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

Sarni Maniar Berliana[a], Ariani Wulan Augustia[b], Praba Diyan Rachmawati[c], Retnayu Pradanie[c], Ferry Efendi[c,d,*], Gading Ekapuja Aurizki[c]

[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

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 level. 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, Yardimci, & 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, 1992; Kim et al., 2019; Klevens, Ports, Austin, Ludlow, & Hurd, 2018; Li, Zhong, Chen, Zhong, & Pan, 2015; Maguire-Jack & Font, 2017; Shanahan, Runyan, Martin, & Kotch, 2017; Tursz, 2011; Wang et al., 2015; Zhao, Bi, Chen, Wu, & Sun, 2018; Zhong et al., 2015; Zielinski, Paradis, Herendeen, & Barbel, 2017) and its impact to future adverse outcomes (Bunting et al., 2018; Hartley, Mullings, & Marquart, 2013; Macedo, von Werne Baes, Menezes, & Juruena, 2019; Sylvestre & Mérette, 2010). Those studies analyzed the effect of the children, parents, families, or communities' characteristics towards the risk or implication of child maltreatment or child neglect by applying single or multilevel statistic models. However, the concept and definition of child neglect on those studies were not completely similar to the current study. Instead of using each subtype of child maltreatment or child neglect as a variable of interest that had been done in those previous studies, this study defined child neglect as the unfulfillment of children's basic needs such as foods, clothing, education, health, and house.

A study about the risk factors for child maltreatment or child neglect in Indonesia is still absent. Moreover, nationally representative sources on this topic are also scarce. National Socio-Economic Survey (NSES) is the one that available. This survey had divided eligible households in which lived one or more nuclear families. The household characteristics in Indonesia are commonly extended families, so there is a big tendency that one household has more than one child. Therefore, in terms of statistical methods and substance of the issue, child neglect analysis needs to take into account the influence of the family or household. The study aimed to examine the risk factors for child neglect in Indonesia where knowledge of these risk factors is useful to prevent and reduce the incidence of child neglect in this country.

Based on the associated problems, the expected goals of this study were to understand the prevalence of Indonesian neglected children according to their background characteristics and to analyze the factors affecting this result. Relevant background characteristics, such as child demographic characteristics and household characteristics, were chosen based on previous studies with some adjustment to data availability.

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 (NSES-SCEM). The survey is 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

NSES 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 was derived from the scoring of the neglected child indicators taken from database of the 2012 NSES-SCEM 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 ddescriptive 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 (σ) 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

Table 1
Percentage of children according to background characteristics.

Background characteristics	Unneglected (%)	Neglected (%)
Child's characteristics		
Gender of child		
Boy	76.96	23.04
Girl	78.79	21.21
One or both of the parents has passed away		
Yes	51.50	48.50
No	79.35	20.65
Age of child		
5–6	76.95	23.05
7–12	77.87	22.13
13–17	78.19	21.81
Other neglected children in the household		
No other neglected child	90.96	9.04
Other neglected children	6.95	93.05
Disability		
No disability	78.01	21.99
Low disability	66.46	33.54
High disability	47.69	52.31
Household characteristics		
Number of adults in the household		
1–2	77.34	22.66
3–5	79.08	20.92
6–8	72.42	27.58
9+	66.67	33.33
Housing condition		
Uninhabitable house	37.11	62.89
Almost inhabitable house	65.31	34.69
Inhabitable house	82.79	17.21
Education level of the head of the household		
Uneducated	64.02	35.98
Elementary school	78.32	21.68
Senior high school	86.12	13.88
Higher education	90.75	9.25
Age of the head of the household		
≥20 y.o	77.90	22.10
< 20 y.o	48.67	51.33
Gender of the head of the household		
Male	79.95	20.05
Female	54.98	45.02
Household expenditure per capita		
≥province average	77.93	22.07
< province average	50.62	49.38
Number of under-age children in the household		
0	80.09	19.91
1	78.79	21.21
≥2	68.27	31.73
Parents' working status		
Both working	75.55	24.45
Only the head of the household working	82.48	17.52
Only the spouse working	69.36	30.64
Both not working	85.27	14.73
Living arrangement		
Living with the head of the household and their spouse	80.18	19.82
Only with the head of the household	72.39	27.61
Only with the spouse	54.33	45.67
Total	77.84	22.16

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.

