

Chapter IV

Result and Analysis

This section presented statistical description and the result with analysis from logistic regression.

4.1 Statistical Description

Of the summary statistics below, Table 4.1, has shown us the number of observations for children below five years old who are included in the research and total children experience diarrheal disease. Of 18,021 children there are 13.90% children who experienced with diarrhea episode within the past two weeks and 81.58% children who did not experience diarrhea disease. Missing data found where mothers did not recall or did not answer the question.

Table 4.1 Children with Diarrhea

Variables	Obs.	Percentage
Diarrhea	2,505	13.90
Non-diarrhea	14,702	81.58
Missing	814	4.52
Total	18,021	100.00

Source: idkr63dt file, IDHS 2012

As diarrhea within two weeks classified as acute persistent diarrhea, then it is important to seek treatment to lighten up the burden. Table 4.2 explained that only 1,556 children received medical treatment and 604 did not received non-medical treatment. Missing data found that mothers did not recall for sought any treatment or did not want to answer the question.

Table 4.2 Children Receive Medical Treatment

Variables	Obs.	Percentage
Medical	1,556	62
Non-medical	604	24
Missing	345	14
Total	2,505	100.00

Source: idkr63dt file, IDHS 2012

4.2 Logistic Regression Result

The result coming from marginal effect logistic regression is shown on Table 4.3. The dependent variable is treatment.

Table 4.3 Marginal Effect Result

Variables	Model1	Model2	Model3
age	0.508*** (0.0974)	0.502*** (0.0976)	0.467*** (0.0993)
gender	-0.128 (0.0979)	-0.138 (0.0982)	-0.141 (0.0984)
rural	0.126 (0.103)	0.168 (0.109)	0.164 (0.110)
wealth	0.518*** (0.129)	0.498*** (0.143)	0.514*** (0.144)
mother's_education	-0.463*** (0.161)	-0.460*** (0.162)	-0.452*** (0.161)
toilet		-0.00514 (0.112)	-0.00690 (0.112)
water_treatment		-0.0631 (0.106)	-0.0540 (0.106)
water_source		0.0932 (0.125)	0.102 (0.125)
only_child			0.0525 (0.102)
mother_age			-0.0169** (0.00770)
Constant	0.609*** (0.107)	0.599*** (0.156)	1.068*** (0.289)

Observations	2,160	2,153	2,153
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Robust standard errors in parentheses

4.3 Result

Significant Variables

- Age

From the result of the estimation we can see that variable age shows a consistent significant result. Initially children with age 0-24 increase the probability to get medical treatment when they experience diarrhea, compared to older children are 50.8 percentage points at 1% significance level. On the second model children with age 0-24 months increase the probability of getting medical treatment by 50.2 percentage point at 1% significance level. Third model, shown us that when children age 0-24months experience diarrhea, it will increase the probability to get medical treatment by 46.7 percentage point compared to children with age more than 24 months who experience diarrhea disease too.

- Wealth

From the estimation result wealth has a positive and significant effect on the choice of medical treatment at 1% significance level on every model. On the first model richer household increase the probability to choose medical treatment by 51.8 percentage point—*ceteris paribus*—compared to those in poorest, poorer, and middle household. The second model shown that richer household—compared to poorest, poorer, and middle household—had a higher probability to treat their illness on medical facility by 49.8 percentage point *ceteris paribus*. The third model shows the highest probability by 51.4 percentage point *ceteris paribus* for household with

higher or richer wealth quintile to choose medical treatment compared to those with poorest, poorer, and middle household.

- Mother's Education

Mother's education showed a negative significant relationship to the choice of medical treatment at 1% significance level. On the first model, higher mother's education reduces the probability of choosing medical treatment by 46.3 percentage point *ceteris paribus* compared to mothers with no education, primary, and secondary educational level. The second model shows that higher mother's education will decrease the probability of choosing medical treatment by 46 percentage point compared to mother with no education, primary, and secondary educational level. Third model shown us that mother who had higher education will choose less medical treatment to treat child diarrhea by 45.2 percentage point compare to mothers with no education, primary, and secondary educational level.

- Mother's Age

From the result above mother's age have a negative significant impact on medical treatment for children's diarrhea. On the third model when mother's age increases by one year the probability to choose medical treatment will be reduce by 1.69 percentage point *ceteris paribus* at 10% significance level.

4.4 Discussion

Based on the estimation result age of children significantly give an impact to the choice of diarrhea treatment. Younger children tend to receive more medical treatment compared to the older one. This result supported by the previous findings

from Page et al (2011), Dagneu et al (2018), Ogunlesi & Olanrewaju (2010) that mothers whom children less 2 year more likely to seek medical health care. This happen possibly due to the fact that children with age less than 2 years is when children first time got complementary food (Olango & Aboud, 1990). Conversely, Pillai et al (2003) found that family seek less care for younger children since younger children tend to have more illness that will resolve on their own.

Wealth index shown that relative to rich household less likely to treat diarrhea non-medically. Instead they use medical treatment to treat children with diarrhea. Some of previous research support this findings, Aremu et al (2011) stated that poorest household choose to use home care to manage children diarrhea compared to the richer one. Shaikh & Hatcher (2005) stated that poverty not only exclude benefits of healthcare but also prevent them for participate in the decision for their own health. But Pillai et al (2003) found the opposite result for wealth, a higher economic status seek less care because the family is able to get later care for the same illness if it is does not resolve.

Higher education level has a negative significant impact to the choice of medical treatment. This finding is in contrast with Aremu, Lawoko, Moradi, & Dalal (2011), Ogunlesi & Olanrewaju (2010) and Page et al (2011) findings that stated that highly educated caregiver have a positive association with the choice of medical treatment, but this finding is supported by our reference paper Pillai et al (2003) that stated that more mother education associated with less medical facilities visit because more education, have the resource needed to obtain later in the illness when the disease did not resolve by itself.

Mother age have a negative significant impact to the choice of treatment for children with diarrhea. This result conversely with the result from Dagneu et al (2018) findings that younger mother less likely to seek modern treatment for their children. However this finding is supported by Ogunlesi & Olanrewaju (2010) that found mother with age more than 30 are subject to high risk group for inappropriate care-seeking.

Living in rural area have a positive relationship with the choice of diarrhea treatment but this variable does not show a significant result. Sex of children, non-sanitize toilet facility, treatment to water prior consumption, water source, and whether the child is the only child on the household did not shown any significant impact to the choice of diarrhea treatment. Sex of children is not significant might be because both sex female and male were equally to experience diarrhea disease (El-Gilany & Hammad, 2005). Non-sanitize toilet and drinking water source are not significant is supported by Chowdhury et al (2015) findings itself that stated there's no association between toilet sanitation and drinking water source. Drinking water treatment has a negative relationship to treatment, the result is supported by the referenced research itself. Those who used drinking water treatment less likely to visit professional healthcare provider, perhaps this happen because they think that their illness is not serious (Chowdhury et al., 2015) .