Factors associated with child neglect in Indonesia: Findings from National Socio-Economic Survey

Sarni Maniar Berliana a, Ariani Wulan Augustia b, Praba Diyan Rachmawatia c, Retnayu Pradanie c, Ferry Efendia d,⁎, Gading Ekapuja Aurizkic e

a Politeknik Statistika STIS, BPS-Statistics of Indonesia, Jakarta, Indonesia
b BPS-Statistics of Kabupaten Rokan Hulu, Riau, Indonesia
c Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia
d School of Nursing and Midwifery, La Trobe University, Melbourne, Victoria, Australia

ARTICLE INFO

Keywords:
Neglected children
Multilevel binary logistic regression
Indonesia national socio-economic survey

ABSTRACT

This study aimed to identify the factors that affect the incidence rate of neglected children in Indonesia by considering the household effect. Neglect is a form of child abuse by not fulfilling or ignoring their basic needs. Neglected children are a complex social problem. This is a multidimensional problem, since the cause cannot be seen only based on individual characteristics, but it must also consider the household variation effect. The data was collected from a secondary source, namely the Socio-Culture and Education Module of the 2012 National Socio-Economic Survey (NSES-SCEM) that consisted of 75,000 households' data. The response variable was the child status of neglect, while the explanatory variables included a child's background characteristics at individual and household levels. Two-level binary logistic regression with a random effect was applied. The regression model results show that neglected children were more commonly boys, had one or both parents dead, were younger in age, have another neglected child in the households, have disabilities, live in an uninhabitable house, headed by young and/or lower educated adults, had lower economic status, have higher underage family members, had unemployed parents, and lived with one of her/his parents. The current study found that the individual and household level remains an important aspect of child neglect in Indonesia. Policies in Indonesia should be directed to improve household welfare and to create a specific intervention to identify and assist vulnerable children in society.

1. Introduction

Every human has the right to a decent standard of living, and this is no exception for a child. The United Nations Convention on the Rights of the Child asserted that every child has the right to obtain adequate support for their development in terms of his/her physical, moral, mental, social, and spiritual aspects (Lundy & Byrne, 2017; Ruck, Keating, Saewyc, Earls, & Ben-Arieh, 2016; UNCRC, 1989). Unfortunately, the fulfillment of these rights is still far from expectations. On a global scale, cases of child maltreatment are still at an alarming rate, which leads to serious adverse outcomes (Ferrara et al., 2016). The most common and fatal form is child neglect, which reaches up to two-thirds of the maltreatment cases (Braham et al., 2018; Dubowitz, 2013, 2014; Hornor, 2014). Child neglect is a complex form of persecution, which is included under the umbrella of physical or sexual torture (Zuravin, 1999). According to Petersen, Joseph, and Feit (2014), neglect is one form of abuse in children that is done by not providing adequate supervision; not protecting children; and not fulfilling or ignoring their basic needs, including physical, educational, and emotional.

Child neglect causes adverse effects, such as problems with cognitive, social and emotional development (Benedan, Powell, Zajac, Lum, & Snow, 2018; Geoffroy, Pereira, Li, & Power, 2016), substance use (Oshri et al., 2018), self-harm (Paul & Ortin, 2017), lower social living ability (Wang et al., 2019), psychiatric and neurological problems (Ferrara, 2014), the continuity of neglect to their own children (Merrick & Guinn, 2018), and the potential for wanting revenge on the people who neglected them (Johnson & James, 2016).

In 2006, 30.6 per 1000 children were neglected (Dubowitz, 2014). According to the World Health Organization (WHO) (2013), the global
prevalence of physical and emotional neglect was 16.3% and 18.4% respectively. In the US, 6.07% children were neglected in the past year, and around 15.14% have a history of being neglected at least once in their lifetime (Vanderminden et al., 2019). In developed countries, such as the United States and United Kingdom, child neglect is common. USDHHS, ACF, ACYF, and Children's Bureau (2017) estimated approximately 674,000 American children are abused and neglected. In the UK, 5% of children under 11 years old had experienced neglect once in his/her lifetime, while the neglect rates in adolescents 11–17 years old and 18–24 years were 13.3% and 16.0% respectively (Radford et al., 2011). Meanwhile, in the Asia-Pacific population, child maltreatment is common, though the prevalence cannot be generalized across the region due to differences in cultures (Dunne et al., 2015).