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

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

Table 3

Adjusted probability of child neglect according to background characteristics for several random effect of household.

Background characteristics	Household effect (v_j)				
	$v_j = -2$	$v_j = -1$	$v_j = 0$	$v_j = +1$	$v_j = +2$
Constant	0.018	0.052	0.139	0.324	0.588
Gender of child					
Boy	0.019	0.055	0.149	0.341	0.606
Girl	0.017	0.048	0.129	0.306	0.567
One or both of the parents has passed away					
Yes	0.050	0.134	0.315	0.578	0.803
No	0.017	0.049	0.132	0.311	0.573
Age of child					
5–6	0.023	0.066	0.173	0.383	0.648
7–12	0.017	0.048	0.131	0.309	0.571
13–17	0.018	0.051	0.137	0.321	0.584
Other neglected children in the household					
No other neglected child	0.008	0.022	0.062	0.165	0.370
Other neglected children	0.687	0.867	0.951	0.983	0.994
Disability					
No disability	0.018	0.051	0.137	0.321	0.584
Low disability	0.052	0.139	0.324	0.588	0.809
High disability	0.168	0.375	0.641	0.841	0.940
Housing condition					
Almost inhabitable house	0.026	0.072	0.188	0.408	0.671
Uninhabitable house	0.062	0.165	0.370	0.636	0.838
Inhabitable house	0.014	0.041	0.112	0.273	0.528
Education level of the head of the household					
Uneducated	0.029	0.082	0.210	0.441	0.701
Elementary school	0.018	0.053	0.142	0.330	0.594
Senior high school	0.013	0.039	0.107	0.262	0.514
Higher education	0.009	0.026	0.074	0.192	0.413
Age of the head of the household					
≥20 y.o	0.018	0.051	0.139	0.323	0.587
< 20 y.o	0.064	0.170	0.378	0.644	0.843
Household expenditure per capita					
≥Province average	0.018	0.051	0.138	0.323	0.586
< Province average	0.060	0.160	0.362	0.628	0.834
Number of underage children in the household	0.018	0.052	0.139	0.324	0.588
Parents' working status					
Both working	0.019	0.053	0.143	0.332	0.596
Only the head of the household working	0.017	0.049	0.132	0.311	0.573
Only the spouse working	0.017	0.048	0.131	0.309	0.571
Both not working	0.019	0.055	0.147	0.339	0.604
Living arrangement					
Living with the head of the household and their spouse	0.017	0.048	0.129	0.306	0.567
Only with the head of the household	0.020	0.056	0.149	0.342	0.607
Only with the spouse	0.043	0.117	0.283	0.539	0.777
Level-two variance	1.184				

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; Makhlouf & Rambaud, 2014; Stoltenborgh, 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 & Umeda, 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 deliquent 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 transition 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; Makhlouf & 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 misbehave 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 to tendency 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 not-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 (Afifi 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 unfulfilment 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; Sedlak 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, Kilincoglu, 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, & Ukwuije, 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 to 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 the children in households where both parents were not working. The odds ratio from the regression model shows that only when the head of the household is working is there a significantly different impact on the child neglect, relative to 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

Declaration of Competing Interest

The authors declare no conflict of interest.

References

Child Protection Act (2014). *Undang-undang Republik Indonesia Nomor 35 Tahun 2014 tentang Perubahan atas Undang-undang Nomor 23 Tahun 2002 tentang Perlindungan Anak.* Pub. L. No. 35.

Abbasi, M. A., Saeidi, M., Khademi, G., Hoseini, B. L., & Moghadam, Z. E. (2015). Child maltreatment in the worldwide: A review article. *Child Maltreatment International Journal of Pediatrics, 3*(13), 354. Retrieved from http://ijp.mums.ac.ir.

Afifi, T. O., Taillieu, T., Cheung, K., Katz, L. Y., Tonmyr, L., & Sareen, J. (2015). Substantiated reports of child maltreatment from the Canadian incidence study of reported child abuse and neglect 2008: Examining child and household characteristics and child functional impairment. *The Canadian Journal of Psychiatry, 60*(7), 315–323. https://doi.org/10.1177/070674371506000704.

