		

Note: Exp (β)=Exponent Beta; Sig.=Significance; Exp (B)=Exponent Beta

The results of the evaluation of the quality of the equations based on the calibration parameters from the Hosmer and Lemeshow Test are 0.647, meaning that the formula equations obtained have good calibration because the p-value value is >0.05. The variables found are included in the strong category to be a fit model for predicting the factors that affect the level of parental satisfaction in online learning.

Equation (y)=-4.257+1.119 (Mother's Education in primary category) +1.225 (Parents' negative perception of learning at home) +1.337 (Negative perceptions of parents about teacher support during the learning process at home) +1.218 (decrease in the value of children's knowledge during learning from home) =0.642

Probability (P) =$\frac{1}{(1+e^{-y})}$ = $\frac{1}{(1+\ 2{,}7^{-0.642})}$=0.654x100=65.42%

Notes:
P = The probability of an event occurring
e = natural number =2.7
y = Constant

This equation shows that the parent's dissatisfaction due to the low perception of teacher support for children during the learning process from home, the level of education of parents (elementary school and junior high school), the decrease in the value of children's knowledge and the lack of parental perception of the effectiveness of the learning system from home. These factors contribute 65.42% resulting in low parental satisfaction with this learning system. This research is following the statement of previous studies that when parents feel that the school is unsupportive and unresponsive to their children's needs both in teaching and collaboration, then parents experience a loss of need or desire to actively participate in learning methods from home [16]. Thus, the exploration results from this research can be used as a basis for information for the government and schools in formulating strategies and policymaking to increase the effectiveness and efficiency of teaching and learning practices from home during the COVID-19 Pandemic. This can have a positive impact because parents can participate in promoting, helping, and succeeding in children's learning from home.

4. CONCLUSION

Parents still have a low level of satisfaction with the learning system from home, which has an impact on their suboptimal support in assisting children during the learning process during the COVID-19 pandemic. The factor that affects parental dissatisfaction is their low perception of teacher support. This factor is reinforced by the education of parents, their perception of the learning system from home, which is considered not optimal, and the decrease in the value of children's knowledge. These factors contribute 65.42% to the low satisfaction of parents about the learning system from home.

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