In Indonesia, neglected children have been defined in Law No. 35 of 2014, article 1 paragraph 6 as “a child who is not fulfilled his/her needs properly, either in physical, mental, spiritual or social” (Child Protection Act, 2014). In 2011, the Central Bureau of Statistics and the Ministry of Social Affairs conducted a survey on the number of neglected children in Indonesia. The sample consisted of children aged five through to 18 years old, and as many as 58,172 children. The survey categorized the data into three groups; “neglected”, “almost neglected”, and “not neglected”. It was found that between 2003 and 2009, the number of neglected children fluctuated. It peaked at 6% (3395 children) in 2006 but declined to 5.36% (3116 children) in 2009.

There are several previous studies regarding the risk factors or predictors for child maltreatment, as well as child neglect (Altiparmak, Yildirim, Yardinci, & Ergin, 2013; Clément, Bérubé, & Chamberland, 2016; Evans & Burton, 2013; Gu et al., 2011; Ha, Collins, & Martino, 2015; Hibbard & Desch, 2007; Hua et al., 2014; Jones & McCurdy, 2009, the number of neglected children aged

2. Materials and methods

2.1. Design

This study used secondary data from the Socio-Culture and Education Module of 2012 National Socio-Economic Survey (SESM). The survey was conducted by the Central Bureau of Statistics (BPS) every year. The first survey was conducted in 1963, which was designed to have three modules: the household consumption/expenditure module, the socio-cultural and education module, and the housing and health module to examine the household characteristics in more detail.

2.2. Data collection

SESM are held each year by asking core questions about the community welfare of society. The modules are implemented every three years in turn. In 2012, the number of the samples was 300,000 households divided into four quarters. The Socio-Culture and Education Module (SCEM) was implemented in the third quarter, with a sample of 75,000 households. The data from each quarter has been able to estimate the national and provincial level situations (BPS, 2015). The survey sampling was done gradually (two stages). The first stage, was the selection of an enumeration area/census block (BS), while the second stage was the household selection.

This research identified unmarried household members aged 5–17 years old as our eligible unit of analysis. We found there to be 73,055 unmarried household members aged 5–17 years old as analysis unit level one, and 42,437 households as analysis unit level two.

2.3. Research variables

The response variable in this study was the status of being a neglected child (yes or no). The compilation of neglected child variables were derived from the scoring of the neglected child indicators taken from database of the 2012 SESM Block VA on the individual description of functionalities/disabilities, socio-cultural, and educational information for all ages and Block IV on the information of the household members.

The determination criteria of being a neglected child was as follows: (1) never attending school, not attending school anymore, or not graduating from elementary school; (2) consuming staple food < 14 times a week; (3) consuming vegetable protein less than or equal to four times, and animal protein less than or equal to two times a week; (4) having less than four sets of clothing; (5) having no permanent place to sleep; (6) not getting treatment while sick; (7) being an orphan or the biological father is not a member of the household; and (8) working or helping to earn income (for residents < 15 years old). A child is categorized as being neglected if at least two of the criteria are fulfilled. As a note, the criteria number (1) does not apply to household members aged five to six years old.

The explanatory variables used in this study consisted of a child's background characteristics as level one variables, and household or parental characteristics as level two variables. The explanatory variables at level one were a child's gender, dead or alive parents, child's age, other neglected children in the family, and child's disability status. Meanwhile, the explanatory variables for household level were the number of adults in household, housing condition, education level of the head of the household, age of the head of the household, gender of the head of the household, level of household expenditure per capita, number of under-aged children in the household, working status of the parents, and living arrangements.