Akmatov, M. K. (2011). Child abuse in 28 developing and transitional countries–results from the Multiple Indicator Cluster Surveys. *International Journal of Epidemiology, 40*(1), 219–227. https://doi.org/10.1093/ije/dyq168.

Al Odhayani, A., Watson, W. J., & Watson, L. (2013). Behavioural consequences of child abuse. *Canadian Family Physician, 59*(8), 831–836.

Altiparmak, S., Yildirim, G., Yardimci, F., & Ergin, D. (2013). Child abuse and neglect based on the information obtained from mothers, and the factors affecting child abuse. *Anatolian Journal of Psychiatry, 14*(4), 354. https://doi.org/10.5455/apd. 39819.

Appleton, S. (1996). Women-headed households and household welfare: An empirical deconstruction for Uganda. *World Development, 24*(12), 1811–1827. https://doi.org/10.1016/S0305-750X(96)00089-7.

Barnhart, S., & Maguire-Jack, K. (2016). Single mothers in their communities: The mediating role of parenting stress and depression between social cohesion, social control and child maltreatment. *Children and Youth Services Review, 70*, 37–45. https://doi.org/10.1016/J.CHILDYOUTH.2016.09.003.

Barth, R. P. (2009). Preventing child abuse and neglect with parent training: Evidence and opportunities. *The Future of Children, 19*(2), 95–118. https://doi.org/10.1353/foc.0.0031.

Benedan, L., Powell, M. B., Zajac, R., Lum, J. A. G., & Snow, P. (2018). Suggestibility in neglected children: The influence of intelligence, language, and social skills. *Child Abuse & Neglect, 79*, 51–60. https://doi.org/10.1016/j.chiabu.2018.01.005.

Berger, L. M. (2005). Income, family characteristics, and physical violence toward children. *Child Abuse & Neglect, 29*(2), 107–133. https://doi.org/10.1016/J.CHIABU. 2004.02.006.

Bilge, Y., Tasar, M., Kilincoglu, B., Ozmen, S., & Tiras, L. (2013). Socioeconomic status lower levels of parental knowledge about child abuse, neglect, experiences and discipline methods used. *Anatolian Journal of Psychiatry, 14*(1), 27. https://doi.org/10. 5455/apd.35949.

BPS (2015). Indonesia - National Socio-Economic Survey 2011 (Pooled). Retrieved from https://microdata.bps.go.id/mikrodata/index.php/catalog/411/overview.

Braham, M. Y., Jedidi, M., Hmila, I., Masmoudi, T., Souguir, M. K., & Ben Dhiab, M. (2018). Epidemiological aspects of child abuse and neglect in Sousse, Tunisia: A 10-year retrospective study. *Journal of Forensic and Legal Medicine, 54*, 121–126. https://doi.org/10.1016/j.jflm.2018.01.003.

Bruhn, C. M. (2004). Children with disabilities. *Journal of Aggression, Maltreatment & Trauma, 8*(1–2), 173–203. https://doi.org/10.1300/J146v08n01_07.

Bunting, L., Davidson, G., McCartan, C., Hanratty, J., Bywaters, P., Mason, W., & Steils, N. (2018). The association between child maltreatment and adult poverty – A systematic review of longitudinal research. *Child Abuse & Neglect, 77*, 121–133. https://doi.org/10.1016/j.chiabu.2017.12.022.

Carter, V., & Myers, M. R. (2007). Exploring the risks of substantiated physical neglect related to poverty and parental characteristics: A national sample. *Children and Youth Services Review, 29*(1), 110–121. https://doi.org/10.1016/J.CHILDYOUTH.2006.08. 002.

Cathy, K. (2005). *Children justice act task force child neglect study: Final report and strategic plan.* USA: Portland state university.

Child Welfare Information Gateway (2012). *Acts of Omission: An Overview of Child Neglect - Child Welfare Information Gateway.* Retrieved February 26, 2018, fromhttps://www.

childwelfare.gov/pubs/focus/acts/.

