



Original Research

Description of Knowledge of Parenting Processes and Quality of Mother-Child Interaction in Yogyakarta, Indonesia

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ABSTRACT

Background: The COVID-19 pandemic has caused changes in aspects of knowledge and the quality of mother-child interaction. These changes are a result of the suboptimal and unsustainable implementation of a program. Mothers have faced difficulties in implementing parenting patterns during this pandemic. The objective of this study was to provide an overview of the level of knowledge and quality of mother-child interaction in the parenting process during the COVID-19 pandemic in Kulon Progo, Yogyakarta, Indonesia.

Methods: The study employed a quantitative descriptive design in March and April 2023. The participants were mothers with toddlers who had received cadre mentoring in child development in 2018, totalling 57 respondents from the entire village in Kulon Progo, Yogyakarta, Indonesia. Questionnaires on maternal knowledge and the quality of interaction for carers were utilised in this study. The data was described using frequency, percentage, and mean.

Results: The mother's level of knowledge was 51.98 (21.43), with a distribution of 45.61% indicating less knowledge and 54.38% indicating good knowledge. The mother's interaction quality was 51.06 (20.11), with 63.15% indicating good interaction quality and 36.85% indicating less intractable quality.

Conclusion: The findings of the study indicated a decrease in the knowledge aspect of mothers during the COVID-19 pandemic, while the quality of mother-child interaction has shown an increase.

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INTRODUCTION

Based on 2018 Basic Health Research, the occurrence of stunting in Indonesia in 2018 reached 30.8% (Kementerian Kesehatan Republik Indonesia, 2018). In 2021, the

percentage of stunted toddlers in Indonesia was 24.4%, or 5.33 million toddlers. Despite the decrease, this figure is still considered high according to the threshold established by the World Health Organisation (WHO) of 20%. Conversely, the rate of stunting in Yogyakarta is 17.3% (Ministry of Health Indonesia, 2018).

Kulon Progo Regency is one of the areas that has responded to cases of stunting, as evidenced by a significant annual reduction in stunting incidents. The incidence rate of stunting in Kulon Progo was 14.31% in 2018. In 2021, the percentage of stunting decreased to only 10.35%. However, Kulon Progo remains the region with the highest prevalence of protein-energy malnutrition deficiency in the province of DI Yogyakarta.

Protein-energy deficiency is a form of malnutrition that arises from inadequate consumption of energy and protein in the daily diet, posing a risk factor for stunting. One specific area in Kulon Progo Regency that receives special attention in relation to stunted toddler growth is the working area of the Kalibawang Health Centre, which encompasses four villages, representing 26% of the region (Dinas Kesehatan Daerah Istimewa Yogyakarta, 2020). In 2018, a research study was undertaken to provide child development (CCD) training to carers in Kalibawang, with a focus on mentoring methods.

This region was chosen as a pilot area to accelerate efforts to treat stunting in Kulon Progo Regency (Dinas Kesehatan Daerah Istimewa Yogyakarta, 2020). The CCD training, which included comprehensive interventions, targeted primary carers and aimed to enhance the mother's capacity, particularly in terms of knowledge and behavioural aspects of mother-child interaction. The training was implemented through various methods, such as lectures, interactive discussions, active observation, demonstrative practices, and the use of audiovisual media (Akhmadi et al., 2021).

The study took place in the working area of Kalibawang Health Center, Kulon Progo, prior to the COVID-19 pandemic. However, the implementation of CCD training faced obstacles as the procedures taught to carers were affected. Moreover, it is highly likely that challenges in the parenting process also emerged, necessitating further evaluation of the mother's capacity to optimize the growth and development of the child.

The CCD training emphasizes the collaboration of carers to maximize the mentoring process for the mother. This mentoring occurs during observation, home visits, or posyandu activities. However, the COVID-19 pandemic introduced obstacles in the health system, subsequently affecting the application of CCD mentoring (Akhmadi et al., 2021).

Previous studies have indicated that training in Child Care Development (CCD) has the potential to significantly enhance maternal knowledge and the quality of interaction. This enhancement was substantiated by the identification of substantial variations in the statistical outcomes between the control and intervention groups subsequent to the CCD training (Akhmadi et al., 2021). The amplification of maternal capability has a notable influence on the practice of parenting patterns within the child.

