Maternal role and psychosocial development of children aged 36-59 months

Erni Samutri¹*, Ika Rahmawati¹, Wahyuningsih¹, Anafrin Yugistowati¹, Yhona Paratmanitya²

¹ Department of Nursing, Faculty of Health Sciences, Universitas Alma Ata,  
² Department of Nutrition, Faculty of Health Sciences, Universitas Alma Ata  
Jalan Brawijaya No. 99, Yogyakarta 55183, Indonesia  
*Corresponding author: erni.samutri@almaata.ac.id

ABSTRACT

Background: Each child will probably achieve each early developmental aspects at different times. The achievement of child development is determined by various inputs, including child input, maternal input, family input, and environmental input. However, failure to fulfill these inputs has an impact on development delay, especially psychosocial development aspect. Parents, especially mothers, have a significant role in providing these inputs.

Objectives: To identify the relationship between maternal input including sociodemographic characteristics and the maternal role and the psychosocial development of children aged 36-59 months.

Methods: This study was a cross-sectional conducted in February 2020 in Puskesmas Sedayu 2, Yogyakarta. The eligible participant was mothers of children aged 36-59 months. The questionnaires included sociodemographic data, parent role questionnaires, and

ABSTRAK

Latar Belakang: Setiap anak akan mencapai setiap aspek dalam tahap perkembangan awal dengan waktu yang berbeda-beda. Pencapaian perkembangan anak ditentukan oleh berbagai input, antara lain input anak, input ibu, input keluarga, dan input lingkungan. Namun, kegagalan dalam pemenuhan input- input tersebut akan berdampak pada kejadian keterlambatan perkembangan, khususnya aspek perkembangan psikososial. Orang tua khususnya ibu memiliki peran yang cukup besar dalam memberikan input tersebut.

Tujuan: Mengetahui hubungan antara input ibu termasuk karakteristik sosiodemografi dan peran ibu dengan perkembangan psikososial anak usia 36-59 bulan.


Hasil: Penelitian ini melibatkan 89 ibu dengan anak usia 36-59 bulan. Sekitar 91% anak berada dalam perkembangan psikososial normal dan 9% anak dengan keterlambatan perkembangan psikososial. Korelasi karakteristik sosiodemografi menunjukkan bahwa pekerjaan ibu berhubungan signifikan dengan perkembangan psikososial anak usia 36-59 bulan (p=0,005). Peran ibu juga menunjukkan hubungan yang signifikan dengan perkembangan psikososial anak (p=0,007). Selain itu, terdapat 2 domain peran ibu yang menunjukkan hubungan signifikan dengan perkembangan psikososial anak, yaitu peran sebagai pengasuh (p=0,002) dan konselor (p=0003).

Kesimpulan: Pencapaian perkembangan psikososial anak usia 36-59 bulan berhubungan dengan pekerjaan ibu dan peran ibu. Pemenuhan setiap dimensi peran orang tua akan mengoptimalkan seluruh aspek perkembangan anak, termasuk aspek psikososial pada anak prasekolah agar menjadi anak yang memiliki konsep diri positif, kreatif, berani berinisiatif.

KATA KUNCI: perkembangan psikososial; anak; peran maternal
INTRODUCTION

The psychosocial development of children is related to emotions, motivation, formation of self-confidence, independence, and how children interact with other people. This developmental task starts from newborn, infancy, preschool, school age, and adulthood. In preschool, children learn to be creative and take the initiative to solve their problems. Delays in these developmental tasks will increase the risk of developmental problems in other domains.

Suspected delay in children under six years in 63 low- and middle-income countries shows a prevalence of 25%. This prevalence is about 10% in Europe and Central Asia and 42% in West and Central Africa. The developmental domain that shows the most delay is numeracy literacy (1). In Indonesia, the overall development achievement of children aged 36-59 months is 88.3%, with development of the numerical literacy domain at 95.2%(2). At regional D.I. Yogyakarta, the proportion of child development is slightly higher in the physical domain (99.6%), social-emotional domain (72.1%), learning domain (98.4%), and lower in the numeracy literacy domain (63.1%)(3). Although the social-emotional domain at a regional level is slightly higher than at the national level, achievement in this domain is the second lowest compared to other developmental domains. It means that about 27.9% of children aged 36-59 months still experience delays in social-emotional development.