One of the important explanatory variable to explain is housing condition. Inhabitable housing is a composite indicator of several variables, i.e., source of drinking water, sanitation facilities, lighting, floor area per capita, and the main material of floor, roof, and wall area.
Each variables was given a score of one for poor quality. The maximum score for inhabitable house is one, and that for an almost inhabitable house is two. If the score for housing condition is more than three then it is categorized as uninhabitable house.

2.4. Analysis approach

The analysis methods used in this study were both descriptive and inferential. The descriptive analysis was used to provide an overview of the distribution of neglected children in Indonesia based on their background characteristics. The inferential analysis of the two-level binary logistic regression was used to analyze the factors that affect the neglected children by taking into account the household effects.

This method was used with the assumption that there is a correlation in child neglect risk among children from the same household. We computed the scale parameter to identify additional variations because of the household effect. If this parameter turned out to be zero, then the model could be reduced to ordinary binary logistic regression. We also computed intra-class correlation (ICC) to determine whether the multilevel analysis fits. The higher the ICC, the more appropriate the multilevel analysis. Two-level binary logistic regression with a random intercept is a generalized linear mixed model (GLMM) (Wong & Mason, 1985) or Hierarchical Generalized Linear Model (HGLM) (Snijders & Bosker, 2012).

3. Results

3.1. Neglected children according to their background characteristics

The final number of eligible children as the level one units in this study consisted of 73,055 children, from 42,437 households as the level two units. There were 16,189 children (22.2%) categorized as being neglected. The data reveals that almost 50% (20,983) of households contributed more than one neglected child. This information suggests interdependence within the unit of analysis that justified the application of a multilevel regression model to the data.

Table 1 shows that the percentage of neglected children is higher among the children who were boys, had one or both parents dead, had other neglected children in the household, had a disability, whose households had higher number of adult household members, lived in uninhabitable house, whose households were headed by woman, low educated, and younger person, comes from lower economic status, have more underage household members, have working parents, and live with one of his/her parents.

3.2. Factors affecting the neglected children

The two-level binary logistic regression model gave a log-likelihood value of $-19,935.49$ (p-value = .0000). This means that at least one of the explanatory variables have a significant effect on child neglect. The scale parameter ($\sigma$) is 1.09 which is different from zero with ICC = 26.46% (p-value = .000). This means that 26.46% of the total variation of child neglect can be explained by the household variation. This justifies the application of a multilevel model with random effect to the data (Table 2).

The full model of logistic regression model indicated there to be 12 significant variables out of a total of 14 explanatory variables. All child’s characteristics as level one variables were significant, i.e., gender of the child, age of the child, one or both of the parents dead, disability status, and the existence of another neglected child in the household. Meanwhile, the significant household variables as the level two variables were housing condition, education level and age of the head of the household, household expenditure per capita, number of underage members, parent’s working status, and living arrangements. The number of adults in the household and gender of the head of household are not significant statistically affecting child status of being neglected.

Table 3 shows adjusted probability of child neglect according to background characteristics. The probability of child neglect varies among children with the same characteristics. For example, the probability of a boy to be neglected ranges from 0.019 when the random effect of the household is twice the negative standard deviation (low risk child) to 0.606 when the random effect of the household is twice the positive standard of deviation (high risk child). In other words, we can say that 95% of boys have probability to be neglected from 0.019 to 0.606 or 69% of boys have the probability to be neglected from 0.055 to 0.341. We can analyze other characteristics in the same manner.
Table 2
The coefficient of the parameters and odds ratios of the two-level binary logistic regression model for neglected children.