Meanwhile, the process of parenting has undergone alterations amid the COVID-19 pandemic. On March 11, 2020, the World Health Organisation (WHO) declared the Corona Virus Disease (COVID-19) a global pandemic (Cucinotta & Vanelli, 2020). Throughout the COVID-19 pandemic, Indonesia has encountered four distinct variants of COVID-19, including Alpha, Beta, Delta, and Omicron. The COVID-19 pandemic has had an impact on various domains, encompassing health workers, governments, and

families (Setiawan & Suwardianto, 2021; Suwardianto et al., 2022; Suwardianto & Setiawan, 2021).

One of the challenges that arises within families is the limitation faced by parents in their approach to parenting (Fernianti, 2022). The existence of the COVID-19 pandemic has led to modifications in parenting patterns, both in terms of attitudes and behaviours among mothers. Previous research has demonstrated that a majority of parents have encountered difficulties in parenting during the COVID-19 pandemic. The obstacles that impede parental parenting patterns include alterations in daily routines, concerns, and anxieties influenced by COVID-19 (Galanis et al., 2022).

Research conducted by Yoshikawa et al., (2020) has demonstrated that the COVID-19 pandemic exerts a significant influence on the overall quality of public health services. The pandemic has a direct and profound impact while also presenting long-term risk factors. This can be primarily attributed to the economic restraints and the resultant challenges in fulfilling daily necessities, which consequently lead to heightened stress levels and limited accessibility to healthcare facilities. In a separate study conducted by Garcia et al. (2022), the intricate ramifications of the COVID-19 pandemic on families are expounded upon.

The multifaceted effects are observed within various aspects of family dynamics, including health, employment, economic stability, access to essential resources, psychological well-being, and the interactions between family members. Mothers, in particular, often experience stress due to the dual role they play in maintaining family equilibrium; this role ambiguity entails being responsible for both child-rearing and fulfilling work or academic obligations. In fact, mothers play a pivotal role in nurturing their children within the confines of their homes. The knowledge base and the quality of mother-child interaction are crucial in facilitating an effective parenting process. Both of these aspects significantly impact the interpretation of parenting practices in everyday life.

Based on the outlined research, it is evident that studies have already been conducted to understand the state of knowledge and the quality of mother-child interaction through CCD training. Furthermore, several studies have also been carried out to determine the growth and development of children's nutritional status using the CCD training approach in Kalibawang, Kulon Progo. Additionally, research has been conducted to explore the knowledge and quality of interaction between mothers and children during the child's growth process.

However, there is a lack of research specifically evaluating the outcomes of implementing maternal care through the CCD approach in the context of the COVID-19 pandemic in Kalibawang, Kulon Province. Therefore, further research is needed to assess the level of knowledge and quality of mother-child interaction after comprehensive mentoring of carers through CCD training in Kalibawang, Kulon Progo, during the pandemic. The objective of this study is to gain an understanding of the level of knowledge and quality of mother-child interaction in the parenting process during the COVID-19 pandemic in Kalibawang, Kulon Progo. The evaluation results will then be used to recommend the implementation of CCD training to enhance the effectiveness and sustainability of knowledge and the quality of mother-child interaction in the future.

MATERIALS AND METHOD

Design

The present study adopts a quantitative-descriptive research approach. The primary objective of the research is to investigate the extent of maternal knowledge and the quality of mother-child interaction.

Sample and Settings

A total of 57 mothers who received CCD training in Kalibawang, Kulon Progo, in 2018 were included in the study. The sampling method employed was consecutive sampling. The inclusion criteria encompassed mothers who underwent CCD training in the specified location in 2018 and have children aged between 4 and 6 years old. Exclusion criteria involved mothers who are deceased or have relocated.

Instruments

Three main instruments were utilised in this research: the questionnaire on respondent characteristics, the questionnaire on maternal knowledge, and the quality of mother-child interaction. These instruments were developed by Akhmadi et al., (2021) and have undergone validation to ensure their reliability for research purposes.