Clément, M.-È., Bérubé, A., & Chamberland, C. (2016). Prevalence and risk factors of child neglect in the general population. *Public Health, 138*, 86–92. https://doi.org/10.1016/j.puhe.2016.03.018.

Connell-Carrick, K. (2003). A critical review of the empirical literature: Identifying correlates of child neglect. *Child and Adolescent Social Work Journal, 20*(5), 389–425. https://doi.org/10.1023/A:1026099913845.

Cozza, S. J., Ogle, C. M., Fisher, J. E., Zhou, J., Whaley, G. L., Fullerton, C. S., & Ursano, R. J. (2019). Associations between family risk factors and child neglect types in US Army communities. *Child Maltreatment, 24*(1), 98–106.

DePanfilis, D. (2006). *Child neglect: A guide for prevention.* Assessment and Intervention Child Neglect: A Guide for Prevention, Assessment, and Intervention. Retrieved from https://www.childwelfare.gov/pubPDFs/neglect.pdf.

Draper, A., & Hancock, M. (2011). Childhood parental bereavement: The risk of vulnerability to delinquency and factors that compromise resilience. *Mortality, 16*(4), 285–306. https://doi.org/10.1080/13576275.2011.613266.

Dubowitz, H. (2013). Neglect in children. *Psychiatric Annals, 43*(3), 106–111. https://doi.org/10.3928/00485713-20130306-05.

Dubowitz, H. (2014). Child neglect. *Pediatric Annals, 43*(11), 444–445. https://doi.org/10.3928/00904481-20141022-07.

Dunne, M. P., Choo, W. Y., Madrid, B., Subrahmanian, R., Rumble, L., Blight, S., & Maternowska, M. C. (2015). Violence against children in the Asia Pacific region. *Asia-Pacific Journal of Public Health, 27*(8_suppl), 6S–8S. https://doi.org/10.1177/1010539515602184.

Duva, J., & Metzger, S. (2010). Addressing poverty as a major risk factor in child neglect: Promising policy and practice. *Protecting Children, 25*(1), 63–74.

Egry, E. Y., Apostólico, M. R., Albuquerque, L. M., Gessner, R., da Fonseca, R. M. G. S., Egry, E. Y., ... da Fonseca, R. M. G. S. (2015). Understanding child neglect in a gender context: A study performed in a Brazilian city. *Revista Da Escola de Enfermagem Da USP, 49*(4), 0556–0563. https://doi.org/10.1590/S0080-623420150000400004.

Elias, T. I., Blais, N., Williams, K., & Burke, J. G. (2018). Shifting the paradigm from child neglect to meeting the needs of children: A qualitative exploration of Parents' perspectives. *Social Work in Public Health, 33*(7–8), 407–418. https://doi.org/10.1080/19371918.2018.1543625.

Evans, C. B. R. R., & Burton, D. L. (2013). Five types of child maltreatment and subsequent delinquency: Physical neglect as the most significant predictor. *Journal of Child and Adolescent Trauma, 6*(4), 231–245. https://doi.org/10.1080/19361521.2013.837567.

Featherstone, B., Morris, K., Daniel, B., Bywaters, P., Brady, G., Bunting, L., ... Mirza, N. (2017). Poverty, inequality, child abuse and neglect: Changing the conversation across the UK in child protection? *Children and Youth Services Review.* https://doi.org/10.1016/J.CHILDYOUTH.2017.06.009.

Ferrara, P. (2014). Child abuse and neglect: Psychiatric and neuro-biological consequences. *Italian Journal of Pediatrics, 40*(S1), A32. https://doi.org/10.1186/1824-7288-40-S1-A32.

Ferrara, P., Guadagno, C., Sbordone, A., Amato, M., Spina, G., Perrone, G., ... Corsello, G. (2016). Child abuse and neglect and its psycho-physical and social consequences: A review of the literature. *Current Pediatric Reviews, 12*(4), 301–310. https://doi.org/10.2174/1573396312666160914193357.

Fowler, P. J., Henry, D. B., Schoeny, M., Landsverk, J., Chavira, D., & Taylor, J. J. (2013). Inadequate housing among families under investigation for child abuse and neglect: Prevalence from a National Probability Sample. *American Journal of Community Psychology, 52*(1–2), 106–114. https://doi.org/10.1007/s10464-013-9580-8.

