Role of Social Capital of Parents on Children's Health

Ni Putu Sintia Dewi, Ida Ayu Nyoman Saskara

Abstract: The aim of this research is to explore the role of parents' social capital in children's health in Indonesia. This research was conducted in Indonesia using data from the Indonesia Family Life Survey (IFLS) in 2007 and 2014 which was panel data where the analysis technique used was Ordinary Least Square Fixed Effect. Based on the analysis conducted, it was concluded that parents' social capital had no significant effect on the child's height-per-age. This happens even after controlling for other variables that are thought to affect height. The author suspects that this is because height is influenced by other factors such as genetics. However, other estimation results show that parental social capital has a positive and significant effect on the weight per child age. This is also consistent with previous research which found that there is a connection between someone's openness in the social community and the child's weight in the short term due to economic shock.

Keywords: Social Capital, Stunting, Health, Poverty, fixed effect, JEL Classification

1. Introduction

Health is one indicator that shows the welfare of a country. Issues regarding public health are indicators of population development that are very important in the world population order (Saputra and Nurrizka, 2012). Issues concerning health are very important for the world and are one of the goals of sustainable development (SDGs). Health issues are very concerned because they are interactions between various environmental factors, physical, social, economic, cultural and political. If health problems are not immediately addressed, it will provide a domino effect on various other related aspects such as cognitive abilities, work productivity, and overall economic problems.

Health is arguably the condition that becomes the basis of survival. The role of health as a foundation for human survival will greatly affect one's productivity. The importance of health can be seen from the shifting development of the poverty literature. Since 2010, the United Nation Development Program (UNDP) has made a new agreement in measuring poverty, namely the Multidimensional Poverty Index (MPI) (Budiantoro, et al., 2013). Measuring poverty which was originally based solely on income and consumption has now expanded with other dimensions in life. Socioeconomic, namely access to education, health and quality of life. The health dimension in MPI is measured using two indicators, namely nutrition and child mortality. Child nutrition is then seen through the approach of body weight and age, while adult health is seen using the Body Mass Index (BMI) approach.

Health is also one of the goals of the goal of sustainable development (Sustainable Development Goals, SDGs). One of the goals of this goal is to alleviate poverty and ensure access for the poor and vulnerable in particular, and the whole community generally includes babies, to get nutritious and sufficient food throughout the year, targeted in 2030.

Child health in Indonesia is a concern of its own considering that children are the next generation of the nation. As the nation's successor, health must be considered given the domino effect of health on the economy, and as a nation's future, children's health will later reflect the future of the nation's economy. Health research results (RISKESDAS) in 2013 showed a number of child problems such as the prevalence (prevalence) of malnutrition in children under five which increased to 19.6 percent in 2010, and the problem of stunting (short body condition due to chronic malnutrition) which reached 37.2 percent at the national level (WHO international standards are 27 percent).

Based on the 2013 RISKESDAS, it can be seen that the prevalence of the nutritional status of children under five according to three indexes, Body Weight / Age (BB / U), Height / Age (TB / U), and Body Weight / Height (BB / TB), that the prevalence of malnutrition and malnutrition increased from 2007 to 2013. Very short prevalence fell by 0.8 percent from 2007, but the prevalence of short-term infants actually increased to 1.2 percent from 2007. Very thin prevalence fell 0.9 percent in 2007 The lean prevalence fell 0.6 percent from 2007. Fat prevalence fell 2.1 percent from 2010 and fell 0.3 percent from 2007.

There are several factors that can explain children's health. One interesting factor is the relation of social capital that is owned by the child's family to their health. This is in accordance with WHO recommendations which reveal that to conduct a study of the social determinants of health, it is necessary to pay attention to several factors, one of which is social inclusion (Marmot and Wilkinson, 2003), namely the relationship of someone with their community.

The role of social capital over the past few years has been an interesting idea to study over the past few years. The concept of social capital states that the relationship between individuals and surrounding communities is an important capital in living life (Portes, 1998: 2). Putnam (1995: 67) describes social capital as an advantage available in social organizations such as the availability of networks, social norms, and social trust that provide individuals with a place to coordinate for mutual benefit. The availability of data that is so specific in the present causes research to develop social capital.

