

# CHAPTER I

## INTRODUCTION

### 1.1 Background Study

Water is one of the important element for a healthy body. Water has an important role in the body, as a solvent, catalyser, lubricant, regulator for body temperature and as a provider of minerals and electrolytes to the body. In 2009 a study of *The Indonesia Regional Hydration Study* (THIRST) declare that 49,5% of teenager experience mild dehydration, the same case also happened to an adult, but with a smaller amount compared to teenager (42,5%) (Hardinsyah *et al.*, 2010). Fluid intake is total fluid intake that represents from plain water and beverages like soda, coffee, tea, syrup, sports drink, and energy drink, as we know that the most part of the body is waters. Lower fluid intake can also be caused by various factors, i.e., nutrient status, gender, temperature, physical activity, water intake, age, and subject knowledge. Research also explains that the level of teenagers knowledge at lowland (57,8%) also rated low (Hardinsyah *et al.*, 2010).

Dehydration is the condition where unbalanced fluid happens in the body and deficiency of fluid was happen in the body because the output of the fluid is too much than the fluid intake (Almatsier, 2009). Good hydration is vital for good health and well-being. To date, there was little interest in collecting data on water intake. However, there was increasing evidence that a low water intake or mild dehydration might be linked with the risk of chronic diseases (Gandy, 2015).

Teenage girls at Islamic Boarding School have a high activity level, get started from dawn until late come close to sleep again. The daily activity consists of many agendas series inside the Islamic Boarding School, including academic agendas and non-academic agendas. According to researcher's observation that the high activities inside the Islamic Boarding School sometimes make some of the teenagers careless and doesn't pay

attention of the drinking habit or behavior and total daily fluid intake, this factor that may influence and effect the dehydration case on a teenage girl at Islamic Boarding School.

One of the other factors that may be able to also influence of fluid intake is the level of individual knowledge about hydration. Much of them drink just only when they feel thirsty, whereas the feeling of thirsty is the first stage of mild dehydration, many peoples didn't realise that them self were experiencing mild dehydration. On Nindya and Permadhi researchs (2013) explain that there was a relationship between the level of knowledge and fluid intake on teenager aged 13-18 year at Kasih Keluarga Foundation, Pejaten, south of Jakarta.

According to Andayani (2013) in her research, there was an association between fluid consumption and hydration status in male industrial workers. In the study of Arrasuli and Permadhi (2012), it was also stated that the level of knowledge in children aged 7-9 years was associated with their daily fluid intake. Whereas in the results of Kusuma *et al.* research (2016) showed that there was no relationship between the level of knowledge of fluid intake on hydration status in the elderly, this was due to disturbing variables such as decreased kidney function in concentrating urine which made the urinary frequency increase. The decrease in the feeling of thirst and a feeling of discomfort during urinating caused the elderly rarely consumed fluids. For these reasons the researcher was interested in researching to know is there the relationship between knowledge level of hydration and total fluid intake on a teenage girl at Islamic Boarding School.

## **1.2 Research Question**

Is there a relationship between the level of hydration knowledge and total fluid intake on a teenage girl?

## **1.3 Purpose**

### **1.3.1. General Purpose**

The purpose of this study is to know the relationship between the level of hydration knowledge and total fluid intake on teenage girls at Islamic Boarding School.

### **1.3.2. Specific Purpose**

The specific purpose of this study are to :

- Identify the average of total fluid intake on teenage girl Islamic Boarding School.
- Identify the average level of hydration knowledge on a teenage girl at Islamic Boarding School.
- Analyzing a proportion of teenage girl at Islamic Boarding School that getting the risk of dehydration.
- Analyzing the relationship between the level of hydration knowledge and total fluid intake on a teenage girl at Islamic Boarding School.

## **1.4 Benefit**

### **1.4.1 Theoretical Benefit**

This research is expected to be able to improve and adding the scientific insight regarding the relationship between the level of knowledge about dehydration and total fluid intake on teenage girl at Islamic Boarding School, can apply the knowledge that had been obtained and provide contributions or devotion to the *Islamic Boarding School* in term of improving the health of the student.

### **1.4.2 Practical Benefit**

This research is expected to increase the awareness of students about the importance of consuming water to meet total fluid needs by the recommended needs to out of dehydration and can to increase the place of taking water provided as input for the Institution or Islamic Boarding School.

### 1.5 Authenticity Research

Here is the explanation about the difference between previous research and research to be done that is said in Table 1 :

Table 1. Authenticity research

No	Research title	Method	Result	Difference
1	Relationship level of knowledge of fluid intake toward hydration status on aged at the posyandu elderly Banjar Serasan silence east Pontianak sub-district (Kusuma, 2016)	Observational research using cross-sectional descriptive analytic study design Variable Independent: Level knowledge about fluid intake Variable dependent: Hydration status	There was not a correlation between the level of knowledge of fluid intake and the status of hydration in the elderly with values P 0,347 and 1,000 ( $p < 0,05$ )	The difference from this research resides in a variable (hydration status), a sample that used and the place to do the research
2	Relationship fluid intake with hydration status on male industrials worker (Andayani, 2013)	Observational research with cross-sectional design Variable Independent: Fluid intake Variable dependent: Hydration status	There was a relationship between fluid consumption and hydration status in male industrial workers ( $p = 0,006$ )	The difference from this research resides in a variable, a sample that used and the place to do the research

No	Research title	Method	Result	Difference
3	Fluid intake and the relationship with the level of knowledge on children 7-9 year at Kasih Keluarga foundation, Pejaten, Jakarta at 2012 (Arrasuli, 2013)	Research with cross-sectional design Variable Independent: level of knowledge Variable dependent: Fluid intake	The level of knowledge of children aged 7-9 years was related to their daily fluid intake (p=0,007)	The difference from this research resides in the sample that used and the place to do the research
4	Fluid intake and hydration status influence blood pressure in youth football athletes (Penggali <i>et al.</i> , 2016)	Observational research with cohort longitudinal design Variable Independent: Fluid intake and Hydration status Variable Dependent: Blood pressure	Fluid intake and hydration status, and change in body weight of subjects before and after exercise provided a significant effect on systolic blood pressure (P<0,005)	The difference from this research resides in a variable, the total variable used, sample and place to do the research

