

# Differences in the motivation for seeking oral health treatment among parents of kindergarten students

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## ABSTRACT

**Introduction:** Motivation and the role of parents are essential in educating children on maintaining their oral health. The low parental knowledge in seeking oral health treatment will increase the prevalence of children's oral disease. This study aimed to analyse the differences in the motivation for seeking oral health treatment among parents of kindergarten students in two kindergarten. **Methods:** The research was analytic with a cross-sectional technique, conducted on 109 parents taken as respondents, consisting of 54 parents of Bunda Asuh Nanda Kindergarten students and 55 parents of Mekar Arum Kindergarten students. Data collection was carried out with an online Google<sup>®</sup> form questionnaire. **Results:** The mean intrinsic motivation range of Bunda Asuh Nanda Kindergarten and Mekar Arum Kindergarten parents was 45 to 65, while the extrinsic motivation range was 51 to 59, and the combined motivation range was 47 to 63. The Mann-Whitney test result showed a significant difference in the intrinsic and combined motivation, with a p-value of 0.0008 and 0.0073, respectively, while the extrinsic motivation showed no difference (p-value=0.2313). **Conclusions:** The motivation for seeking oral health treatment in parents of kindergarten students showed differences in intrinsic and combined motivation, while no difference is found in extrinsic motivation. Most of the parents in both kindergartens have rather good motivation in seeking oral health treatment for their children.

**Keywords:** children; oral health; motivation; parents; treatment-seeking behaviour

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## INTRODUCTION

Oral health for Indonesians is vital and requires serious attention from health workers, doctors, and dental nurses. Most people visit the dentist only after experiencing an unhandled toothache, while not a few of them even seek alternative

treatment.<sup>1</sup> This fact can be either caused by a lack of patients' individual motivation (intrinsic motivation) or motivation driven by their surroundings (extrinsic motivation) to go to private dental practitioners, dental clinics, or health centres with dental treatment services.<sup>1</sup> The 2018 Indonesian Basic Health Research (Riskesdas)

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data discovered that dental caries, the highest proportion of oral problems in Indonesia, doubled from 2013, from 25.9% to 57.6%.<sup>2</sup> Children's oral health needs serious attention from parents and health workers, both dentists and dental nurses because dental caries is one of the primary chronic oral health problems. Inadequate oral health care is the leading cause of the most common children's oral health problems.<sup>3</sup> Many parents still ignore oral diseases because they are considered ordinary children diseases.<sup>4</sup> Parents' low motivation causes children not to have optimal tooth-brushing activities. The lack of motivation also makes children not pay attention when parents direct tooth-brushing orders.<sup>4</sup>

The role of parents is crucial in educating children; therefore, parents must become good examples and be able to guide, direct, and motivate their children. Dental caries can be prevented early through the understanding and participation of parents in maintaining children's oral health.<sup>5</sup> Parents must have fundamental knowledge regarding daily oral health care.<sup>3</sup> A simple example is a proper technique and time for tooth-brushing activities. Implementation of these fundamentals will allow parents to be more assertive in maintaining their children's oral health.<sup>5,6,7</sup>

De Castilho *et al.* suggested that the level of parental knowledge significantly influences their children's oral health care behaviour.<sup>3</sup> A low level of parental knowledge tends to be associated with a high prevalence of children's oral diseases.<sup>3,8</sup> Parents who lack oral health knowledge are associated with poor children's oral health care behaviour, which will negatively affect their oral health.<sup>9</sup> Because, in general, children still have a significant dependence on their parents, especially mothers, who play the most role in maintaining the children's oral health.<sup>9,10</sup>

Parents with low economic status tend to ignore healthy living behaviour. A study conducted on most parents with low-income levels found that because it is difficult even to meet their basic needs, they found it more challenging to provide health services for their families.<sup>11</sup> According to several studies, parents with higher income status better perceive oral health with a lower toothache experience.<sup>12,13,14</sup> Therefore, middle and upper income parents will be more motivated to seek oral

health treatment for their children. Observation results showed socioeconomic disparities among parents in Mekar Arum Kindergarten and Bunda Asuh Nanda Kindergarten. Acknowledging this evidence, the current research aimed to analyse the differences in the motivation for seeking oral health treatment among parents of two kindergarten students.