<table>
<thead>
<tr>
<th>Covariates</th>
<th>Estimated parameters</th>
<th>Odds ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-3.909</td>
<td></td>
</tr>
<tr>
<td>Gender of child</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boy</td>
<td>0.162</td>
<td>1.18***</td>
</tr>
<tr>
<td>Girl</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>One or both of the parents has passed away</td>
<td>1.108</td>
<td>3.03***</td>
</tr>
<tr>
<td>No</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Age of child</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5–6</td>
<td>0.269</td>
<td>1.31***</td>
</tr>
<tr>
<td>7–12</td>
<td>-0.057</td>
<td>0.94</td>
</tr>
<tr>
<td>13–17</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Other neglected children in the household</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>No other neglected child</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Other neglected children</td>
<td>5.672</td>
<td>290.62***</td>
</tr>
<tr>
<td>Disability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No disability</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Low disability</td>
<td>1.104</td>
<td>3.02***</td>
</tr>
<tr>
<td>High disability</td>
<td>2.418</td>
<td>11.22**</td>
</tr>
<tr>
<td>Number of adults in the household</td>
<td>-0.014</td>
<td>0.99</td>
</tr>
<tr>
<td>Housing condition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uninhabitable house</td>
<td>1.531</td>
<td>4.63***</td>
</tr>
<tr>
<td>Almost inhabitable house</td>
<td>0.602</td>
<td>1.83**</td>
</tr>
<tr>
<td>Inhabitable house</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Education level of the head of the household</td>
<td>1.2065</td>
<td>3.34***</td>
</tr>
<tr>
<td>Uneducated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary school</td>
<td>0.731</td>
<td>2.08**</td>
</tr>
<tr>
<td>Senior high school</td>
<td>0.404</td>
<td>1.50**</td>
</tr>
<tr>
<td>Higher education</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Age of the head of the household</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥20 y.o</td>
<td>1.302</td>
<td>3.68***</td>
</tr>
<tr>
<td>&lt; 20 y.o</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Gender of the head of the household</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>0.211</td>
<td>1.23</td>
</tr>
<tr>
<td>Household expenditure per capita</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥province average</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>&gt; province average</td>
<td>1.252</td>
<td>3.50***</td>
</tr>
<tr>
<td>Number of under-age children in the household</td>
<td>0.086</td>
<td>1.09***</td>
</tr>
<tr>
<td>Parents’ working status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both working</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Only the head of the household working</td>
<td>-0.096</td>
<td>0.91***</td>
</tr>
<tr>
<td>Only the spouse working</td>
<td>-0.101</td>
<td>0.90</td>
</tr>
<tr>
<td>Both not working</td>
<td>0.043</td>
<td>1.04</td>
</tr>
<tr>
<td>Living arrangement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Living with the head of the household and their spouse</td>
<td>0.164</td>
<td>1.18</td>
</tr>
<tr>
<td>Only with the head of the household</td>
<td>0.760</td>
<td>2.14**</td>
</tr>
<tr>
<td>Scale parameter (σ)</td>
<td>1.088</td>
<td></td>
</tr>
</tbody>
</table>

*p-value < .1.  
*p-value < .05.  
*p-value < .001.

4. Discussion

4.1. Neglected children based on the gender

Although this study found that boys have nearly 1.2 times higher the risk of being neglected, the percentage of neglect among boys was slightly higher than girls at 23.0% and 21.2% respectively. Several studies revealed that boys are more likely to be neglected than girls (Akmatov, 2011; Egry et al., 2015; Tursz, 2011; Zhao et al., 2018). The boys are expected to be the breadwinner of the family, so their parents usually abandon them as a part of training before they assume responsibility in their adulthood (Akmatov, 2011). Based on cultural point of view, gender that is considered has special role is usually treated preferentially (Hua et al., 2014). In Indonesia, for instance, many people believe that it is a disgrace for neglecting a girl due to their future role as mother and household manager. Moreover, the victim’s gender is also related to the gender of the aggressor (Egry et al., 2015). For example, fathers who have an educational role tend to be tough on boys, rather than girls.