Demographic data questionnaire

An Indonesian demographic form was developed by the researchers, including age, education, occupation status, and family outcome.

Mothers Parenting Process Knowledge Questionnaire

The knowledge questionnaire comprises 20 statements and has undergone validation and reliability testing in previous studies conducted by (Akhmadi et al., 2021). The effectiveness of the instrument was evaluated on a sample of 30 respondents in the work area of the Kalibawang Health Center. To establish its validity, the correlation between the statements in the questionnaire needed to be equal to or greater than 0.361 based on the validity table, with a significance level of 5%. Conversely, if the correlation value falls below 0.361, the questionnaire is deemed invalid and requires further attention. As the overall item count r exceeds the table r of 0.361, it can be determined to be valid. Reliability can be assessed through the Cronbach alpha test. Reliability is considered valid if the Cronbach alpha value exceeds 0.70. In the case of the knowledge instrument, the Cronbach alpha value is 0.820, indicating high reliability.

Quality of Mother-Child Interaction Questionnaire

The validity and reliability of the interaction quality questionnaire, consisting of 19 question items, were examined in a study conducted by (Akhmadi et al., 2021). In order to determine the validity of the instrument, it is necessary to assess the correlation value of the statements in the questionnaire, which should be equal to or greater than 0.361 based on a validity table with a significance level of 5% (Akhmadi et al., 2021). When assessing the validity of instruments that measure the quality of mother-child interaction, the item validity values range from 0.374 to 0.607. Additionally, the Cronbach's alpha value for the 19 question items was found to be 0.831, indicating acceptable reliability and confirming the suitability of the instrument for use in the study.

Data Collection

The data collection process occurred between March and April 2023. The process of data collection was conducted offline, with a particular emphasis on adhering to health protocols and research ethics. On average, participants spent approximately 30 minutes responding to the provided questionnaires.

Data Analysis

The collected data were described using IBM SPSS Statistics version 25.0 (IBM Corp., Armonk, N.Y., USA). Descriptive statistics serve as the primary technique to describe the data in this study. This entails the presentation of the mean, standard deviation, frequency distributions, and percentages for each variable under investigation. By adopting this approach, a comprehensive understanding of the level of maternal knowledge and the quality of mother-child interaction within the studied population can be obtained.

Ethical Consideration

Written informed consent was procured from all adult participants and their parents or legal guardians in adherence to the ethical principles of autonomy, beneficence, and non-maleficence. Ethical approval was granted by the Medical and Health Research Ethics Committee (MHREC) of the XXX with the reference number KE/FK/0533/EC/2022.

RESULTS

Based on the data presented in Table 1, it can be observed that the greatest proportions are attributed to females in the stages of early and late adulthood, accounting for 42.10% of the total. Moreover, it is evident that the highest percentage of mothers possess a secondary school education, amounting to 91.22%. Furthermore, the non-working category encompasses a significant portion of mothers, constituting 78.94%. Lastly, a noteworthy 92.9% of mothers have an income that falls below the UMK threshold set by the Kulon Progo Regency.

Table 1. Respondent's Characteristics (n=57)

	Variable	f	%
Age	Late Adolescence	4	7.01
	Young Adult	24	42.10
	Midle-aged Adult	24	42.10
	Older Adult	5	8.77
Education	Elementary	5	8.77
	High School	52	91.22
Occupation	Unemployed	45	78.94
	Employed	12	21.05
Family Income	< RMW	53	92.9
	> RMW	4	7.01

Note: RMW=Regional Minimum Wage per Month

Based on the findings of the descriptive analysis conducted on the image, it can be determined that the mother's knowledge level has an average value of (51.98). The respondents were classified into different categories based on the average score derived

from the overall answer score of 57 participants. The data reveals that the proportion of respondents with a low level of knowledge (54.38%) is higher in comparison to those with a high level of knowledge (45.61%) (Table 2).