## METHODS

The current research was analytical research conducted to measure the relationship between two different variables. The design used was cross-sectional by simultaneous evaluation or observation. The research population was all parents of students at Mekar Arum Kindergarten of Ujung Berung and Bunda Asuh Nanda Kindergarten of Ujung Berung Indah. The research sampling technique was total sampling, where all population members were sampled, resulting in 109 parents, consisting of 54 parents of Bunda Asuh Nanda Kindergarten students and 55 parents of Mekar Arum Kindergarten students.

Based on previous preliminary observations, the Bunda Asuh Nanda Kindergarten represented Kindergarten on the urban area, while the Mekar Arum Kindergarten represented kindergarten of urban area. The inclusion criteria in this study were parents with an age range of around 20-45 years of both Bunda Asuh Nanda Kindergarten and Mekar Arum Kindergarten; residents with Bandung domicile; agreed and were willing to be respondents; while the exclusion criteria were parents who could not participate in the study properly; have no ability to read or write; had no mobile phones or other suitable technological devices.

During the research, the respondents were given informed consent after being explained the research procedure. The data collection technique was carried out using a survey method using a questionnaire conducted from December 2021 - January 2022. The questionnaire consisted of questions on the motivation to seek oral health treatment of parents consisting of intrinsic motivation and extrinsic motivation, which was the culturally adapted questionnaire of oral health seeking treatment by Suwargiani *et al.*<sup>15</sup> The questionnaire consisted of 14 question items, each

with available answers to five choices based on a Likert scale: (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree. The questionnaire was tested for validity and reliability by 30 respondents, and 14 valid and reliable items were obtained based on the Spearman coefficient showing a result of 0.857.<sup>15</sup>

The Mann-Whitney difference result was then used to determine the difference in the median of the two independent groups, based on the type of motivational measurement data used,

known as ordinal data. The range (range) or also known as the range is the difference between the data with the largest value and the data with the smallest value. Finally, the data was presented as a frequency distribution table along with the analysis results. Prior to the research, ethical approval was obtained from the Research Ethics Commission of Universitas Padjadjaran with the approval number 999/UN6.KEP/EC/2021 on December 6, 2021.

## RESULTS

Table 1. Respondents' characteristics

Table 11. Respondents' characteristics				
Characteristics		Category	Numbers (n)	Percentage (%)
Mekar Arum Kindergarten	Age (years)	20-34	24	43.63
		35-45	31	56.36
	Sex	Male	55	100
		Female	0	-
	Occupation	Homemakers	33	60
		Freelance labourer	0	-
		Self-employed	6	10.90
		Private-sector employee	8	14.54
		Civil servants	1	1.81
		Lecturer/Teacher	7	12.72
		Health worker	0	-
		Income	Below the regional minimum wages	14
	Equal to the regional minimum wages		17	30.90
	Above the regional minimum wages		24	43.63
	Expense	Below the income	3	5.45
Equal to the income		43	78.18	
Above the income		9	16.36	
Bunda Asuh Nanda Kindergarten	Age (years)	20-34	28	50
		35-45	28	50
	Sex	Male	4	7.14
		Female	50	89.2
	Occupation	Homemakers	22	39.2
		Freelance labourer	1	0.92
		Self-employed	7	12.5
		Private-sector employee	11	19.64
		Civil servants	3	5.35
		Lecturer/Teacher	10	17.85
		Health worker	3	5.35
		Income	Below the regional minimum wages	12
	Equal to the regional minimum wages		17	30.35
	Above the regional minimum wages		27	48.21
	Expense	Below the income	7	12.5
Equal to the income		36	64.28	
Above the income		13	23.21	

The analysis of respondent characteristics is presented in Table 1, which shows the highest percentage of respondents aged 35-45. Most parents involved in this research were female, with

the highest occupation level being homemakers. The average income was above the regional minimum wages, with the level of expenses equal to the income.

Table 2. Motivation for seeking oral health treatment for parents of two kindergarten

Motivation	Range	Mean
<b>Bunda Asuh Nanda Kindergarten</b>		
Intrinsic motivation	8-30	44.8
Extrinsic motivation	8-35	51.3
Combined motivation	16-65	46.8
<b>Mekar Arum Kindergarten</b>		
Intrinsic motivation	19-35	65.1
Extrinsic motivation	21-35	58.6
Combined motivation	40-70	63.1

The mean motivation for seeking oral health treatment parents in Mekar Arum Kindergarten was higher than that of parents from Bunda Asuh Nanda Kindergarten (data presented in Table 2). The combined average result is the average of the

total number of Bunda Asuh Nanda Kindergarten ranks (2,527) divided by the total number of respondents (54). Meanwhile, the overall rank of Mekar Arum Kindergarten (3,468) is divided by the total number of respondents (55).

