



Factors Affecting Toddlers' Development in Pamekasan Regency

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A B S T R A C T

Toddlers require basic needs – stimulation, love, and care – in the process of growth and development. Parents, especially mothers, are the most important factors in performing these three tasks: honing, loving, and fostering. The mother's physical and psychological conditions, including the mother's age at marriage, education, and stimulation, will impact children's development. This study aims to determine the factors that influence toddlers' development in the Pamekasan Regency. The research method used was descriptive-analytic, with a retrospective design. This study consisted of 110 mothers with toddlers by fixed exposure sampling in Waru, Batu Marmar, and Pasen Public Health Center. The dependent variable was the toddlers' development. The independent variables were the mother's age at marriage, family income, stimulation, mother's LILA during pregnancy, and birth weight. The analysis used the path analysis method. The results showed that the toddlers' development was influenced by the mother's age at marriage ($b = 0.07$, $SE = 0.02$, $p = 0.001$), family stimulation ($b = 0.02$, $SE = 0.01$, $p = <0.001$) and birth weight ($b = 0.00$, $SE = 0.00$, $p = 0.373$). This study concludes that maternal marriage age, family stimulation, and birth weight affect toddlers' development.

INTRODUCTION

Toddlers are children in the age range of 0-5 years, while other definitions describe toddlers are in the age range of 0-3 years (Adriani, 2012). It is the golden age period because of fast growth and development (Prasetyawati, 2011). So that at this time, the role of parents and the environment will be very influential in determining the success of the next process.

Factors that can influence the process of child development include genetic factors and environmental factors. Environmental factors themselves include conditions during the prenatal, natal, and postnatal periods. One of the prenatal factors can come from the mother, namely the mother's age at marriage and her education. The mother's age at marriage will determine the mother's physical and psychological readiness to accept her new role.

Based on existing data, for rural areas, the early marriage ratio fell from 72 per 1,000 marriages in 2012 to 67 per 1,000 in 2013. The early marriage ratio was inversely different from urban areas. In 2012, its incident was 26 out of 1,000 marriages and increased to 32 out of 1,000 marriages in 2013. Meanwhile, according to Statistics Indonesia, in 2015, one in five women has married before the age of 18. Whereas in Pamekasan Regency in 2017, it reached 30% of the total adolescents (Statistics Indonesia, 2016). On

August 15, 2018, the preliminary study results obtained data about young women who had early marriage in the past year. From 3 working areas in the community health center of Batumarmar, Waru, and Pasean, the highest rate was in Pasean community health center.

Meanwhile, the natal factor is the mother's health during pregnancy – evaluation in the mother's upper arm circumference (LILA) during pregnancy – and perinatal, namely the baby's condition at birth, such as birth weight. The number of births with LBW in Pamekasan Regency in 2015 was 396 babies (3.1%). This number has decreased compared to 2014, which was 398 babies. Delivery with low birth weight should be a particular concern because this condition is closely related to neonates mortality (0-28 days) (Pamekasan, 2016).

In addition to genetic and environmental factors for toddlers, other factors also show significant results on children's development: economic status, education, and children's position in the family (Lestari RD, Novadela T., 2016). Children who get adequate nutritional intake also show age-appropriate growth and development (Lindawati, 2012). The current process of child development will influence future success. Thus the development of toddlers must get good attention from various parties. One of them is by doing early detection of children's growth and development according to their age. One of the tools in monitoring children's growth and development is the KMS book, which is currently also in the KIA book (Maternal and Child Health).

METHOD

The research method was descriptive-analytic, with a retrospective design. The research was carried out from September to December 2018 in the Waru, Batu Marmar, and Pasean Community Health Center. The study population was mothers who had children under five. There were 110 respondents in this study. The independent variables were the mother's age at marriage, family stimulation, income, mother's LILA during pregnancy, and the toddlers' birth weight. At the same time, the dependent variable was the toddlers' development. Data collection utilized a questionnaire given to the mother and the MCH Handbook for LILA data and birth weight. The authors obtained child development data from the KIA book. Then the data was collected and then processed using path analysis.