Geoffroy, M.-C., Pereira, S. P., Li, L., & Power, C. (2016). Child neglect and maltreatment and childhood-to-adulthood cognition and mental health in a prospective birth cohort. *Journal of the American Academy of Child & Adolescent Psychiatry, 55*(1), https://doi.org/10.1016/j.jaac.2015.10.012 33-40.e3.

Gu, C. M., Sun, Y. H., Yang, L. S., Han, T. W., Wang, T. Z., Sun, Y., & Cao, Q. Q. (2011). Study on the current status and influential factors of neglect of left-behind children in rural area of Anhui province. *Chinese Journal of Preventive Medicine, 32*(12), 1212–1215. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-84892461632&partnerID=40&md5=24d6bb29b85e77040dbf50b3f975fda0.

Ha, Y., Collins, M. E., & Martino, D. (2015). Child care burden and the risk of child maltreatment among low-income working families. *Children and Youth Services Review, 59*(C), 19–27. Retrieved from https://econpapers.repec.org/RePEc:eee:cysrev:v:59:y:2015:i:c:p:19-27.

Hartley, D. J., Mullings, J. L., & Marquart, J. W. (2013). Factors impacting prosecution of child sexual abuse, physical abuse, and neglect cases processed through a Children's Advocacy Center. *Journal of Child & Adolescent Trauma, 6*(4), 260–273. https://doi.org/10.1080/19361521.2013.836586.

Helton, J. J., & Bruhn, C. M. (2013). Prevalence of disabilities and abilities in children investigated for abuse and neglect. *Journal of Public Child Welfare, 7*(5), 480–495. https://doi.org/10.1080/15548732.2013.843497.

Hermenau, K., Eggert, I., Landolt, M. A., & Hecker, T. (2015). Neglect and perceived stigmatization impact psychological distress of orphans in Tanzania. *European Journal of Psychotraumatology, 6*(1), 28617. https://doi.org/10.3402/ejpt.v6.28617.

Hibbard, R. A., & Desch, L. W. (2007). Maltreatment of children with disabilities. *Pediatrics, 119*(5), 1018–1025. https://doi.org/10.1542/peds.2007-0565.

Hockenberry, M. J., & Wilson, D. (2013). *Wong's essential of pediatric nursing* (9th ed.). St. Louis, Missouri: Elsevier Mosby.

Hornor, G. (2014). Child neglect: Assessment and intervention. *Journal of Pediatric Health Care, 28*(2), 186–192. https://doi.org/10.1016/j.pedhc.2013.10.002.

Hua, J., Mu, Z., Nwaru, B. I., Gu, G., Meng, W., & Wu, Z. (2014). Child neglect in one-child families from Suzhou City of Mainland China. *BMC International Health and Human Rights, 14*(1), 8. https://doi.org/10.1186/1472-698X-14-8.

Johnson, E. J., & James, C. (2016). Effects of child abuse and neglect on adult survivors.

Early Child Development and Care, 186*(11), 1836–1845. https://doi.org/10.1080/03004430.2015.1134522.

Jones, E. D., & McCurdy, K. (1992). The links between types of maltreatment and demographic characteristics of children. *Child Abuse & Neglect, 16*(2), 201–215. https://doi.org/10.1016/0145-2134(92)90028-P.

Kim, S., Yoo, J. P., Chin, M., Jang, H. J., Kim, H.-S., Lee, S.-G., & Lee, B. J. (2019). Factors influencing resubstantiation of child neglect in South Korea: A comparison with other maltreatment cases. *Asian Social Work and Policy Review, 13*(1), 100–116. https://doi.org/10.1111/aswp.12160.

Kistin, C. J., Tompson, M. C., Cabral, H. J., Sege, R. D., Winter, M. R., & Silverstein, M. (2016). Subsequent maltreatment in children with disabilities after an unsubstantiated report for neglect. *JAMA, 315*(1), 85. https://doi.org/10.1001/jama.2015.12912.