Table 2. Description of Mother's Knowledge (n=57)

Variable	Category	f	%	Mean (SD)
Knowledge Level	Good	26	45.61	51.98 (21.43)
	Poor	31	54.38	

Based on the findings of the analysis regarding the knowledge aspect score of each dimension, it was observed that the cognitive dimension had an average score of 2.61. Similarly, the affective dimension had a mean score of 2.58 for the knowledge aspect, while the psychomotor dimension had an average score of 2.66. Notably, it was found that the highest percentage (56.14%) was accounted for by mothers who lacked knowledge of aspects in the psychomotor domain. Conversely, the lowest percentage (43.86%) was found among mothers who possessed knowledge aspects in the good psychomotor domain (Table 3).

Table 3. Knowledge Score in Each Dimension (n=57)

Knowledge Dimension	Good		Poor		Mean (SD)
	f	%	f	%	
Cognitive	26	45.61	31	54.39	17.84 (5.11)
Affective	29	50.88	28	49.12	15.25 (6.27)
Psychomotor	25	43.86	32	56.14	18.89 (6.21)

Based on the results obtained from cross-tabulating the characteristics of respondents with their known level of knowledge, it is evident that respondents classified under the early adolescent adult age category and possessing a good level of knowledge exhibit the highest percentage at 22.81%. Similarly, respondents falling under the category of secondary education and possessing both low and high levels of knowledge demonstrate the highest percentage at 45.61%. Furthermore, respondents categorised as not working and lacking knowledge also display the highest percentage at 42.11%. Lastly, respondents belonging to the low income category and possessing low levels of knowledge exhibit the highest percentage at 50.88% (Table 4).

Table 4. Cross-Tabulation of Knowledge Level and Respondent's Characteristics (n=57)

Variable		Knowledge			
		Good		Poor	
		f	%	f	%
Age	Late Adolescence	1	1.75	3	5.26
	Young Adult	13	22.81	12	21.05
	Middle-aged Adult	11	19.30	12	21.05
	Older Adult	2	3.51	3	5.26
Education	Elementary	1	1.75	4	7.02
	High School	26	45.61	26	45.61
Occupation	Unemployed	21	36.84	24	42.11
	Employed	6	10.53	6	10.53
Family Income	< RMW	24	42.11	29	50.88

Variable	Knowledge			
	Good		Poor	
	f	%	f	%
> RMW	3	5.26	1	1.75

Note: RMW=Regional Minimum Wage per Month

The descriptive analysis of the picture revealed that the mother-child interaction has an average value of 51.06. After computing the overall score of 57 respondents, the classification of categories based on average scores was obtained. The data presented in the table indicates that the percentage of respondents with good-quality interaction (63.15%) outweighs those with less-quality interaction (Table 5).

Table 5. Description of Mother-Child Interaction Quality (n=57)

Variable	Category	f	%	Mean (SD)
Interaction Quality Level	Good	36	63.15	51.06 (20.11)
	Poor	21	36.85	

Based on the outcomes of the analysis conducted on the interaction quality scores in each domain, it was found that the average value for the quality of mother-child interaction in the affection domain is 12.07. Similarly, the mean quality of interaction in the responsiveness domain stands at 12.34, whereas the mean quality of interaction in the encouragement domain is recorded as 12.26. Lastly, the mean quality of interaction in the teaching domain is determined to be 14.38. Out of all the analysis results, it is worth noting that the interaction quality scores in the teaching domain exhibit the highest percentage, amounting to 66.67%, according to Table 6.

Table 6. Interaction Quality Score in Each Dimension (n=57)

Interaction Quality Domain	Good		Poor		Mean (SD)
	f	%	f	%	
Affection	25	43.85	32	56.14	12.07 (4.20)
Responsiveness	32	56.14	25	43.85	12.34 (4.91)
Encouragement	34	59.64	23	40.35	12.26 (4.11)
Teaching	38	66.67	19	33.33	14.38 (5.72)

Based on the outcomes of cross-tabulating the characteristics of participants with the standard of interaction, participants who fall under the groups of early adulthood and high standard of interaction possess the greatest proportion (29.82%), participants who fall under the group of secondary education and high standard of interaction possess the greatest proportion (59.65%), participants who fall under the groups of unemployment and high standard of interaction possess the greatest proportion (49.12%), as well as participants who fall under the group of low income and standard of interaction, which either had the greatest proportion (59.65%) (Table 7).