One of the mutual benefits that can be achieved from social capital is health, especially children's health. Information about health is generally channeled more quickly through the community level (Kawachi and Berkman, 2000), such as counseling that is commonly conducted in Banjar. Besides
Kawachi and Berkman (2000) also revealed that by joining social communities, family health behavior can be controlled through the norms that apply in the community. If there is a deviant health behavior, the community as social capital will be able to reduce or even stop the behavior.

Research on the relationship between social capital and health has indeed been a heated debate over the past two decades, especially in developing countries (Kawachi et al., 1997; Fujiwara and Kawachi, 2008; Beaudoin, 2009; Giordano and Lindstrom, 2010; Mohsen et. Al., 2011; Han et. Al., 2012) However, from various ongoing debates, there are still few specific studies regarding children's health. Previous studies such as Kawachi and Berkman (2000) only observed how the role of social capital on adult health, namely individual owners of social capital itself, while Fujiwara and Kawachi (2008) observed the role of individual social capital in adult health by comparing differences in ownership of social capital between a pair of twins. Understanding children's health is very important because the Indonesian government itself has special attention to children's health.

According to a recent report from WHO, the concept of social unification or social capital is a unique concept in understanding Social Determinants of Health. During the last ten years this concept has been discussed in the realm of social science. The findings have also stated that social capital is a core factor in shaping public health. However, the approach used to define social capital is still diverse.

Until now in various literature studies there have been three major groups regarding the definition of social capital, namely by communitarian approaches (networkitarian approaches), network approaches (network approaches), and resource distribution approaches (WHO, 2015). The communitarian approach defines social capital as a psychosocial mechanism. One of these studies is conducted by Putnam, where social capital is defined as various features of social organizations, such as networks, norms, social beliefs that facilitate coordination and cooperation for the common good. Social capital is seen as an extension of social relations and social norms. The existence of social support that arises from human relations is what will have an impact on public health.

The network approach defines social capital in the form of resources that arise through relationships between humans that form networks with each other. This approach implies that every decision taken both by individuals and groups is always based on the social context in which the decision was taken. This concept is emphasized by Coleman (1988) and Bourdieu (1992).

The approach to resource distribution explains social capital as a psychosocial aspect that affects public health, as a consequence of one's living conditions and the surrounding environment.

The study of social capital is very interesting to do in Indonesia because of the many communities such as arisan, mutual cooperation activities, Banjar in Bali, and so on. The many forms of community and the tendency of Indonesian people who have a culture of togetherness are interesting reasons to understand the influence of parents' social capital on children's health in Indonesia. This study will attempt to explore the role of family-owned social capital, in the form of the number of resources at the community level that are accessed by families, in influencing children's health.

2. Conceptual Framework

Previous studies expressed several mechanisms regarding the way social capital affects health. Kawachi and Berkman (2000) suggest that there are three mechanisms that link social and health capital, including bridging health-related behavior, increasing access to health services, and psychosocial processes (Kawachi and Berkman, 2000).

The link between social capital and health is shown by the spread of information between human health through social relations. This information generally spreads faster with word of mouth. Aside from being a place for the spread of information, the relationship between social capital and health can be shown from the form of community control. A united society becomes an informal social control that can affect individual health behavior (Samuel, Commodore-Mensah, Dennison Himmelfarb, 2013)

Social capital has been hypothesized to increase access to services by increasing group collective efficacy, or their willingness to produce change in the community. For example, if the environment with high social capital faces the threat of closure of the nearest medical clinic or turns a local park into a parking lot, they will be more likely to gather and lobby to prevent such an event than a socially low capital environment. In addition, the psychosocial mechanism in which social capital has been recognized to affect health occurs due to increased social support. Communities with high levels of social capital tend to be more socially supportive, who can “support stress - either by positively influencing individual judgments on their ability to cope with pressing situations, or by directly supplying the resources needed to deal with stressful disorders. (Kawachi, Subramanian, Kim 2008) Putnam refers to several other possible mechanisms, including accepting real assistance for health care - such as money and transportation - from one's social network, and extrapolating the spread of health information theory to argue that social capital can strengthen norms, healthy norms at the community level, which will be considered as a result of the definition of 'good public' (Putnam 2001). This mechanism applies to oral health as well, and this study will measure whether consumption of soda is an example of factors mediating health behavior through which social capital impacts multi's health ut. Soda consumption has been found to have detrimental effects on the oral health of children and adolescents (Shenkin et al., 2003).

