

Chapter in Book


Tactical Medistick


Nur Adilah Binti Mhd Rameli^{1,*}, Nur Fatehah Binti Ariffin², Aqil Danial Bin Suhaimi³, Nurin Aina Nabihah binti Zulkiflee⁴, and Hassnah Wee⁵

¹ nuradilahmhdrameli@gmail.com;  ORCID ID (0000-0002-8674-4945)

² nrfttharf00@gmail.com;  ORCID ID (0000-0002-0193-4628)

³ aqildanial18@gmail.com;  ORCID ID (0000-0003-1409-1890)

⁴ aweennurinaina@gmail.com;  ORCID ID (0000-0001-6687-3371)

⁵ Faculty of Hotel and Tourism Management, Universiti Teknologi MARA, Cawangan Selangor Bandar Puncak Alam, Malaysia; hassnah739@uitm.edu.my;  ORCID ID (0000-0001-7103-4679)

* Correspondence: hassnah739@uitm.edu.my; +6011-1217 2037.

Abstract: Experienced hikers and individuals typically bring all of the essentials for jungle trekking and hiking. Included in this list are food and medical supplies. Although this may seem like a smart idea at first, it may be difficult to extract the pills from the bag, packet, or other objects in which hikers store their medical supplies when an emergency arises and requires their usage. Consequently, creating a "Tactical Medistick" through invention is the optimal approach. The "Tactical Medistick" is an aluminium walking stick with compartments designed to increase trekking and walking stability and durability. On one end of the stick is a laser pointer, while on the other is a miniature flashlight. Additionally, it is adaptable and user-friendly. All travellers, from casual tourists to seasoned hikers, can now easily reach their medical supplies while utilising the 'Tactical Medistick' as a walking stick. This concept has the potential to be commercialised for all tourists who like hiking, regardless of their level of experience. It is also excellent for older individuals who regularly use walking sticks.

Keywords: Tactical Medistick, Safety, Medical.



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1. INTRODUCTION

In Malaysia, mountain hiking is a popular outdoor activity. Since the widespread adoption of social media in 2016, it has become a trend ((Monasterio, Alamri & Mei-dan, 2014; Soule, Reynier, Lefevre, & Boutroy, 2017). Popular hiking destinations are favoured by hikers. They enjoyed sharing their great experiences and photographs. Hiking creates friendship, promotes physical fitness, and instils an appreciation for nature in everyone. Many people like spending time with friends, family, and co-workers while mountain biking, trail running, or hiking in the beautiful outdoors. The sensation of a soft, earthy path beneath their boots, the warmth of the sun on their face, and the sound of the wind rustling through the trees overhead (National Park Service, 2018). These hobbies are both enjoyable and good for overall health. It has been discovered that hiking has numerous health benefits, ranging from the physical exercise that one receives on the trail to the stress-relieving effects of being outside. Developing a product or idea based on this action will prove fruitful. According to Grand View Research (2020), the global hiking equipment and gear market was valued at USD 4.5 billion in 2019 and is anticipated to reach USD 7.4 billion by 2027. Producing a new innovative product for the hikers in the market would be very useful and benefit them.

1.1 Problem Statement

When undertaking hiking-related activities, hikers and individuals must be aware of and prepared for any possible risks. Due to the prevalence of fractures, broken bones, muscle tears, and overtraining among hikers, it goes without saying that they regularly experience discomfort months or years after their journey. As a result, there were several SAR (Search and Rescue) efforts, which were costly, time-consuming, and difficult.

According to newly disclosed data, in 2018, the Malaysian Fire and Rescue Department reported 105 accidents and incidents. Surprisingly, this result was 78% identical to the number of recorded cases between 1996 and 2014. (Nik Jazwiri, 2016). This illustrates an increase in unsafe climbing behaviours in the mountainous setting of Malaysia. Our innovation ought to be advantageous to both tourisms in general and medicinal products in particular. The Tactical Medistick is an innovation aimed at the hiking sector that provides a solution to one of its most pressing safety issues. This item can be utilised as a standard trekking tool, but it also includes first aid supplies and other safety features.