Table 7. Cross-Tabulation of Interaction Quality Level and Respondent's Characteristics (n=57)

Variable		Interaction Quality			
		Good		Poor	
		f	%	f	%
Age	Late Adolescence	4	7.02	0	0.0
	Young Adult	17	29.82	8	14.04
	Midle-aged Adult	13	22.81	10	17.54
	Older Adult	3	5.26	2	3.51
Education	Elementary	3	5.26	2	3.51
	High School	34	59.65	18	31.58
Occupation	Unemployed	28	49.12	17	29.82
	Employed	9	15.76	3	5.26
Family Income	< RMW	34	59.65	19	33.3
	> RMW	3	5.26	1	1.75

Note: RMW=Regional Minimum Wage per Month

DISCUSSION

The objective of this research was to provide an overview of the level of knowledge and quality of mother-child interaction in the parenting process during the COVID-19 pandemic in Kulon Progo, Yogyakarta. The results of this demonstrated that the age group with the highest proportion of knowledge was early adulthood, as well as in the variable of communication quality, indicating that the early adult group had the highest percentage of interaction quality. The mother's self-assurance as a caretaker increases with age and experience in relation to the parenting process. The more mature the mother is, the more comprehending she becomes in providing positive affirmations, support and encouragement, and a sense of affection, ultimately resulting in a favorable internalisation.

The majority of participants possessed a recent educational background in the secondary category. Mothers falling under the secondary final education category displayed a commendable level of knowledge and interaction quality. Consistent with prior investigations, mothers with a low educational background tended to possess an understanding of substandard parenting patterns. Mothers with a history of limited education still harbour an erroneous theory of parenting practice (Ilmiati, 2021; Rosda, 2019; C. Weitzman et al., 2011, 2015; M. Weitzman et al., 2011).

Based on the cross-tabulation table illustrating the relationship between respondents' characteristics, their level of knowledge, and the quality of interaction, it can be observed that individuals with incomes below MSMEs exhibit a lower level of knowledge. Conversely, respondents with incomes below MSMEs demonstrate a favourable quality of interaction. Parents with a lower economic degree display significant consideration in meeting their child's needs. On the other hand, parents with stable economies are capable of fulfilling all of their child's requirements (Chotima, 2015; Handayani, 2022).

The majority of participants in the study were housewives who were not employed. By examining the cross-tabulation between respondents' characteristics, the level of knowledge, and the quality of interaction, it was discovered that mothers in the non-working category possessed a lower level of knowledge. In contrast, these mothers exhibited a positive quality of interaction. The process of parenting is closely

intertwined with the various activities undertaken by mothers to support their child's development (Susanto, 2021).

Maternal knowledge refers to the mother's comprehension of the various stages of a child's growth and development in accordance with the mother's age. Within this investigation, it was discovered that the mean value of maternal knowledge was 51.98, with 31 participants exhibiting a low level of knowledge and 26 mothers demonstrating a high level of knowledge. This can be supported by the distribution of the mothers' responses, which consistently displayed a lack of accuracy for each respective age stage. Furthermore, certain mothers appeared indecisive and uncertain when providing answers.

The analysis of maternal knowledge, based on the operational definition, encompasses three dimensions: cognitive, affective, and psychomotor. The cognitive dimension pertains to maternal parenting behavior as influenced by perceptions, beliefs, and individual thought processes. The affective dimension entails parenting behavior that emphasises personal preferences, values, attitudes, and motivation. Lastly, the psychomotor dimension encompasses parenting behavior rooted in motor skills and physical activity (Suryana, 2018, 2021).

The poor interaction quality of the mother when engaging with the child is the definition of quality of interaction. In this particular study, it was discovered that the average value of mother-child interaction quality was 51.06, with 36 mothers exhibiting good interaction quality and 21 others demonstrating poor interaction quality. This finding was corroborated by the distribution of responses from the participants, who were accurate in each domain. Some observers also noted that the majority of mothers observed had already adopted effective parenting practices in their daily lives.