The network approach defines social capital in the form of resources that arise through relationships between humans that form networks with each other. This approach implies that every decision is taken both by individuals and groups is always based on the social context in which the decision was taken. This concept is emphasized by Coleman (1988) and Bourdieu (1992).
The approach to resource distribution explains that social capital is a psychosocial aspect that affects public health, as a consequence of one's living conditions and the surrounding environment.

The study of social capital is very interesting to do in Indonesia because of the many communities such as arisan, mutual cooperation activities, Banjar in Bali, and so on. The social capital on children's health in Indonesia is the many forms of community and the tendency to understand the influence of parents. This study will attempt to explore the role of family-owned social capital, in terms of family access, in influencing children's health.

3. Results and Discussion

The respondents’ characteristics of the research contained in the IFLS were drawn back from the IFLS wave 1 in 1993. This survey represented 83% of the population in Indonesia residing in 13 provinces out of a total of 26 provinces in 1993. The data collected consisted of individual respondents, their families, households and the surrounding residential communities and health and education facilities. The first wave survey obtained 7,224 households. In the next wave, IFLS wave 2 in 1997, IFLS wave 3 in 2000, and IFLS wave 4 in 2004, it tried to recalculate individuals and households interviewed in the following period including individuals who had split off from their old families because they had formed their own family roster which later became new samples. These individuals and households continue to be monitored including split offs in subsequent periods so that in IFLS 5 which was carried out at the end of 2014 and early 2015, 16,204 households and 50,148 individuals were found. There are 2,662 individuals who have been declared dead since IFLS 4, which then carried out exit interviews with proxies, can become families, who know individuals.

This research is in accordance with what has been conveyed in the background and the methodology uses a sample of children who are then restricted as toddlers aged 0-5 years who have complete information regarding the characteristics of their parents - this study uses only the mother - and also its own characteristics as a proxy health, the height for age and weight for age are calculated by the z-score.

Respondents in this study, all communities in western Indonesia, namely Java, Bali, Sumatra and Kalimantan were registered as respondents who had previously been surveyed by meter surveys. Furthermore, it will be explained in detail about the characteristics of respondents based on gender, employment status, education level, and work location.

In this study, the independent variable is children's health (X1), the dependent variable is Social Capital (Y1) which is proxy using maternal participation in activities in the community, control variables according to those described in the research method. After cleaning according to the availability of the required variables, this study uses up to 18,000 observations available on the IFLS wave 4 (2007) and 19,000 data available in the IFLS wave 5 (2014) data. The 2007 and 2014 panel data provided 4,000 data that matched the requirements in this study. The following are the regression estimation results of social capital and child health in Indonesia:

Table 5.4: Test Results (Data 2014)

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>hf age 2014</th>
<th>wf age 2014</th>
<th>Hf age 2014 (r)</th>
<th>Wf age 2014 (r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>commpar2014</td>
<td>0.00551**</td>
<td>-0.0836***</td>
<td>0.0157***</td>
<td>-0.0133</td>
</tr>
<tr>
<td>(0.00245)</td>
<td>(0.0162)</td>
<td>(0.00315)</td>
<td>(0.0204)</td>
<td></td>
</tr>
<tr>
<td>duration_bf2014</td>
<td>-0.000385</td>
<td>0.00822***</td>
<td>-0.00651***</td>
<td>-0.00751***</td>
</tr>
<tr>
<td>(0.000407)</td>
<td>(0.00270)</td>
<td>(0.00197)</td>
<td>(0.0131)</td>
<td></td>
</tr>
<tr>
<td>educ_iwu2014</td>
<td>0.00395**</td>
<td>0.00848</td>
<td>0.00795**</td>
<td>0.01048**</td>
</tr>
<tr>
<td>(0.00197)</td>
<td>(0.0131)</td>
<td>(0.00197)</td>
<td>(0.0131)</td>
<td></td>
</tr>
<tr>
<td>Kontrol laimnya</td>
<td>Ada</td>
<td>Ada</td>
<td>tidak</td>
<td>Tidak</td>
</tr>
</tbody>
</table>

Constant 3.565*** 25.38*** 1.466*** 6.589***
(0.111) (0.735) (0.00732) (0.0474)

Observations 19,323 19,323 19,476 19,476
R-squared 0.403 0.374 0.001 0.000

Multiple linear regression testing was carried out on 2014 data using four specifications. This specification was conducted to show how social capital seen based on maternal participation affected (1) height-for-age children and (2) weight for age children. Specifications (3) and (4) are restricted versions of each of the previous specifications. Specifications (1) show that the more mothers are involved in the social community, the higher the child-age (height per age) will be, but the test results show the opposite weight-for-age. While we expect this to be due to an incorrect z-score calculation in measuring weight-for-age values.