Klevens, J., Ports, K. A., Austin, C., Ludlow, I. J., & Hurd, J. (2018). A cross-national exploration of societal-level factors associated with child physical abuse and neglect. *Global Public Health, 13*(10), 1495–1506. https://doi.org/10.1080/17441692.2017.1404622.

Lakhdir, M. P. A., Nathwani, A. A., Ali, N. A., Farooq, S., Azam, S. I., Khaliq, A., & Kadir, M. M. (2019). Intergenerational transmission of child maltreatment: Predictors of child emotional maltreatment among 11 to 17 years old children residing in communities of Karachi, Pakistan. *Child Abuse & Neglect, 91*, 109–115. https://doi.org/10.1016/j.chiabu.2019.03.004.

Leeb, R. T., Bitsko, R. H., Merrick, M. T., & Armour, B. S. (2012). Does childhood disability increase risk for child abuse and neglect? *Journal of Mental Health Research in Intellectual Disabilities, 5*(1), 4–31. https://doi.org/10.1080/19315864.2011.608154.

Li, Q., Zhong, Y., Chen, K., Zhong, Z., & Pan, J. (2015). Identifying risk factors for child neglect in rural areas of western China. *Child: Care, Health and Development, 41*(6), 895–902. https://doi.org/10.1111/cch.12283.

Lundy, L., & Byrne, B. (2017). The four general principles of the United Nations convention on the rights of the child: The potential value of the approach in other areas of human rights law. In E. Brems, E. Desmet, & W. Vandenhole (Eds.). *Children's Rights Law in the Global Human Rights Landscape* (pp. 52–70). . https://doi.org/10.4324/9781315637440-4.

Macedo, B. B. D., von Werne Baes, C., Menezes, I. C., & Juruena, M. F. (2019). Child abuse and neglect as risk factors for comorbidity between depression and chronic pain in adulthood. *The Journal of Nervous and Mental Disease, 207*(7), 538–545. https://doi.org/10.1097/NMD.0000000000001031.

Maguire-Jack, K., & Font, S. A. (2017). Community and individual risk factors for physical child abuse and child neglect: Variations by poverty status. *Child Maltreatment, 22*(3), 215–226. https://doi.org/10.1177/1077559517711806.

Maguire-Jack, K., & Klein, S. (2015). Parenting and proximity to social services: Lessons from Los Angeles County in the community context of child neglect. *Child Abuse & Neglect, 45*, 35–45. https://doi.org/10.1016/J.CHIABU.2015.04.020.

Makhlouf, F., & Rambaud, C. (2014). Child homicide and neglect in France: 1991–2008. *Child Abuse & Neglect, 38*(1), 37–41. https://doi.org/10.1016/J.CHIABU.2013.08.016.

Mennen, F. E., Kim, K., Sang, J., & Trickett, P. K. (2010). Child neglect: Definition and identification of youth's experiences in official reports of maltreatment. *Child Abuse & Neglect, 34*(9), 647–658. https://doi.org/10.1016/j.chiabu.2010.02.007.

Merrick, M. T., & Guinn, A. S. (2018). Child abuse and neglect: Breaking the intergenerational link. *American Journal of Public Health.* https://doi.org/10.2105/ajph.2018.304636.

Morantz, G., Cole, D., Vreeman, R., Ayaya, S., Ayuku, D., & Braitstein, P. (2013). Child abuse and neglect among orphaned children and youth living in extended families in sub-Saharan Africa: What have we learned from qualitative inquiry? *NIH Public Access. 8*(4), 338–352. https://doi.org/10.1080/17450128.2013.764476.

Mulder, T. M., Kuiper, K. C., van der Put, C. E., Stams, G.-J. J. M., & Assink, M. (2018). Risk factors for child neglect: A meta-analytic review. *Child Abuse & Neglect, 77*, 198–210. https://doi.org/10.1016/j.chiabu.2018.01.006.

Oginni, A., Ahonsi, B., & Ukwuije, F. (2013). Are female-headed households typically poorer than male-headed households in Nigeria? *The Journal of Socio-Economics, 45*, 132–137. https://doi.org/10.1016/j.socec.2013.04.010.