However, Cathy (2005) stated that the neglect rates of both genders do not differ greatly. These findings show that the association between neglect and gender is frequently inconsistent, as stated by Connell-Carrick (2003). The equal distribution of neglect between the genders has been found in several studies (Abbasi, Saeidi, Khademi, Hoseini, & Moghadam, 2015; Makhlof & Rambaud, 2014; Stolenborgh, Bakermans-Kranenburg, & van IJzendoorn, 2013). Nonetheless, there are several arguments that can explain why these differences arise.
First, a certain gender is likely to be more vulnerable to certain types of neglect. For instance, girls are more prone to sexual abuse, while boys are more prone to physical neglect (Abbasi et al., 2015; Watson, 2005). Second, for those who are the victims of intergenerational neglect, the gender of the neglected child is usually the same as those who do the neglecting (Oshio & Umaeda, 2016). Our study did not specifically examine the types of neglect, as well as intergenerational neglect, so this study cannot prove these statements.

4.2. Neglected children based on one or both parents passed away

A child whose biological parents have passed away, or one of them, has a tendency to be neglected three times higher than a child whose parents are alive. This corresponds with studies stating that neglect cases are higher in single-parent households (Sedlak et al., 2010) and lower where there are children with two biological parents (Vanderminden et al., 2019). In addition, orphans are more likely to bear the brunt of neglect (Hermenau, Eggert, Landolt, & Hecker, 2015), either in the form of intra-household discrimination, material neglect, school neglect, child labour, exploitation, as well as emotional, sexual, and physical abuses (Morantz et al., 2013). In addition, children living with a single parent encounter a higher risk of parental violence than those with two parents (Berger, 2005). There are several reasons why the absence of parenthood from one or both parents causes neglect. Many single parents, particularly mothers, reported extreme fatigue and stress (Elias, Blais, Williams, & Burke, 2018), which is strongly associated with neglect and abuse (Barnhart & Maguire-Jack, 2016). Meanwhile, in terms of children’s concerns, their bereavement experience due to parental loss leads to delinquent behavior (Draper & Hancock, 2011), which often causes stigmatization (Hermenau et al., 2015). A review study conducted in sub-Saharan Africa found there to be several predisposing factors causing neglect in orphaned children, namely poverty, non-biological caregivers, stigma, and alcohol abuse (Morantz et al., 2013). These reasons indicate that neglect among orphans or children with single parents is related to a maladaptive transaction response. The parents cannot deal with a single-parenting role, while the children have difficulty adapting to the death of their parent(s). Their family readjusts, which usually reduces the affection and attention given to the children. Moreover, it often gets worse due to stigmatization from society.

4.3. Neglected children based on the age of the child

This study found that younger children are more likely to be neglected than older children, although the percentage distribution difference is not great, around 20%. Children five to six years old, the age group with the highest rate of neglect, are about 1.3 times more likely at risk than those aged 13–17 years old. This corresponds to some studies that state infants and toddlers are more likely to suffer from neglect and other maltreatment (Akmatov, 2011; Makhlof & Rambaud, 2014; Tursz, 2011; Watson, 2005; Zhao et al., 2018). The reason for this is because children within those age groups are vulnerable and too dependent on their caregivers (Zeanah & Humphreys, 2018). If the caregivers abandon them, then they cannot take care of themselves. In addition, stressed parents can also trigger neglect (Barnhart & Maguire-Jack, 2016), especially in toddlers who have troublesome tendencies. In addition, the younger children can be the victims because neglect could begin in the very early phases of life (Tursz, 2011). Therefore, supervision and precautions must be given to younger children because they are very dependent on parents and have a higher tendency to misbehavior than their older counterparts.

4.4. Neglected children based on the existence of other neglected children in the household

The likelihood of a child being neglected where there are other neglected children in the household was > 290 times compared to those where there was no neglected child. This is because they are subjected to the same caregiver in the household. A child whose siblings or relatives are stranded has a higher tendency to be neglected compared to a child who has no neglected siblings or relatives (Zhao et al., 2018). The household characteristics, such as being at risk of having neglected children, are affected by the household’s resources. A household with limited resources, particularly due to having too many members, tends to be more at risk of having neglected children, resulting in all children in the family experiencing neglect (Berger, 2005; Jones & McCurdy, 1992). In this case, if a household suffers from poverty resulting in one child being neglected, and they have another child in the household, then it is almost certain that the other child will be neglected as well (see Table 3). Children who live in a large family are more at risk of being neglected (Sedlak et al., 2010). Furthermore, children with siblings have a higher abandonment possibility than those without siblings. This is because a child in one-child families will get more attention than those who have siblings (Zhao et al., 2018). This variable, the existence of other neglected children in the household, has the highest odds ratio compare to other explanatory variables in the model. As mentioned above, almost half of the households on this study had more than one neglected child. It could explain the high odd ratios.