Panel 2007-2014 (height-for-age)

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>H_panel (r)</th>
<th>H_panel (r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commpar</td>
<td>0.00311</td>
<td>1.72e-09</td>
</tr>
<tr>
<td>(0.00570)</td>
<td>(4.65e-09)</td>
<td></td>
</tr>
<tr>
<td>duration_bf</td>
<td>0.00135***</td>
<td>-1.36e-09**</td>
</tr>
<tr>
<td>(0.000652)</td>
<td>(5.44e-10)</td>
<td></td>
</tr>
<tr>
<td>Kontrol laimnya</td>
<td>Tidak</td>
<td>ada</td>
</tr>
<tr>
<td>Constant 3.891***</td>
<td>-5.603***</td>
<td></td>
</tr>
<tr>
<td>(0.00086)</td>
<td>(1.82e-07)</td>
<td></td>
</tr>
<tr>
<td>Observations 4,108</td>
<td>4,071</td>
<td></td>
</tr>
<tr>
<td>Number of id 2,054</td>
<td>2,046</td>
<td></td>
</tr>
<tr>
<td>R-squared 0.003</td>
<td>1.000</td>
<td></td>
</tr>
</tbody>
</table>

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

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The OLS estimation result of the fixed effect panel in table 5.5 shows the role of social capital for the age per child. The estimation results show that if the parents of the child more and more participate in community social activities, the height-per-age of the child will be greater, but different from the results of the 2014 cross-section test, testing using panel data 2007-2014 is not statistically significant. This phenomenon occurs both in tests that do not use variable controls and models with variable controls. This is thought to occur because the child's height is influenced by other variables. One interesting variable control that turned out to be statistically significant in influencing child height was the duration of breastfeeding mothers.

### Panel 2007-2014 (weight-for-age)

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>W_panel (r)</th>
<th>W_panel (r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commpar</td>
<td>0.243***</td>
<td>0.228***</td>
</tr>
<tr>
<td></td>
<td>(0.0211)</td>
<td>(0.0211)</td>
</tr>
<tr>
<td>duration_bf</td>
<td>0.0270***</td>
<td>0.0234***</td>
</tr>
<tr>
<td></td>
<td>(0.00241)</td>
<td>(0.00246)</td>
</tr>
<tr>
<td>Kontrol</td>
<td>Tidak</td>
<td>Ada</td>
</tr>
<tr>
<td>lannya</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>9.160***</td>
<td>5.877***</td>
</tr>
<tr>
<td></td>
<td>(0.0365)</td>
<td>(0.824)</td>
</tr>
<tr>
<td>Observations</td>
<td>4,108</td>
<td>4,071</td>
</tr>
<tr>
<td>Number of id</td>
<td>2,054</td>
<td>2,046</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.150</td>
<td>0.181</td>
</tr>
</tbody>
</table>

Standard errors in parentheses  
** * p<0.01, ** * p<0.05, * p>0.1

The OLS estimation result of the fixed effect panel in table 5.6 shows the role of social capital for the weight per child age. The OLS estimation results of the fixed effect panel in table 5.6 show the role of social capital on the weight per child age. The estimation results show that if the parents of the child more and more participate in community social activities, the weight-per-age of the child will be greater, in contrast to the results of the 2014 cross-section test, which shows otherwise. The author believes that testing using panels is considered otherwise.

One interesting variable control that turned out to be statistically significant in influencing child height was the duration of breastfeeding mothers. The test results show that the longer the duration of the mother breastfeeding the child, the weight-per-age of the child will be higher. This is interesting to see further in the next study considering the importance of the duration of breastfeeding on children's health.

### 4. Discussion of Research Results

With this the results of the study showed a positive and significant relationship between parents' social capital with high-per-age children. This shows that if the parents participate more and more in community social activities, the child's height and age will be better. This is in accordance with previous research conducted by Foster (1995) who found that there was a relationship between someone's openness in the social community and the child's height in the short term. Foster revealed that community social capital has a role to reduce the economic shock of its members, including mothers, which at times occur, so that children's health is maintained.