Early childhood development has four aspects, numeracy literacy, physical development, social-emotional development, and learning. Each child will probably reach each of these developmental aspects at different times. Although the justification for normal development varies by culture, ethnicity, and religion, the development pace has common and predictable stages (4).
Untreated child psychosocial development delay can drive to negative consequences such as loss of initiative, lack of confidence, experience guilty feelings easily, and fear of trying something new and disturbing their social relationships in the future (1,5,6). Specifically, psychosocial delay at preschool age will impact disruptive behavior, psychiatric disorders, and poor academic achievement. The continuation of this condition influences the quality of relationships with other people, poor school adjustment, and obstacles to academic success and relationships with others in the future (7). Because of the seriousness of the impact, parents must be able to provide the right stimulus according to their developmental stage to maximize the achievement of children's development.

The achievement of child development is determined by various inputs, including child input (child's condition), maternal input, family input, and environmental input(8-12). Parents, especially mothers, have a significant role in providing these inputs. Study conducted by Stephiana et al shows that children's cognitive development is influenced by the mother's work hours, the child's input (age, gender, and nutritional status), maternal input (sociodemographic characteristics, breastfeeding, and maternal antenatal care), family input (father's demographic characteristics)(8). Maternal literacy belief (11), maternal education level and their role in parenting also have important role on children early language and literacy learning skill (10). Qualitative study by Solomon-Moore (12) also demonstrates that parents, primarily the mother have an important role to support their children's physical development. Parents' input that supports the enrichment of their home environment and stress also increase the child's socio-emotional skill in a high-income country (13). A study by Kerstjens et al.(14) also shows that developmental delay in children born either preterm, moderately preterm, or full-term is influenced by the socioeconomic status of parents (especially mothers) and the characteristics of children.

Study on inputs that affect overall child development has been done a lot. However, the identification of inputs that affect a child's development in a psychosocial domain is still limited, especially in developing country. Whereas delay in child development will produce a negative impact on a child's health and quality of life in the future (7,15-17). Therefore, this study aims to identify the relationship between maternal input including sociodemographic characteristics and the maternal role and the psychosocial development of children aged 36-59 months. Identification of psychosocial development and the factors that influence can provide data to develop strategies for optimizing the achievement of children's psychosocial development according to their age stages.

MATERIALS AND METHODS

Study Design

This study used a cross-sectional design conducted in February 2020 to identify the relationship between sociodemographic characteristics and the maternal role and the psychosocial development of children aged 36-59 months.

Participants

This study included 89 mothers with children aged 36-59 months. The inclusion criteria for this study was mothers or the primary caregivers of children aged 36-59
months in the working area of the Sedayu 2 Public Health Center, Bantul, Yogyakarta. The exclusion criteria were mothers with children aged 36-59 months with diseases related to developmental disorders including autism, Down syndrome, etc that can be identified through health card (called Kartu Menuju Sehat).

**Instruments**

This research used three questionnaires included sociodemographic data, maternal role questionnaires, and psychosocial development questionnaires. The questionnaire used was valid and reliable. First, mother's sociodemographic data include age, education level, occupation, and family income. Second, the parent role questionnaire consists of 5 domains, namely the role of parents as caregivers (four questions), educators (four questions), motivators (two questions), supervisors (two questions), and counselors (two questions). The Cronbach’s α reliability tested by Erni Mayang Sari (18) on the parent sample in Yogyakarta, Indonesia was 0.667. This questionnaire consists of 14 questions. The score is ranging from 4 for “always” to 1 for “never” and vice versa for unfavorable questions. The total score ranges from 14-56, with the interpretation that the higher the score, the better the role of parents.

Third, the psychosocial development questionnaire contains questions related to psychosocial development for a child aged 36-59 months. The Cronbach’s α reliability tested by Sindhi Purwita Sari (19) on the children sample in Yogyakarta, Indonesia was 0.723. The psychosocial development questionnaire consists of 13 questions describing the initiative and guilt behavior development. Every question scored 1 for “yes” answers and 0 for “no” answers, and vice versa for unfavorable questions. The total score ranges from 0-13. The interpretation is that a score less than equal to 50% means a delay in psychosocial development and vice versa.