4.5. Neglected children based on the disability status

Children with low and high severity disability are more likely to be neglected, about three and 11 times higher than non-disabled children, respectively. This finding is consistent with several studies stating that children with disabilities, such as multiple development delays, mental retardation, and behavioral problems, as well as learning and physical disabilities, are at the highest risk of being neglected (Hibbard & Desch, 2007; Olatosi, Ogordi, Oredugba, & Sote, 2018; Perrigo, Berkovits, Cederbaum, Williams, & Hurlburt, 2018; Sedlak et al., 2010). They are also more likely to be maltreated, re-referred for treatment, and placed in foster care (Kistin et al., 2016). The neglect of a child with a disability can be attributed to the stress and feelings of distress felt by the parents related to the unmet expectations regarding their child’s condition (Bruhn, 2004). Moreover, an inadequate children’s welfare system in society itself is also one factor causing neglect (Helton & Bruhn, 2013). Although the causal relationship between neglect and disability is still unclear and complex (Leeb, Bitsko, Merrick, & Armour, 2012), one thing that is certain is that disabled children are very vulnerable to neglect. This is not only due to their young age, but also due to their limited physical and mental condition. The situation will get worse if the parents and the community around them are not friendly towards disabled children.

4.6. Neglected children based on the number of adults in the household

Neglected children are likely to be higher in households with more adults. The percentage of children living with more than nine adults was higher than the percentage of neglected children living with one to two adults, 33.3% and 22.7%, respectively. The incidence rate of neglected children was the highest for children who had a large family (Connell-Carrick, 2003; Sedlak et al., 2010). Moreover, living with too many adults will leave small space for children to develop, which can be categorized as environmental neglect (Mennen, Kim, Sang, & Trickett, 2010). However, this study shows that the number of adults in the household does not significantly affect the risk of child neglect. A solid study reported that family factors elevated the risk of neglected children (Al Odhayani, Watson, & Watson, 2013; Cozza et al., 2019). Another study shows that the larger number of family members in a household would decrease the tendency of child neglect because there would be more people looking after the children—for example, grandparents or other relatives (Hua et al., 2014). Therefore, the non-significant results may be caused by the data collection methods, which
used the household approach, not family. Hence, households in the samples were extended family where each family member still had blood ties, so the responsibility to take care the children of their relatives is relatively high.

4.7. Neglected children based on housing condition

Children who live in almost inhabitable houses are almost twice more likely to be neglected than children who live in inhabitable house. Moreover, those who live in uninhabitable houses are nearly five times more likely to be neglected. This finding corresponds to the results of a study stating that unsafe and overcrowded housing is associated with child neglect and maltreatment (Affi et al., 2015), and that nearly 16% out-of-home placements among intact families is caused by inadequate housing (Fowler et al., 2013). Uninhabitable house contributes to child neglect because of its danger to the health of the inhabitants, especially children (Shanahan et al., 2017), and the underfilment of the child’s physical needs (Duva & Metzger, 2010). The conditions of uninhabitable houses make it difficult for the parents to meet their children’s needs completely due to the limited facilities available. Sometimes they even ignore essential aspects, such as education and health. Regular monitoring in this type of housing is urgently needed to prevent the occurrence of neglect cases. In addition, housing improvement programs from the government and other related parties are needed so that the house is inhabitable for children.