This is also in line with the research conducted by Putnam (1995) which explains that social communities will help their members face shock such as natural disasters so that the health of members, including their children, is protected from the economic downturn. Other studies in accordance with the results of this study, namely by Beard (2005) and Grootaert (1999) found a link between a community's solidarity with the financial well-being of its members. With this solidarity, as stated by Beard (2005), it will help mothers get health services and general knowledge about parenting that will benefit children. Beard (2005) also emphasizes that one of the factors causing low male and female participation in the community is a lack of information.

However, the test results using panel data 2007-2014 did not show the relationship between social capital participation and child height. Parental social capital in 2007 did not have a significant effect on the height-per-age of children in 2014. We suspect that this occurs because the height-per-age of children in the longer term is influenced by other factors, such as genetics.

The insignificance of the relationship between parent and child social capital also occurs in previous studies by Abewe (2017) who found results that were not in line with the hypothesis. This research was conducted in South Africa and found out how social capital plays a role in the height of children, but the results of the tests actually show insignificant results.

The results of the study showed a positive and significant relationship between social capital of parents with severe-per-age children. This shows that if more parents participate in community social activities, the child's weight will be better. This is also in accordance with previous studies conducted by Foster (1995) who found that there was a connection between someone's openness in the social community and the child's weight in the short term. In the short term, if there are events of shock, generally it will affect the financial condition of the household, but according to Foster the change in conditions is muffled if individuals are involved in community social activities. Openness with the community is thought to help the economic shock mitigation process so that children's health is guaranteed.

Research conducted by Putnam (1995) also reveals things that are harmonious where social communities will help their members face shock such as natural disasters so that the health of members, including their children, is protected from the economic downturn. Other studies in accordance with the results of this study, namely by Beard (2005) and Grootaert (1999) found a link between a community's solidarity with the financial well-being of its members. With this solidarity, as stated by Beard (2005), it will help mothers get health services and general knowledge about parenting that will benefit children.

The results of OLS estimation of fixed effect panels show that if the parents of children more and more participate in community social activities in 2007, then the weight-per-age

Volume 8 Issue 7, July 2019

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Paper ID: ART20199087 10.21275/ART20199087 647
of children measured in 2014 will be even greater. The author believes that testing using panels is considered more appropriate.

Previous research carried out in developing countries such as Lau and Li (2011) subjective measures of child welfare increased with high social capital in the environment. De Silva and Harpham (2007) also found out how increasing social support improves child health indicators (weight for age and height for age) in Peru, Ethiopia, Vietnam and India. The study also found a consistent relationship between cognitive social capital and children's health, by looking at a sample of one year old children. Another study, Reyes et. al. (2004) found out how the factors in the family sphere, one of which is the existence of social networks affecting the health of children measured using stunting symptoms (children born short, below average), this study was conducted in Mexico using a sample of children aged 6-23 month.

5. Conclusions and Suggestions

Based on the estimation results using the data panel, it can be found that:

1. Parental social capital does not have a significant effect on the child's height-per-age. This happens even after controlling for other variables that are thought to affect height. The author suspects that this is because height is influenced by other factors such as genetics.

2. Parental social capital has a positive and significant effect on the child's weight-per-age.

Health and economic well-being cannot be separated, individuals with higher economic status, characterized by higher income tend to invest in the health sector such as attending insurance programs and taking precautions on things that can disrupt health. Having a good health status, is expected to have higher productivity so that they can get a higher salary.

Cases of malnutrition, income inequality, educational inequality, health inequality, availability of infrastructure and the large number of people living below the poverty line cannot be separated from the problems of developing countries. Complex problems make the government make a priority in development.

Child growth is closely related to the adequacy of the level of nutrient intake obtained (Hanandita & Tampubolon, 2015). Good nutritional intake is the basis for children’s health, good nutritional intake will reduce the level of pain, reduce the risk of disability and death of children so that sufficient intake of nutrients that have been obtained can improve the quality of human resources (Ministry of Health, 2015). Not only adequate nutrition, the quality of intake is also very important in supporting the health of children when entering adulthood (Bharagava, 2001). Most children who are indicated to have malnutrition at the age of three to five years, actually have suffered from malnutrition from the beginning of their birth (Shrimpton, Victoria, de Onis, Lima, Blo’ssmer, & Clugston, 2001). So, it is very important to pay attention to the completeness of nutritional intake at the early age of a child’s life.

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Volume 8 Issue 7, July 2019

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