Olatosi, O., Ogordi, P., Oredugba, F., & Sote, E. (2018). Experience and knowledge of child abuse and neglect: A survey among a group of resident doctors in Nigeria. *The Nigerian Postgraduate Medical Journal, 25*(4), 225. https://doi.org/10.4103/npmj.npmj_92_18.

Oshio, T., & Umeda, M. (2016). Gender-specific linkages of parents' childhood physical abuse and neglect with children's problem behaviour: Evidence from Japan. *BMC Public Health, 16*(1), 403. https://doi.org/10.1186/s12889-016-3072-3.

Oshri, A., Kogan, S. M., Kwon, J. A., Wickrama, K. A. S., Vanderbroek, L., Palmer, A. A., & MacKillop, J. (2018). Impulsivity as a mechanism linking child abuse and neglect with substance use in adolescence and adulthood. *Development and Psychopathology, 30*(2), 417–435. https://doi.org/10.1017/S0954579417000943.

Paul, E., & Ortin, A. (2017). Correlates of suicidal ideation and self-harm in early childhood in a cohort at risk for child abuse and neglect. *Archives of Suicide Research, 1*–17. https://doi.org/10.1080/13811118.2017.1413468.

Perrigo, J. L., Berkovits, L. D., Cederbaum, J. A., Williams, M. E., & Hurlburt, M. S. (2018). Child abuse and neglect re-report rates for young children with developmental delays. *Child Abuse & Neglect, 83*(1), 1–9. https://doi.org/10.1016/j.chiabu.2018.05.029.

Petersen, A., Joseph, J., & Feit, M. (2014). New directions in child abuse and neglect research. Retrieved from http://www.nap.edu/catalog.php?record_id=18331.

Radford, L., Corral, S., Bradley, C., Fisher, H., Bassett, C., Howat, N., & Collishaw, S. (2011). Child abuse and neglect in the UK today. Retrieved from https://learning.nspcc.org.uk/media/1042/child-abuse-neglect-uk-today-research-report.pdf.

Ruck, M. D., Keating, D. P., Saewyc, E. M., Earls, F., & Ben-Arieh, A. (2016). The United

Nations convention on the rights of the child: Its relevance for adolescents. *Journal of Research on Adolescence, 26*(1), 16–29. https://doi.org/10.1111/jora.12172.

Schaner, S. (2012). Gender, poverty, and well-being in Indonesia: MAMPU background assessment. Retrieved from https://dfat.gov.au/about-us/publications/Pages/publications.aspx.

Schneider, W. (2017). Single mothers, the role of fathers, and the risk for child maltreatment. *Children and Youth Services Review, 81*, 81–93. https://doi.org/10.1016/j.childyouth.2017.07.025.

Sedlak, A. J., Mettenburg, J., Basena, M., Petta, I., McPherson, K., Greene, A., & Li, S. (2010). *Fourth National Incidence Study of child abuse and neglect (NIS–4): Report to congress.* United States: Washington D.C.

Shanahan, M. E., Runyan, D. K., Martin, S. L., & Kotch, J. B. (2017). The within poverty differences in the occurrence of physical neglect. *Children and Youth Services Review, 75*, 1–6. https://doi.org/10.1016/J.CHILDYOUTH.2017.02.014.

Slack, K. S., Holl, J. L., McDaniel, M., Yoo, J., & Bolger, K. (2004). Understanding the risks of child neglect: An exploration of poverty and parenting characteristics. *Child Maltreatment, 9*(4), 395–408. https://doi.org/10.1177/1077559504269193.

Snijders, T. A., & Bosker, R. J. (2012). *Multilevel analysis: An introduction to basic and advanced multilevel modeling* (2nd ed.). London: Sage Publisher.

Stoltenborgh, M., Bakermans-Kranenburg, M. J., & van IJzendoorn, M. H. (2013). The neglect of child neglect: A meta-analytic review of the prevalence of neglect. *Social Psychiatry and Psychiatric Epidemiology, 48*(3), 345–355. https://doi.org/10.1007/s00127-012-0549-y.

Straus, M. A., & Kantor, G. K. (2005). Definition and measurement of neglectful behavior: Some principles and guidelines. *Child Abuse & Neglect, 29*(1), 19–29. https://doi.org/10.1016/j.chiabu.2004.08.005.