**Data Collection**

Data collection used research questionnaires that were distributed in 3 Posyandu in the working area of Sedayu 2 Public Health Center. In addition, data collection was also done by visiting respondents' homes because they unable to come to the Posyandu.

**Data Analysis**

Sociodemographic data, maternal role, and psychosocial development were presented in numbers and percentages. The correlation between sociodemographic characteristics and maternal role and a child’s psychosocial development was analyzed using a Spearman rank test.

**Ethical Considerations**

This research protocol was approved by the institutional review board. Informed consent has been obtained from all of the study participants after being given the information about the research objectives, data confidentiality, data publication, and the right to withdraw from the study at any time.

**RESULTS AND DISCUSSION**

**RESULTS**

**Sociodemographic Characteristics and Child Psychosocial Development**

This study included 89 mothers with
children aged 36-59 months. The sociodemographic characteristics of mothers and children are shown in Table 1. The majority of mothers are more than 35 years old (67.5%), senior school graduates (48.3%), and as housewives (65.1%), and the average family income per month is IDR 500,000 - 1,000,000 (33.7%). The characteristics of children are 55% are female children at the age of 48-59 months (75.3%).

The mean score of maternal role in children with normal and delay psychosocial development is 43.20 and 37.63, respectively. This value is greater than the cut-off of the total score. While in each domain, the mean score of the maternal role is also greater than the cut-off. It means that the overall maternal role is sufficient but not adequate.

The psychosocial development of children aged 36-59 months in this study showed that 91.01% of children were in normal psychosocial development. Achievement of psychosocial development in this study is higher than the 2018 Riskesdas data (the percentage of socio-emotional development of children aged 36-59 months is 72.1%). This may be caused by differences in the timing of the assessment of the child's developmental status, the sociodemographic characteristics of parents as caregivers for children, and other input factors. However, there are still eight children (8.99%) with a delay in psychosocial development. This condition needs to be treated immediately to prevent delays in development at the next stage of age.

Correlation analysis on sociodemographic characteristics showed that only the mother's occupation was significantly related to the

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Table 1. Sociodemographic characteristics of mothers with children aged 36-59 months

<table>
<thead>
<tr>
<th>Variables</th>
<th>Psychosocial development</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Delay</td>
<td>Normal</td>
</tr>
<tr>
<td>Maternal Age (y)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17-25</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>26-35</td>
<td>1(1.1)</td>
<td>28(31.4)</td>
</tr>
<tr>
<td>&gt;35</td>
<td>7(7.9)</td>
<td>53(59.6)</td>
</tr>
<tr>
<td>Maternal educational status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary graduated</td>
<td>0</td>
<td>2(2.2)</td>
</tr>
<tr>
<td>Junior school graduated</td>
<td>0</td>
<td>20(22.6)</td>
</tr>
<tr>
<td>Senior school graduated</td>
<td>7(7.9)</td>
<td>36(40.4)</td>
</tr>
<tr>
<td>University graduated</td>
<td>1(1.1)</td>
<td>23(25.8)</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farmer</td>
<td>0</td>
<td>4(4.5)</td>
</tr>
<tr>
<td>Civil servant</td>
<td>0</td>
<td>3(3.4)</td>
</tr>
<tr>
<td>Private sector employee</td>
<td>7(7.9)</td>
<td>17(19.1)</td>
</tr>
<tr>
<td>Not employed</td>
<td>1(1.1)</td>
<td>57(64.0)</td>
</tr>
<tr>
<td>Monthly income (IDR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 500,000</td>
<td>0</td>
<td>3(3.4)</td>
</tr>
<tr>
<td>500,000-1,000,000</td>
<td>5(5.7)</td>
<td>25(28.1)</td>
</tr>
<tr>
<td>1,000,000-1,500,000</td>
<td>1(1.1)</td>
<td>27(30.3)</td>
</tr>
<tr>
<td>&gt; 1,500,000</td>
<td>2(2.2)</td>
<td>26(29.2)</td>
</tr>
<tr>
<td>Maternal role</td>
<td>37.63</td>
<td>43.20</td>
</tr>
<tr>
<td>Child sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>2(2.2)</td>
<td>38(42.7)</td>
</tr>
<tr>
<td>Female</td>
<td>6(6.8)</td>
<td>43(48.3)</td>
</tr>
<tr>
<td>Child age (months)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36-47</td>
<td>5(5.6)</td>
<td>17(19.1)</td>
</tr>
<tr>
<td>48-60</td>
<td>3(3.4)</td>
<td>64(71.9)</td>
</tr>
</tbody>
</table>