Research indicates that there is an enhancement in the quality aspects of interaction among mothers who have undergone CCD training following the COVID-19 pandemic. This aligns with previous research, which suggests that CCD training can enhance the quality of interaction, enabling mothers to engage with their children through play (Oktavianto et al., 2016). Considering the classification of each domain, the predominant participants in this study already exhibited a high score for interaction quality. This finding is consistent with the research conducted by Akhmadi et al. (2021), which highlights the effectiveness of CCD training through stimulus administration in improving the quality of maternal interaction in terms of affection and teaching.

In accordance with the operational definition, the analysis of the quality aspects of mother-child interaction is based on four domains: affection, responsiveness, encouragement, and teaching. The domain of affection pertains to the emotional connection and fondness between the mother and child during interaction. The responsiveness domain focusses on the mother's ability to promptly and appropriately respond to the child's needs. The encouragement domain emphasises the parental support and motivation provided during mother-child interaction. Lastly, the teaching domain concentrates on the parent's role in instructing the child during their interaction (Harvens et al., 2019).

The aspect of the quality of maternal interaction related to the process of parenting the child has an average value of 12.07 in the domain of affection. It should be noted that the highest score in the affection domain is found in items involving interaction with the child. The study's results indicate that 32 respondents (56.14%) have been classified as having good responsiveness in the domain of responsiveness. According to the data, the dominant mothers have not demonstrated a clear sense of affection for their

children. However, it is expected that mothers should be able to establish a warm bond with their children and spend quality time together to provide positive emotions, confidence, and affection (Ngewa, 2021).

The average value of the domain of responsiveness, which pertains to the quality of maternal interaction in the child-rearing process, is 12.34. Notably, the highest score in the responsiveness domain is observed in items that involve responding to the child's voice. The study's findings reveal that 32 respondents (56.14%) have been classified as having good responsiveness. Based on the data, it is evident that the dominant mothers already exhibit clear responsiveness towards their children. Mothers who display good responsiveness also tend to possess good sensitivity, enabling them to be more attuned to their children's needs (Anggraini, 2022).

In terms of the quality of maternal interaction in the process of parenting, the domain of encouragement has an average value of 12.26. It is worth noting that the highest score in the impulse domain is associated with items that provide support for the child's desired activities. The results of the impulse domain score indicate that 34 respondents (59.64%) have already exhibited a good aspect of encouragement. Based on the data, it is evident that the dominant mothers already demonstrate clear support for their children. Encouragement can have a positive impact on a child's development. Mothers who support their children's activities can foster early independence (Oktavianto & Paramitha, 2017).

The average value of the domain of teaching, which pertains to the quality of maternal interaction in the child-rearing process, is 14.38. Notably, the highest score in the teaching domain is found in items that involve explaining something to the child. The study's findings indicate that 38 respondents (66.67%) exhibit good teaching abilities. Based on the data, it is evident that the dominant mothers already exhibit clear teaching towards their children. Mothers can facilitate the learning process by engaging their children in activities that stimulate creativity and support their development while at home (Holis, 2017; Marwiyati, 2021; Saadah et al., 2020).

CONCLUSION

Based on the findings of the study, the COVID-19 pandemic led to a majority of mothers possessing a limited level of knowledge, while most mothers demonstrated a commendable level of interaction. The primary reason for the decline in maternal knowledge scores was attributed to the time-consuming nature of data retrieval in the context of CCD training, which lacked sustained program support during the pandemic. Conversely, the surge in interaction quality scores can be attributed to the increased proximity and heightened inclination of parents to engage with their children during the COVID-19 crisis.

The study findings point to the importance of mothers effectively implementing the knowledge acquired through CCD training to optimise the parenting process, particularly in terms of cognitive and affective aspects. Additionally, it is recommended that Puskesmas, as healthcare centres, regularly conduct training sessions for the community, particularly carers, to enhance their knowledge and uphold the quality of interaction in the realm of parenting. Furthermore, the study identified gaps, such as the decline in maternal knowledge despite improved mother-child interaction quality, underscoring the need to explore the factors behind this improvement. Further studies should also consider the increased stress on mothers due to dual roles, economic

constraints on resource access and healthcare, and changes in parenting practices during the pandemic.