2. METHOD & MATERIAL

For this innovation, we will set in compartments into the walking stick. To get to this compartments, the user will only have to screw it off section by section. Thus, the user can get to their meds pretty easily. The Tactical Medistick is made by aluminium and then sprayed with a glow in the dark paint. So if the situation ever arises where the user lost their Tactical Medistick in the dark, they could locate it pretty easily. The Tactical Medistick also comes fully equipped with a flashlight and a laser pointer on both end of the stick handle. The handle of the Tactical Medistick will be wrap by polyurethane to give the user a more comfortable grip to the handle. A feasibility survey using Google Form were distributed to 100 respondents to hikers Facebook group. The purpose of the survey is to get feedback on the product acceptance and usability from the potential market.

2.1 Design

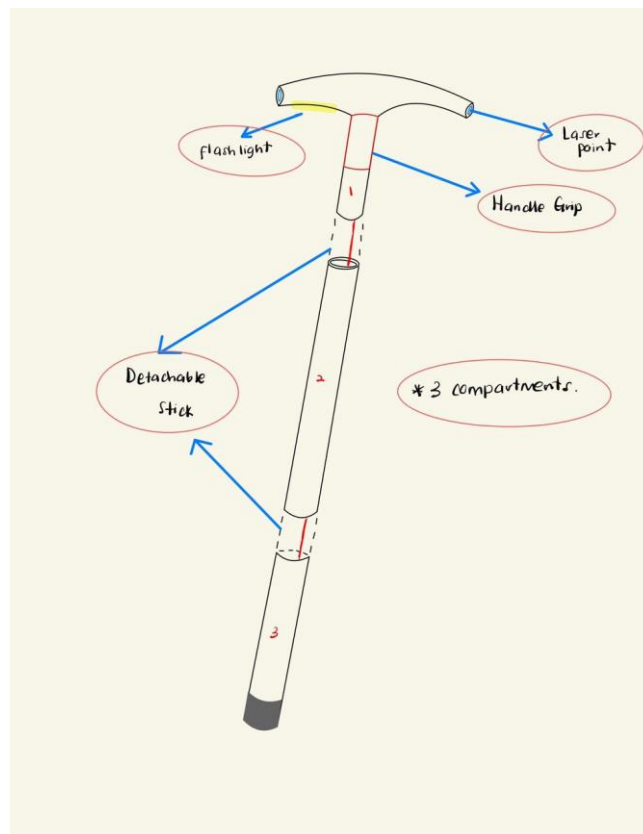


Figure 1. The Design Sketch of the Tactical Medistick

2.2 Finished Product



Figure 2. The Fully Finished Design of the Tactical Medistick

3. FINDINGS

A feasibility study was conducted to obtain feedback from possible consumers. The primary method for reaching the 100 respondents was a Google Form Survey.

The respondents' demographic results from Section A show that the majority of the respondents were females (54%) and most were aged between 18 and 25 years old (58%). The results also show that most of the respondents are degree students (47%). Based on the responses, it can also be interpreted that most of the respondents receive no income each month (37%).

Section B measures the respondents' agreement. Results show that 93% of the respondents do in fact like to travel, and 57% of them always pack a medicine kit when hiking or traveling. 93% of the respondents also agree that hikers should indeed carry a medical kit when hiking, and 65% of them believe that doing so will take up valuable space in their backpacks. As for the final part, 85% of the respondents agree that aluminium is the ideal material for a Tactical Medistick.

Section C measures the respondent's knowledge and interest in the Tactical Medistick. Based on the results shown, 91% of the respondents have never come across a Tactical Medistick, yet most of them (75%) would purchase one if available. Results also show that the majority (79%) believe that this Tactical Medistick would be useful to them as most (92%) find the Tactical Medistick interesting and practical. Furthermore, most of the respondents (74%) fortunately intend to tell others about Tactical Medistick.