Spearman rank's test
psychosocial development of children aged 36-59 months (p=0.005).

Maternal Role and Child Psychosocial Development

The correlation analysis on the role of parents and child psychosocial development is shown in Table 1. The correlation of the role of mothers as childcare providers with the psychosocial development of children aged 36-59 months showed a statistically significant relationship (p=0.007). Analysis of each domain of the mother's role shows that there are 2 domains of the mother's role, namely the role of caregiver and the role of counselor which shows a significant relationship with the psychosocial development of children with

| Maternal role domains | Psychosocial development: | Sig.
|-----------------------|--------------------------|-----
|                       | Delay | Normal |       |
| Role as caregiver     | 9.38  | 12.44  | 0.002 |
| Remind children not to get angry or cry for no reason |
| Accompany and calm children when they have trouble sleeping or are delirious |
| Win over the child when afraid or anxious |
| Role as an educator   | 13.38 | 14.54  | 0.081 |
| Teach children to always socialize |
| Teaches not to give up easily and not to complain easily |
| Teaches that stealing is prohibited |
| Role as motivator     | 5.38  | 5.83   | 0.328 |
| Always provide motivation when children fail in learning |
| Give praise for every child's achievement |
| Role as supervisor    | 3.75  | 3.45   | 0.335 |
| Do not scold children when fighting with friends, but teach them how to solve problems |
| Role as counselor     | 5.75  | 6.94   | 0.003 |
| Give consideration to positive and negative values about something so that children can make the right decisions |

Spearman rank's test

DISCUSSION

Psychosocial Development of Children Aged 36-59 Months

Psychosocial development at the age of 36-59 months is related to how children achieve their developmental tasks to behave initiative or vice versa, namely feeling guilty (20). In this study, about 91% child show normal psychosocial development and 9% of children aged 36-60 months had a psychosocial developmental delay status. This delay was indicated by an attitude of insecurity, shame, fear of guilt in doing something, and limiting activities so that they did not appear to show the initiative side. Common cause of psychosocial development delay are maternal psychological concern (e.g. maternal depression, lower parenting self-efficacy, low maternal optimism, anxiety) (7,21), child cognitive and linguistic delay () and maternal socioeconomic status (). Maternal depression is likened to mother difficulty adapting to their new role as parents and raising a child. A mother may perform
negative parenting practices, improper stress handling, and impact on children's socio-emotional development delay (7). Cognitive and language impairment hinders a child's ability to meet demands and to build positive relationships with others. In consequences, these children are more vulnerable to experience psychosocial development delay (23).

The finding is in line with many previous studies (14, 24, 25). Study by Ghazavi et al. (25) in Isfahan showed that as many as 2% of children still experience abnormalities in personal social development. Study on 2517 children aged 43-49 months in the Netherlands with a history of premature, moderate premature, and mature groups showed abnormalities in all domains of child development with percentages of 14.9%, 8.3%, and 4.2%, respectively. The domain of personal social development in mature children shows a percentage of less than 4% (14). This means that, compared to previous studies, the delay in the psychosocial development of children 36-59 months in Indonesia is still 2-4 times higher. So efforts are needed to maximize the achievement of children's psychosocial development at this age stage.

Correlation of Sociodemographic characteristic, Maternal role and psychosocial development on child 36-59 months

Based on the results of this study, psychosocial development in children 36-59 months is significantly influenced by the role of parents and sociodemographic factors, namely the mother's occupation.