Sylvestre, A., & Mérette, C. (2010). Language delay in severely neglected children: A cumulative or specific effect of risk factors? *Child Abuse & Neglect, 34*(6), 414–428. https://doi.org/10.1016/j.chiabu.2009.10.003.

The World Bank (2012a). *PKH conditional cash transfer: Social assistance program and public expenditure review 6.* Indonesia: Jakarta.

The World Bank (2012b). *Targeting poor and vulnerable households in Indonesia.* Indonesia: Jakarta.

Tursz, A. (2011). Risk factors of child abuse and neglect in childhood. *Revue du Praticien, 61*(5), 658–660. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-79957946976&partnerID=40&md5=669b34771fd3e7ae200874a2a3811a4d.

UNCRC (1989). *Convention on the Rights of the Child*.

USDHHS, ACF, ACYF, & Children's Bureau (2017). *Child Maltreatment, 2017*. Retrieved from https://www.acf.hhs.gov/cb/research-data-technology/statistics-research/child-maltreatment.

Vanderminden, J., Hamby, S., David-Ferdon, C., Kacha-Ochana, A., Merrick, M., Simon, T. R., ... Turner, H. (2019). Rates of neglect in a national sample: Child and family characteristics and psychological impact. *Child Abuse & Neglect, 88*, 256–265. https://doi.org/10.1016/j.chiabu.2018.11.014.

Wang, F., Pan, J., Zhang, S., Zhang, H., Wang, W., Tao, F., ... Yang, X. (2015). Impact factors analysis on child neglect of children aged 3-6 year-old in rural areas of China. *Zhonghua yu fang yi xue za zhi [Chinese Journal of Preventive Medicine], 49*(10), 866–872. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-84991226451&partnerID=40&md5=1c9b549f28216796daf15bdc3f173c76.

Wang, L., Qu, G., Tang, X., Wu, W., Zhang, J., & Sun, Y. (2019). Child neglect and its association with social living ability: Does the resilience attenuate the association? *Psychology, Health & Medicine, 24*(5), 519–529. https://doi.org/10.1080/13548506.2018.1549743.

Watson, J. (2005). Child neglect: Literature review. Retrieved from www.community.nsw.gov.au.

Wong, G. Y., & Mason, W. M. (1985). The hierarchical logistic regression model for multilevel analysis. *Journal of the American Statistical Association, 80*(391), 513–524. https://doi.org/10.1080/01621459.1985.10478148.

World Health Organization (2013). European report on preventing child maltreatment: Summary. Retrieved from http://www.euro.who.int/.

Zeanah, C. H., & Humphreys, K. L. (2018). Child abuse and neglect. *Journal of the American Academy of Child & Adolescent Psychiatry, 57*(9), 637–644. https://doi.org/10.1016/J.JAAC.2018.06.007.

Zhao, F., Bi, L., Chen, M.-C., Wu, Y.-L., & Sun, Y.-H. (2018). The prevalence and influencing factors for child neglect in a rural area of Anhui province: A 2-year follow-up study. *Public Health, 155*, 110–118. https://doi.org/10.1016/j.puhe.2017.11.024.

Zhong, Y., Zhong, Z., Pan, J., Li, Q., Zhong, Y., & Sun, H. (2015). Research on child neglect situation and influential factors of left-behind children and living-with-parents children aged 6-17 year-old in rural areas of two provinces, western China. *Zhonghua yu fang yi xue za zhi [Chinese Journal of Preventive Medicine], 49*(10), 873–878. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-84991236725&partnerID=40&md5=5fe4990c3f113560dc9cb59264a2be08.

Zielinski, S., Paradis, H. A., Herendeen, P., & Barbel, P. (2017). The identification of psychosocial risk factors associated with child neglect using the WE-CARE screening tool in a high-risk population. *Journal of Pediatric Health Care, 31*(4), 470–475. https://doi.org/10.1016/j.pedhc.2016.12.005.

Zuravin, S. J. (1999). Child neglect: A review of definitions and measurement research. In H. Dubowitz (Ed.). *Neglected Children: Research, Practice, and Policy* (pp. 24–46). . https://doi.org/10.4135/9781452225586.n2.