RESULTS

Table 1 Frequency Distribution of Research Variables

Variables	Frequency	Percentage (%)
1. Age at Marriage		
<16 years	30	27.3
≥ 16 years	80	72.7
2. Family Income		
Low (<1,588,000)	42	38.2
High (≥1,588,000)	68	61.8
3. Stimulation		
Less	23	20.9
Adequate	87	79.1
4. LILA While Pregnant		
<23.5 cm	36	32.7
≥23.5 cm	74	67.3
5. Birth Weight		
<2500 grams	40	36.4
≥ 2500 grams	70	63.6
6. Toddlers' Development		
Age-appropriate	99	90
Not Age-appropriate	11	10
Total	110	100

Table 1 shows that most of the respondents are married at ≥ 16 years old, have high family income, give adequate stimulation to their child, and have Lila ≥23.5cm while pregnant. Mostly, their babies' born weight is ≥ 2500 grams. 90% of the respondent's children have age-appropriate development.

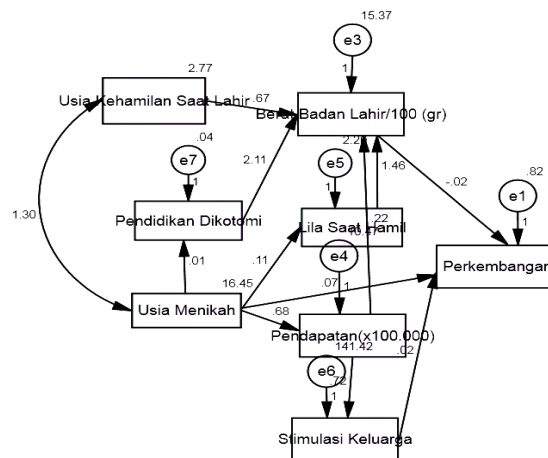


Figure 1 A structural model with unstandardized solution variables

Figure 1 shows that toddlers' development is directly affected by age at marriage, family stimulation, and birth weight. Meanwhile, LILA during pregnancy and family income is indirect factors.

DISCUSSION

This study indicated a direct relationship between the mother's age at marriage and toddlers' development. The effect of the correlation was positive and statistically significant. Children who have mothers with young ages tend to have more disruption in language development. The social-emotional of young mothers also has more problems. Mothers' ability to make social interactions with the environment will indirectly affect parenting and impact children's development (Bhattacharya T, Ray S, 2017).

Furthermore, there was an indirect correlation between LILA during pregnancy and toddler development (Figure 1). This indirect correlation is because of: 1) The effect of a positive relationship between the mother's LILA during pregnancy and birth weight 2) The impact of a positive relationship between birth weight and development. Meeting the needs of *asah* and foster care in the first year of life will affect the child's growth in the following year (Pem D., 2015). Birth weight has a direct influence on toddler development. The body weight at birth influences development during childhood. Children born with LBW are at risk of experiencing problems in their development. External factors such as the environment, stimulation, and parenting can change these conditions. Even though children born with low birth weight, they still have the opportunity to grow and develop when they received adequate external factors (stimulation and parenting) (Linsell L, Malouf R, Morris J, Kurinczuk JJ, 2015). Family income has an indirect effect on toddler development. This indirect correlation is because of: 1) The impact of a significant positive relationship between income and family stimulation. 2) The effect of a positive relationship between family stimulation and development is statistically significant. Socio-economic status affects health status, especially in children (Eddy, 2009).

Family stimulation has a direct effect on toddler development. Development during childhood is a key for the continuation of a generation's life and a nation's progress. Learning in childhood can be used as a basis for well-being in adulthood. The first year of life is a critical period for child development. Therefore, we need optimal efforts for the continuity of growth and development. Parents/caregivers should provide stimulation as often as possible to children, so there will be no developmental abnormalities experienced by children (McCoy, D.C., et al., 2016)

CONCLUSIONS

This study concludes that maternal marriage age, family stimulation, and birth weight affect toddler development. Further research should consider evaluating other determinant factors that influence toddlers' development.

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