A mother's occupation has a statistically significant relationship with the child's psychosocial development. This finding is consistent with data of Riskesdas 2018, where children with parents who do not work tend to have higher psychosocial development achievements compared to children with working parents (2). This finding is also in line with previous study (8, 26, 27). Overall child development is influenced by maternal working status, undernourished, low birth weight, low level of maternal education, and family socio-economic status (26). In our study, more than half of the mothers chose to become housewives. The presence of mothers in this home provides more time to focus on family and children (8) ensures the achievement of child development tasks in each domain, and provides adequate stimulus to maximize the achievement of children's developmental tasks (28-30).

However, there are still 27% of mothers who work and have children with normal psychosocial development status. This finding supports the previous study (8) that in addition to the length of time provided by mothers to be with their children, achievement of child development tasks is also influenced by factors such as the length of mother's education and family income (8, 31). The limited time between mothers and children can be compensated by sufficient formal education of mothers and the availability of family income to meet the nutritional and health needs of children so that mothers can improve the quality of their interactions with children even in a more limited time (8).

The next finding is that the role of parents, especially mothers, is significantly correlated with the psychosocial development of children aged 36-59 months. These results are in line with previous studies (30, 32, 33).
which showed the relationship between the role of parents and the psychosocial development of school-age children. Correlation analysis of the domains of parental roles showed that the roles of caregivers and counselors were significantly correlated with the psychosocial development of children after 36-59 months. However, almost all domains of parental roles in children with normal psychosocial development showed higher scores.

The role of parents as caregivers can be in the form of teaching clean and healthy living behavior and providing healthy food intake, accompanying and calming children when they feel afraid or anxious, having trouble sleeping, and reminding children not to cry for no reason. Role as a counselor will let mother to give picture and consideration of positive and negative values about something so that children can make the right decisions and accompany children when studying at home. Mother as an educator let her teach the children about the surrounding environment, socialize, and provide motivation when children fail to learn (20,33-35). Fulfilling all roles simultaneously will strengthen mother and child attachment (36). These nurturing environments create a sense of security and comfort, the children feel accepted and loved by their parents. Children feel reassured and self-controlled and readily grow a good relationships with others (37).

The fulfillment of each dimension of the parent's role will optimize all aspects of child development. The achievement of psychosocial development tasks for children aged 36-59 months will encourage children to have a positive self-concept, be creative, dare to show initiative, be able to solve their problems according to their level of knowledge, and not always develop a sense of guilt, and ready to pursue their academic achievement optimally (7,38).

**Implication and limitation**

Research findings show that the role of parents and the quality of time between mothers and children are important for achieving the psychosocial developmental stages of children 36-59 weeks. Mothers need to provide quality time and role in providing a stimulus to achieve the level of psychosocial development of children. this needs to be educated to mothers both through public education media and through professional consultations (16).

Especially in children who have experienced abnormal psychosocial development, it is necessary to have a direct evaluation from professional health workers for assessment and treatment as early as possible. Then, parents must be trained to develop their children's skills, especially in the domains that show deviations. Collaboration between parents as primary care providers and intervention from professional health workers is expected to reduce deviations and restore the child's psychosocial development status to normal conditions. This effort also applies to other domains of child development according to their age stages.

This study has several limitations. First, this study did not involve fathers in collecting data on the role of parents and the achievement of children's psychosocial development. So it can not show the picture of the father's role in parenting. Second, the achievement of children's psychosocial development is only explored through...
mothers’ self-reports, not direct observation. So there is a possibility of recall bias and differences in perceptions about the achievement of each child’s psychosocial developmental tasks.

**CONCLUSION AND RECOMMENDATION**
The achievement of psychosocial development of children aged 36-59 months is related to the mother’s work and the mother’s role, especially the role of caregivers and counselors. Fulfilling each dimension of the parent’s role will optimize all aspects of child development, including psychosocial aspects in preschool children to become children who have a positive self-concept, be creative, dare to show initiative, can solve their problems according to their level of knowledge, and do not always develop a sense of belonging. Improving the quality of the mother’s role, both for housewives and working mothers, can optimize the achievement of children’s psychosocial development. The collaboration of the mother’s role and timely evaluation by the professional staff of children with abnormal psychosocial development is expected to return the achievement of the child’s psychosocial development stage to normal conditions.

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