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REFERENCES

- Akhmadi, A., Sunartini, S., Haryanti, F., Madyaningrum, E., & Sitaresmi, M. N. (2021). Effect of care for child development training on cadres' knowledge, attitude, and efficacy in Yogyakarta, Indonesia. *Belitung Nursing Journal*. <https://doi.org/10.33546/bnj.1521>
- Anggraini, R. (2022). Peran Orang Tua terhadap Pembentukan Kemandirian Anak Usia Dini Pada Masa Pandemi. *AWLADY: Jurnal Pendidikan Anak*, 8(2), 67–78.
- Chotima, C. (2015). Pengaruh pendidikan keuangan di keluarga, sosial ekonomi orang tua, pengetahuan keuangan, kecerdasan spiritual, dan teman sebaya terhadap manajemen keuangan pribadi mahasiswa S1 pendidikan akuntansi fakultas ekonomi universitas negeri Surabaya. *Jurnal Pendidikan Akuntansi (JPAK)*, 3(2).
- Cucinotta, D., & Vanelli, M. (2020). WHO Declares COVID-19 a Pandemic. *Acta Bio-Medica: Atenei Parmensis*, 91(1), 157–160. <https://doi.org/10.23750/abm.v91i1.9397>
- Dasar, R. (2018). Laporan Hasil Riset Kesehatan Dasar (Riskesdas) Nasional 2007. *Jakarta: Badan Litbangkes, Depkes RI*.
- Dinas Kesehatan Daerah Istimewa Yogyakarta. (2020). Profil Kesehatan DI Yogyakarta Tahun 2020. *Dinas Kesehatan DIY, Yogyakarta*.
- Fernianti, A. (2022). Analisis Tingkat Stress Orang Tua Ketika Mengasuh Anak Selama Masa Pandemi. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 6(3), 2276–2286. <https://doi.org/10.31004/obsesi.v6i3.1957>
- Galanis, P., Vraika, I., Siskou, O., Konstantakopoulou, O., Katsiroumpa, A., & Kaitelidou, D. (2022). Willingness, refusal and influential factors of parents to vaccinate their children against the COVID-19: A systematic review and meta-analysis. *Preventive Medicine*, 157, 106994. <https://doi.org/10.1016/j.ypmed.2022.106994>
- Garcia, A. S., Born, S. L., Carotta, C. L., Lavender-Stott, E. S., & (Stella) Liu, H.-L. (2022). Hope and Self-Compassion to Alleviate Parenting Stress in the Context of the COVID-19 Pandemic. *The Family Journal*, 30(2), 164–173. <https://doi.org/10.1177/10664807211040836>

- Handayani, E. D. (2022). Umur Dan Paritas Terhadap Kejadian Preeklamsi Berat Pada Ibu Hamil Di UGD Kebidanan. *Jurnal Abdi Kesehatan Dan Kedokteran*, 1(1 SE-Articles), 6–11. <https://jakk.candle.or.id/index.php/jakk/article/view/2>
- Harvens, D. O., Primana, L., & Hildayani, R. (2019). Efektivitas Pelatihan Interaksi Ibu-Anak dalam Meningkatkan Kualitas Interaksi Ibu-Anak dan Compliance Anak. *Jurnal Ilmiah Psikologi MIND SET*, 10(02), 104–119.
- Holis, A. (2017). Belajar melalui bermain untuk pengembangan kreativitas dan kognitif anak usia dini. *Jurnal Pendidikan UNIGA*, 10(1), 23–37.
- Ilmiati, I. (2021). Health Education on Mother's Knowledge and Skills in Care of Kanguru Methods in LBW In Peristi's Room at Mokopido Tolitoli Hospital. *Journal of Applied Nursing and Health*, 3(2 SE-Articles), 55–63. <https://doi.org/10.55018/janh.v3i2.6>
- Marwiyati, S. (2021). Pembelajaran Sainifik pada Anak Usia Dini dalam Pengembangan Kreativitas di Taman Kanak-Kanak. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 5, 135–149.
- Ministry of Health Indonesia. (2018). *Riset kesehatan dasar (Riskesdas) [Basic health research]*. <https://www.badankebijakan.kemkes.go.id/laporan-hasil-survei>
- Ngewa, H. M. (2021). Peran Orang Tua Dalam Pengasuhan Anak. *EDUCHILD (Journal of Early Childhood Education)*, 1(1), 96–115.
- Oktavianto, E., & Paramitha, K. A. (2017). Pelatihan bermain pada pengasuh dapat meningkatkan sensitivitas pengasuhan anak prasekolah. *Prosiding Seminar Nasional Teknologi Informasi (SNATIK): Teknologi Informasi Menuju Smart Health Care*, 187–201.
- Oktavianto, E., Triasih, R., & Haryanti, F. (2016, October 3). Care for child development (ccd) training on cadre can improve the nutritional status on children. *2016 International Conference on Maternal, Child and Family Health*.
- Rosda. (2019). Knowledge And Interest Of Pregnant Mother Towards Pregnant Mother's Implementation. *Journal of Applied Nursing and Health*, 1(2 SE-Articles), 48–52. <https://janh.candle.or.id/index.php/janh/article/view/84>
- Saadah, N., Kp, S., Suparji, S., & Sulikah, S. (2020). *Stimulasi Perkembangan Oleh Ibu Melalui Bermain dan Rekreasi Pada Anak Usia Dini*. SCOPINDO MEDIA PUSTAKA.
- Setiawan, L., & Suwardianto, H. (2021). Community Stigma Against COVID-19 Patients . *Journal of Applied Nursing and Health*, 3(2 SE-Articles), 33–41.

