

## Preliminary Study: The Benefit of Melody (Medical Clothes and Aid Emergency)

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### Abstract

**Objective :** Designing medical equipment volunteers with 3 integrated functions, warmer, litter and first aid kit box.**Material and methods :** This preliminary study uses a questionnaire in data collection. This questionnaire is addressed to 10 students volunteer physician at the University of Muhammadiyah Yogyakarta, in this case the Medical Assistance Team (TBM) Ash-Shifa. These volunteers will try to do the simulation by using Melody, and provide an assessment of Melody through a questionnaire that has been made. This questionnaire contains questions about Melody, ranging from the question of how important Melody to criticism and suggestions to the Melody.**Result :** Data collection show that it is make easier, functional and comfortable for medical rescue equipment.**Conclusion :** Melody is a tool that is expected to support the rescue by medical volunteers in order to optimize the post-disaster prevention and rescue equipment and integrated features.

**Keywords :** Medical, Equipment, Rescue, Integrated, Optimize.

### 1. Introduction

Doctors volunteer is one of the parts who parachuted into the area to help the victims of natural disasters. Many first aid kit should be carried by the doctors, like medicine, scissors, bandages, gauze, and other equipment, so it would be very disturbing if the doctor took him with the victim's purse when looking around the area of natural disasters. Based on the research of Furukawa H, dkk1, which revealed that at the time of the tsunami disaster and the earthquake in Japan, approximately 73% of the victims suffered hypothermia. It is undeniable, the volunteer doctors also at risk of developing these disorders. A tool body warmers are needed to prevent such things, that doctors did not join volunteers suffered hypothermia.

This situation makes a volunteer physician requires a practical and lightweight tool to bring all the equipment needed during the rescue. Clothes and Emergency Medical Aid (Melody) is an innovative solution that is in accordance worn by volunteer doctors because it has been equipped with various features that are required for the convenience and comfort of the doctor. These garments are designed can store all rescue equipment ranging from medicines, bandages, gauze, thermometers, and other equipment. Apparel is also equipped with heating in it that uses solar power and changed by peltier cells, which can be worn when the doctors are volunteers in the disaster area where the temperature is cold. Moreover, to add to the features of this outfit, Melody also has a function as a stretcher that can be used when in an emergency and shortage stretcher.