4.8. Neglected children based on the education level of the head of the household

The education level of the head of the household is strongly associated with child neglect. The percentage of neglected children tends to be higher in a family with a less-educated head. This study found that the occurrence of neglect cases in households with an uneducated head was around 3.3 times higher than those with a degree. The higher the education level, the smaller child neglect tendency. This finding is consistent with other studies that revealed that the low education level of the parents, as well as the head of the household, is a risk factor for child neglect, and vice versa (Mulder, Kuiper, van der Put, Stams, & Assink, 2018; Sediak et al., 2010). Having a low education is a socio-economic disadvantage which exposes the family to poverty pressure that creates barriers to meeting basic family needs, including children’s necessities, that consequently resulted in child neglect (Barth, 2009; Maguire-Jack & Klein, 2015). The neglect is frequently used as punishment for children’s non-compliance (Bilge, Tasar, Kılınçoglu, Ozmen, & Tiras, 2013). Therefore, less-educated heads of the family tend to vent their life difficulties to their children because they have a low intellectual capacity when it comes to identifying the actual problems. This is also the reason for their incompetence when it comes to seeking out more appropriate and fair punishments for their children.

4.9. Neglected children based on age of the head of the household

The percentage of neglected children is more pronounced in those coming from households headed by younger persons than by older persons. The children with younger-headed household are 3.7 times more likely to be neglected than their counterparts. This finding corresponds to the report of the WHO Regional Office for Europe, which stated that young parents under the age of 20 are a risk factor for child maltreatment (Braham et al., 2018; World Health Organization, 2013). A study from Pakistan also found that younger age mothers are more likely to maltreat their children due to a lack of parenting skills and experience (Lakhdir et al., 2019). It has been proved by some studies that limited parenting knowledge and ability is associated with repeated neglect by the perpetrators (Hockenberry & Wilson, 2013; Kim et al., 2019). This finding shows that having children at a very young age has a negative impact, especially for the children. A person at this age is commonly still less mature and has a degree of emotional instability. There should be several years of experience before one should take on the responsibility of caring for children.

4.10. Neglected children based on the gender of the head of the household

The percentage of neglected children coming from households headed by women is greater than those coming from households headed by men because households headed by women tend to be more vulnerable to poverty (Appleton, 1996; Oginni, Ahonsi, & Ukwuuje, 2013). The poverty condition is related to neglect (Carter & Myers, 2007). In order to meet the family necessities required, this means that women have less time to take care of their family members, especially children. This very difficult condition can cause stress up to the point of depression for the caregiver. Moreover, mothers are more likely to experience extreme fatigue and stress (Elias et al., 2018), which leads to the act of neglect and abuse (Barnhart & Maguire-Jack, 2016). This might increase the risk of child neglect, either physically or emotionally (Shanahan et al., 2017).

Although the odds ratio from the regression model in this study shows that children coming from households headed by women tend to be more likely to be neglected, this effect is not significant statistically. In Indonesia, women-headed household are more likely to get support from Indonesia’s major social protection programs, such as Raskin (rice for poor households), Jamkesmas (health insurance for the poor program), BLT (unconditional cash transfer), and PKH (conditional cash transfer) programs (The World Bank, 2012a, 2012b). Women-headed households also manage to support their needs from financial assistance from other family members, such as siblings, parents, and children living outside the household, while men-headed households are less likely to depend on outside assistance (Schaner, 2012).

4.11. Neglected children based on household economic status

The percentage of neglected children coming from low-status households is greater than those from high-status households at 49.4% and 22.1% respectively. What might be explained from these results is that households with a low economic status tend to find it difficult to meet their daily basic needs, especially when it comes satisfying the children’s needs for their physical and intellectual growth (Duva & Metzger, 2010). This study found that children from a lower economic status are 3.5 times more likely to be neglected than those from wealthier households. This finding is in accordance with a previous study that showed there to be a relationship between lower socio-economic status and child neglect (Braham et al., 2018). Another study also stated that poverty is a major factor in child neglect (Barth, 2009). Poor households will experience difficulties when it comes to fulfilling all household needs, and this is closely related to the stress experienced by the parents (Berger, 2005; Featherstone et al., 2017). Therefore, supports from the government and other related parties are needed to enhance the children’s welfare, especially those coming from low-end family.