- Suryana, D. (2018). *Pendidikan anak usia dini: stimulasi dan aspek perkembangan anak*.
- Suryana, D. (2021). *Pendidikan anak usia dini teori dan praktik pembelajaran*. Prenada Media.
- Susanto, A. (2021). *Pendidikan anak usia dini: Konsep dan teori*. Bumi Aksara.
- Suwardianto, H., Richard, S. D., & Kurniajati, S. (2022). AUVIS-Brain Gym To Increase Children's Learning Concentration During Covid-19 Pandemic. *Interest: Jurnal Ilmu Kesehatan*, 45–52.
- Suwardianto, H., & Setiawan, L. (2021). Dampak Penurunan Energi Terhadap Kelelahan Perawat Pada Masa Bencana Pandemic Covid-19. *JURNAL ILKES (Jurnal Ilmu Kesehatan)*, 12(1), 406–412. <https://doi.org/https://doi.org/10.35966/ilkes.v12i1.208>
- Weitzman, C., Edmonds, D., Davagnino, J., & Briggs-Gowan, M. (2011). The Association Between Parent Worry and Young Children's Social-Emotional Functioning. *Journal of Developmental & Behavioral Pediatrics*, 32(9), 660–667. <https://doi.org/10.1097/DBP.0b013e31822bc76b>
- Weitzman, C., Wegner, L., Blum, N. J., Macias, M. M., Bauer, N. S., Bridgemohan, C., Goldson, E., McGuinn, L. J., Weitzman, C., Siegel, B. S., Yogman, M. W., Gambon, T. B., Lavin, A., Lemmon, K. M., Mattson, G., McGuinn, L. J., Rafferty, J. R., Wissow, L. S., Donoghue, E., ... Wildman, B. (2015). Promoting Optimal Development: Screening for Behavioral and Emotional Problems. *Pediatrics*, 135(2), 384–395. <https://doi.org/10.1542/peds.2014-3716>
- Weitzman, M., Rosenthal, D. G., & Liu, Y.-H. (2011). Paternal Depressive Symptoms and Child Behavioral or Emotional Problems in the United States. *Pediatrics*, 128(6), 1126–1134. <https://doi.org/10.1542/peds.2010-3034>
- Yoshikawa, H., Wuermli, A. J., Britto, P. R., Dreyer, B., Leckman, J. F., Lye, S. J., Ponguta, L. A., Richter, L. M., & Stein, A. (2020). Effects of the Global Coronavirus Disease-2019 Pandemic on Early Childhood Development: Short- and Long-Term Risks and Mitigating Program and Policy Actions. *The Journal of Pediatrics*, 223, 188–193. <https://doi.org/10.1016/j.jpeds.2020.05.020>