Table 3. The results of the different tests of intrinsic motivation for seeking oral health treatment in parents from two kinder garden

Intrinsic motivation	N	Range numbers	Range mean	Z-value	P-value
Bunda Asuh Nanda Kindergarten	54	2417	45	-3.352	0.0008
Mekar Arum Kindergarten	55	3578	65		
<b>Total</b>	<b>109</b>	<b>5995</b>			
Extrinsic motivation	N	Range numbers	Range mean	Z-value	P-value
Bunda Asuh Nanda Kindergarten	54	2772,5	51	-1.197	0.2313
Mekar Arum Kindergarten	55	3222,5	59		
<b>Total</b>	<b>109</b>	<b>5995</b>			
Combined motivation	N	Range numbers	Range mean	Z-value	P-value
Bunda Asuh Nanda Kindergarten	54	2527	47	-2.685	0.0073
Mekar Arum Kindergarten	55	3468	63		
<b>Total</b>	<b>109</b>	<b>5995</b>			

Results of Mann-Whitney difference tests of intrinsic motivation for seeking oral health treatment in parents showed a significant difference with a p-value of 0.0008. The mean range of intrinsic motivation in the two kindergartens was 45 for Bunda Asuh Nanda Kindergarten and 65 for Mekar Arum Kindergarten.

The extrinsic motivation for seeking oral health treatment in parents Bunda Asuh Nanda Kindergarten and Mekar Arum Kindergarten also showed a significant difference with a p-value of 0.2313. The mean range of extrinsic motivation

in the two kindergartens was 51 for the parents from the Bunda Nanda kindergarten and 59 for the parents from Mekar Arum kindergarten.

A significant difference was also shown in the combined motivation for seeking oral health treatment in parents from Bunda Nanda kindergarten and Mekar Arum Kindergarten, with a p-value of 0.0073. The mean range of combined motivation for the two kindergartens was 47 and 63 for the parents from Bunda Nanda kindergarten and the parents from the Mekar Arum kindergarten, respectively.

## DISCUSSION

The current research showed that most respondents were of the productive age (35-45 years), with the highest percentage being female, which was similar to the findings of Duijster *et al.*<sup>16</sup> research, which suggested that parents of productive age are able to play more roles in improving their families oral health. Productivity increases along with age in productive age parents.<sup>16,17</sup> The better-thinking maturity at that age significantly affects knowledge, attitude, and practice. Increasing age will encourage an increase in individual comprehension and mindset, so the knowledge gained will improve.<sup>18,19,20</sup>

Most of the parents in the current research were female and were homemakers. A similar result was also discovered by Ystrom *et al.*<sup>21</sup>, which might be caused by the more spare time of homemakers to participate in this research. The respondent's income level distribution showed that most parents have an income level above the regional minimum wages, which included 51 respondents, and the most expenses level was recorded as equal to their income (79 respondents). Research by Buunk-Werkhoven *et al.*<sup>22</sup> also supported that children from parents with above-average income have a higher opportunity to maintain good oral health. One factor that influences parents' motivation to seek oral health treatment is their level of income and expenses.<sup>22,23</sup> Most middle- and low-income parents neglect their children's proper oral health treatment, although they know that children's oral health care is critical.<sup>23,24</sup> The current research showed that the intrinsic, extrinsic, and combined motivation of parents of Mekar Arum Kindergarten students was higher than in Bunda Asuh Nanda Kindergarten, which can be seen from the respondent's answer rate in the distributed questionnaire. Averagely, the respondents chose the point "5" or "strongly agree".