4. DISCUSSIONS

4.1 Uniqueness

This product is different than any other hiking stick-related product on the market because of its unique features. The Tactical Medistick is not only a working and functional hiking stick, but it can also be for medical use. For instance, a fellow hiker with asthma was short of breath during the trip, and in that situation, when everyone tends to panic, it is quite challenging to find the inhaler that the hiker stashed someplace in their bag. Thus, rather than just an ordinary hiking stick, it can be used for medical emergency purposes as well. The market targeted for this product can be various kinds of people, from hikers to the elderly who use a walking stick daily.

4.2 Usefulness

Other than the medical purposes of the Tactical Medistick, which in itself is useful, it also comes with its own safety features. The flashlight and the laser pointer are attached at the end of each handle of the Medistick. The purpose of the flashlight is for hikers to see where they are walking in the middle of the night. As for the laser pointer, it can be used to distract wild animals that hikers might encounter during their hike. The Tactical Medistick is also equipped with a compass to make sure that the hiker never loses their way. The Tactical Medistick itself will be sprayed in a neon-style pattern with green paint. This paint has the effect of glowing in the dark. Thus, if the hiker drops or loses their Tactical Medistick in the middle of the night, it can easily be located.

4.3 Commercialization

This innovative Tactical Medistick has a great potential to be marketed to the hikers and individual with special needs, for example the elderly people. Based on the feasibility survey findings,

more than 75% respondents accepted the features of the Tactical Medistick and perceived that this product is useful and would benefit the hikers especially.

5. CONCLUSION

Medical products are a necessity for all humans. There are a number of advantages to adopting pharmaceuticals designed specifically for tourist use. For example, after disassembly, it becomes a durable and portable object for walking and hiking. People are always in search of medical and safety products. The Tactical Medistick is completely outfitted for medical and security applications. It is a device with the potential to make hiking and trekking safer and save lives.

Additionally, this innovation contributes to the Sustainable Development Goals. It supports "Innovation" (SDG9) and "Gender Equality" (SDG5), so any gender, male or female, can use this product if they so choose. This product is designed and manufactured so that men and women can easily access their hiking medical supplies. In addition, this innovative product promotes "good health and well-being" (SDG3). It is designed specifically for hikers with medical problems. In addition to being durable and comfortable to hold while hiking, this product is user-friendly.

References

- Arrive Alive. (2022). *Hikers and hiking safety*. <https://www.arrivealive.mobi/hikers-and-hiking-safety>
- Grand View Research. (2019). *Hiking gear & equipment market size, share & trends analysis report by product (clothes, footwear, backpack, equipment), by distribution channel (specialty stores, retail stores, online), by region, and segment forecasts, 2020 – 2027*. <https://www.grandviewresearch.com/industry-analysis/hiking-gear-equipment-market>
- Joseph Marulli, PT, DPT. (2022). *Hiking safety tips for before, during and after your hike*. <https://health.osu.edu/wellness/exercise-and-nutrition/hiking-safety-tips>
- Mazuki Mohd Yasim. (2020). *Hiking preparedness model (hiprep): A scenario of Malaysian hikers awareness*. <https://doi.org/10.24191/mjssr.v16i2.13591>.
- National Park Service (2018). *Benefits of hiking*. <https://www.nps.gov/subjects/trails/benefits-of-hiking.htm>
- Scheunemann, J. (2011). *Day hiker preparedness: assessing the roles of past experience, safety messages & knowledge of safety practices*. 7-8. <https://www.semanticscholar.org/paper/Day-hiker-preparedness%3A-assessing-the-roles-of-past-Scheunemann/7cf5eb2bbfe3594a6c03de0e83c72c943fdb16a5#citing-papers>