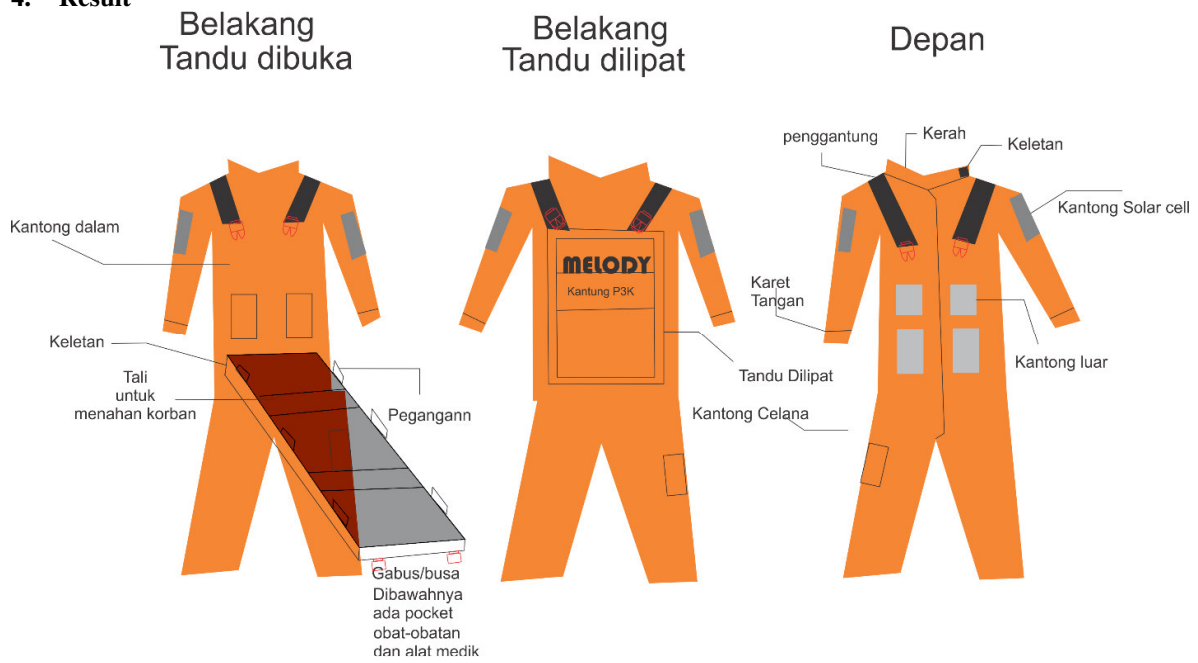
### 2. Purpose of The Study

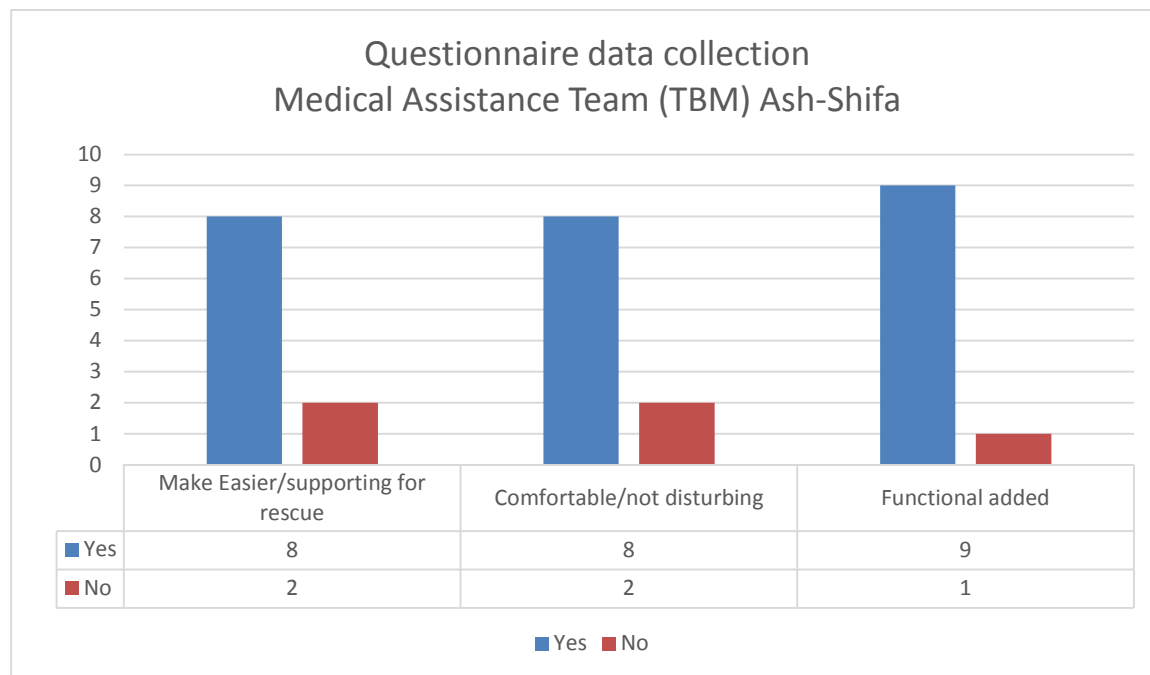
To know how important a medical volunteer clothes for practician volunteer to safe and make easy the task of practician volunteer, *Melody* .

### 3. Methods

This preliminary study uses a questionnaire in data collection. This questionnaire is addressed to 10 students volunteer physician at the University of Muhammadiyah Yogyakarta, in this case the Medical Assistance Team (TBM) Ash-Shifa. These volunteers will try to do the simulation by using Melody, and provide an assessment of Melody through a questionnaire that has been made. This questionnaire contains questions about Melody, ranging from the question of how important Melody to criticism and suggestions to the Melody.

#### 4. Result





## 5. Conclusion

Melody is a tool that is expected to support the rescue by medical volunteers in order to optimize the post-disaster prevention and rescue equipment and integrated features.

## Reference

- [1] Furukawa H, dkk. Hypothermia in Victims of the Great East Japan Earthquake: A Survey in Miyagi Prefecture. 2014 Sep 12:1-11 [PubMed]
- [2] Rahman, Dhohir Taufik dan Tarsisius, 2000, *Indonesia : Negara Bencana*, Jakarta : Yudhistira
- [3] Lazuardi, Gilang, et al. 2008. "Laporan Akhir Tugas Merancang Alat Kompres Termoelektrik". Depok : Departemen Teknik Mesin FTUI
- [4] Agustin, Hendri. 2006. *Panduan Teknis Pendakian Gunung*. Yogyakarta: Penerbit Andi
- [5] Ario, Rachman. 2004. *SAR manual's-compilation hand book*. Bandung: Unpad-PALAWA
- [6] Peter, Darman, 1994. *The Survival Hand Book*, London, Amber books
- [7] Panero, Julius. Martin Zelnik. 1979. *Human Dimension & Interior Space*, New York: Watson-Guption Publications