4.12. Neglected children based on the number of underage household members

The percentage of neglected children is greater in households with more children under seven years old. The more underage children in the household, the higher the percentage of neglected children. The odds ratios of this variable are 1.1 and this is statistically significant. This means that for every increase of one underage child in the household, the odds of child neglect are 1.1 times higher. This finding is in line with a previous study that large family size with children of more than two has significant effect on child neglect (Mulder et al., 2018). Children younger than seven years old will be very dependent on their parents (Straus & Kantor, 2005).
4.13. Neglected children based on the parents' working status

The highest percentage of neglected children is among households with only the spouse working, followed by households with both parents working, 30.6% and 24.5% respectively. The lowest percentage is among children in households where both parents were not working. 30.6% and 24.5% respectively. The lowest percentage is with only the spouse working, followed by households with both parents working. Children from households headed by one working person are less likely to be neglected than those from a household where both parents are working. The explanation of these findings is related to the time used for caring for the children at home. The results of this study indicate the need for a task division for parents as primary caregivers. Parents who work play the role of breadwinner, ensuring the fulfillment of the child's needs (Slack, Holl, McDaniel, Yoo, & Bolger, 2004; Child Welfare Information Gateway, 2012). Parents who do not work play a role in taking care of the children at home.

4.14. Neglected children based on living arrangement

The percentage of neglected children was lower among the children who lived with both the head of the household and his/her spouse, rather than among those who lived with only one of them. The regression model gave similar results to the descriptive analysis that the lowest odds ratio of child neglect was among children who lived with both the head of the household and his/her spouse. The model also showed that the odds ratio of children who lived only with the spouse of the head of the household is higher than those with the head of the household, 2.1 and 1.2 respectively. A previous study gave similar results, stating that children who lived only with the head of the household were three times more likely to be neglected than those who lived with both the head of the household and his/her spouse (Berger, 2005; DePanfilis, 2006). The absence of father in parenting involvement and financial support elevated a single mother to maltreat her children (Barnhart & Maguire-Jack, 2016; Schneider, 2017).

4.14.1. Limitation

Previous studies have shown that the characteristics of children and parents significantly influence the tendency of child neglect. Because the ultimate sampling unit in NSES-SCEM is household, it is quite difficult to obtain variables that reflect the characteristics of the child and the biological parents. Although the head of the household can be loosely translated as the parent of the child under study, this is not always true. Therefore, the analysis in this paper must be understood carefully and wisely.

5. Conclusions

This study shows that Indonesian children being neglected remains prevalent. All the individual level variables in this study were significant, namely gender of the child, one or both parents dead, age of the child, the existence of other neglected children in the household, and child's disability status. There were seven significant household-level variables, such as housing condition, the education level of the head of the household, the age of the head of the household, the household's economic status, the number of underage household members, the parents' working status, and living arrangements. All the significant variables are in line with previous studies. However, there is one variable that has the largest influence on the likelihood of child neglect in Indonesia, namely the presence of other neglected children in the household. One neglected child is already a problem, moreover, if their number is more than one in a household.

This research can be a referenced with national scope for the condition of child neglect in Indonesia. The determinants of child neglect are very complex and require a multistakeholder approach to treat and prevent neglect. Further research is needed to learn more about the in-depth factors affecting child neglect by adding contextual variables at a higher level, such as the community or regional level, to provide more knowledge about the variables that affect child neglect supported by ecological or socio-ecological theory.

Furthermore, further studies could be carried out on the subtypes of child neglect, for instance, physical neglect, educational neglect, emotional neglect, and supervisory neglect. It is expected to portray comprehensively the situation of neglected children in Indonesia.

Acknowledgment

N/A.

Declaration of Competing Interest

The authors declare no conflict of interest.

References