The analysis showed that the mean intrinsic motivation of parents from Mekar Arum Kindergarten was 65.1, the mean extrinsic motivation was 58.6, and the mean combined motivation was 63.1. It was possible that even though the parents came from different socioeconomic levels, they already had good knowledge about the motivation for seeking oral health treatment for their children.<sup>25</sup>

By dint of the advancement of technology, people can quickly access knowledge and information through the internet.<sup>26,27</sup>

The mean intrinsic motivation of parents from Bunda Asuh Nanda Kindergarten was 44.8, the extrinsic motivation was 51.3, and the combined motivation was 46.8. Hamasha *et al.*<sup>28</sup> also discovered the parents' low knowledge and awareness of the children's oral health, indicating the need for effective oral health education programs that parents can implement through social media or direct counselling to increase their motivation.<sup>28,29</sup>

Table 3 presents the intrinsic motivation, and the mean range was 65 for the parents from Mekar Arum Kindergarten and 45 for the parents from Bunda Asuh Nanda Kindergarten. The result was similar to the previous research, which stated that low-motivated children in oral health care are encouraged by no understanding or reminder from their parents.<sup>30</sup> Good parental nurture is shown from the achievement of indicators of the knowledge-providing in the children's oral health care. Parents must have positive parental behaviour and attention because it is one of the factors that can affect a child's readiness to maintain their oral health.<sup>8,31</sup>

The extrinsic motivation of parents from Mekar Arum Kindergarten had a mean of 59, not much different from the parents from Bunda Asuh Nanda Kindergarten, which was 51. The role of teachers in schools also has an important influence on the behaviour of seeking oral health treatment of students.<sup>32,33</sup> The teacher's most important role is to deliver information, motivate, provide facilities and infrastructure, and be a role model in good oral health care habits. The teachers' example is crucial in guiding and educating their students because the educational process in schools aims to equip them to solve various future problems. Providing a good example can be carried out in the form of regular oral health counselling in schools.<sup>32,33,34</sup>

The combined motivation of parents from Mekar Arum Kindergarten was 63, and the Bunda Asuh Nanda Kindergarten was 47; thus, it can be concluded that the combination of intrinsic and extrinsic motivation was found to be more dominant in Mekar Arum Kindergarten. However, it was not indicated that parents from Bunda Asuh

Nanda Kindergarten had no motivation to seek oral health treatment for their children. Poirier *et al.*<sup>35</sup> discovered that the parents are motivated to prioritise preventive oral health behaviours for their children because of their concerns regarding poor oral health levels. The parents in both kindergartens of the current research had high intrinsic and extrinsic motivation in seeking oral health treatment for their children. Children with supportive and highly-motivated parents will have a higher level of motivation than children with no support and motivation for maintaining oral health from their parents.<sup>36,37</sup>

A significant difference was found in the intrinsic and combined motivation between parents from two kindergartens. In contrast, extrinsic motivation showed no significant difference, indicating that although intrinsic motivation has an indispensable influence to succeed and achieve something desired, extrinsic motivation also has a fundamental influence as support.<sup>38</sup> Interestingly, the current study found that parents of middle to lower socioeconomic status had more dominant motivation than parents of middle to upper socioeconomic status. This is because the literacy of lower middle socioeconomic parents is better than that of upper middle socioeconomic parents, so they are smarter in finding information about dental and oral health. These results differ from previous studies, which reported that parents with higher socioeconomic status tend to be more motivated in seeking dental and oral health care for their children.<sup>16,39,40</sup>

This contrast may be because parents from middle to lower socioeconomic status are also highly motivated to obtain knowledge and information about dental and oral health through the internet or other easily accessible media. In contrast, parents from middle to lower socioeconomic status are not too concerned with dental and oral health, usually they are only concerned with the general health of their child. The development of dentistry information technology facilitates the dissemination of information, which can also help dental and oral health education.<sup>25,41</sup> Oral health counselling aims to deliver messages regarding oral health to the community, groups, or individuals to obtain better oral health knowledge.<sup>25,42</sup>

The development of internet technology

goes hand-in-hand with the development of multimedia. Both technologies can make a more significant impression on communication and education.<sup>43,44</sup> The current research suggested that these technological developments had broken the socioeconomic level boundaries in terms of oral health knowledge and information accessibility. However, several studies have shown that the awareness of the importance of children's oral health care is still highly affected by the parent's education level.<sup>3,31,45,46,47</sup> Therefore, further research is necessary to investigate the effect of parents' education on the motivation to seek oral health treatment for their children.

## CONCLUSION

Motivation for seeking dental and oral health treatment among parents of kindergarten students with different socioeconomic conditions shows differences in intrinsic and combined motivation. Mekar Arum Kindergarten is more dominant in motivation compared to Bunda Asuh Nanda Kindergarten. In contrast, no differences were found in extrinsic motivation. Most of the parents in both kindergartens had relatively good motivation in seeking dental and oral health treatment for their children.

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