

Improving Medical Students' Safety Injection Behavior In *Panembahan Senopati Hospital* by Leaflet, Movie, and Intensification

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BACKGROUND

In 2006, *Yogyakarta* contributes 0.8% Hospital Acquired Infection (HAI's) of total HAI's in *Indonesia*. In 2010 6-16% HAI's occurred in the Teaching Hospital. Sharps injury is one of the causes of HAI's. Center for Disease Control and Prevention (CDC) stated that there was 385,000 sharps injury/year. Sharps injury can cause a pathogen transmission, such as Hepatitis B Virus, Hepatitis C Virus and Human Immunodeficiency Virus and inflict a financial loss up to \$71 to \$5,000. Data from *Colombo*, 2012 stated that 95% of 168 medical students experienced sharp injury. In *Indonesia* from August-October 2008 at *Sardjito Hospital* occurred 43.3% sharp injury and some of them was medical students. *Panembahan Senopati Bantul Hospital* accepts 40 medical students every year. The Revised Injection Safety Assessment Tool (Tool C – Revised) was used to assess how well-behaved the health worker provided injections to enhance sharp safety.

OBJECTIVE

To improve medical student's safety injection behavior in *Panembahan Senopati Hospital*.

METHODS

This study uses action research method. Action Research (AR) is defined as an instrument that can be used to investigate, evaluate, and improve any activities done by practitioners (Winter & Munn-Giddings 2001). The researcher used *Kurt Lewin's* action research model, with the stages of planning, acting, observing, and reflecting. This research was conducted with two different cycles, specifically in the acting stage. The first cycle is carried out by independent learning through a leaflet and video screening, while the second cycle is carried out by intensification.

The subjects of this study were 11 medical students who were on duty at the emergency department of *Panembahan Senopati Hospital*. Sampling was done by purposive sampling. The object of this study is the knowledge of the students about sharp safety and the action in conducting safety injection. This Research also used additional data in the form of in-depth interview with the head of ER in *Panembahan Senopati Hospital* and research samples. Students' safety injection behavior was evaluated by using Revised Injection Safety Assessment Tool (Tool C – Revised), before and after the action.

Comparison of Knowledge and Action of safety injection before and after Action Phase Cycle I

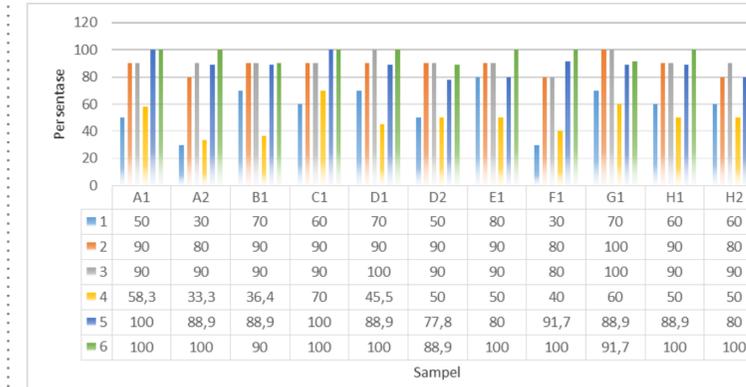


RESULTS

Before the research, the medical students' knowledge on sharp safety was 30% until 80% and the action on safety injection was 33,3% until 70%. After the research the knowledge increased is 80% until 100% and the action is 88,9% until 100%.

From Planing Phase Cycle I, the researcher and the research subject agreed that the action is independent learning by reading leaflet and video screening. An independent learning using a leaflet and video screening surely can empower the knowledge and the behavior of the students. Leaflet as promotional media consisting of two sides, and is designed as simple as possible so that it can inform (1) the reader's psychological aspect about the ways of a process; (2) confidentiality and its limits; (3) choices (Hurtado et al. 2014). In 2015 *Piddennavar & Krishnappa* said that leaflet is one of the commonly used media to promote health education, and one of its benefit is that it can be used to empower group knowledge and behavior, particularly those with lower education. The second media is a video that contains safety injection steps. The use of leaflet and video can simultaneously increase self-knowledge and behavior (Beaujean et al. 2016).

Comparisson of Knowledge and Action of Safety Injection, before, after cycle I and after cycle II



1	Knowledge before Action	4	Safety Injection Act before the research
2	Knowledge after Action Cycle I	5	Safety Injection Act after Cycle I
3	Knowledge after Action Cycle II	6	Safety Injection Act after Cycle II

According to *Pelletier et al. (2015)*, which stated that the prevention of injuries is gradually improving after health promotion by video. Video can also increase audience awareness about the promoted content (Zhang et al. 2017). Video movie embeds relevant health and wellbeing messages in an entertaining piece, intending to make a difference in health literacy (Schoen & Thompson 2016).

In the Cycle II, Intensification measures were carried out. Intensification is a multilayered process propelled by three intersecting forces, austerity, rationalization, and strengthening (Selberg 2013). The intensification have a lot of benefit because of this three intersecting forces. Austerity is about saving time, energy and cost. The rationalization is to provide a reasons why something must be done, and in this case is the steps in conducting safety injection. The strengthening is the repetition of the important point (Selberg 2013).The Intensification process can improve knowledge and action at an individual or personal level by providing a favorable environment and attitude (Sinha et al. 2017). Deeper, the process of intensification can also increase a person's curiosity about something (Sinha et al. 2017). In another study, it was stated that intensification can improve the use of one's basic knowledge (Hirsch-kreinsen 2013)

CONCLUSIONS

The improvement of sharp safety knowledge in medical students is 10% until 60% and the action of safety injection in medical students is 30% until 66,7%. The result of this study was reported to The Education and Training Committee of *Panembahan Senopati Hospital*

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Tabel 1. Subject Characteristic

Subject Characteristics	Frequency (n)	Presentage (%)
1. Age		
21 y.o	2	18.2
22 y.o	5	45.5
23 y.o	4	36.4
Total	11	100.0
2. Gender		
Male	4	36.4
Female	7	63.6
Total	11	100.0
3. Rotation		
Internal Medicine	4	36.4
Surgery	5	45.5
Paediatric	2	18.2
Total	11	100.0
4. Absence on rotation		
Yes	0	0
No	11	100.0
Total	11	100.0
5. Class		
Class of 55	11	100.0
Total	11	100.0