

## **A Literature Review On Knowledge, Awareness and Attitude Related To First Aid Among University Students**

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**Abstract:** Having knowledge and awareness related to first aid in each individual person is important in terms of helping people in emergency situation since injuries are one of the leading causes of morbidity and mortality worldwide. On the other hand, first aid is the treatment for the purpose of preserving life and minimizing the consequences of injury and illness until getting help from a medical practitioner or nurse. Furthermore, some studies have found that individual person who equipped with adequate first aid knowledge had a positive impact on morbidity and mortality worldwide. Therefore, this literature review was aimed to evaluate the knowledge, awareness, and attitude related to first aid among university students. The finding of this literature showed that the level of knowledge, awareness, and attitude related to first aid among university students are varied and inadequate although they knew this course is important.

**Keywords:** First aid, first aid training, knowledge, awareness, attitude, university student.

### **INTRODUCTION**

According to world health organization (WHO), injuries related to traffic accidents were ninth among the first 10 causes of global disease burden in 1990 [1]. They are expected to be ranked in third place after ischemic cardiac disease and unipolar major depression in 2020. Globally, injury related, including traffic injuries, homicide, suicide, and others are 8 of the 15 major causes of death for people aged from 15 to 29 years [2].

A study found that the most commonly injury cases reported were road injuries(43.8%), and injuries occurring at home (33.2%) and outside home (26.9%) at places like schools, workplaces, or sports venues [3]. Based on a study among university students in Finland, most of the accidents had been sustained during sports activities and 14% in traffic, only 0.5% of the accidents were classified as having occurred in the university area or during activities directly related to their studies [4]. Looking at to Malaysia, according to the Ministry of Health, injuries including road traffic accidents are the fifth cause of death and the third cause of admission to the hospitals [5].

According to Malaysian Red Crescent, first aid is the rapid and fast care given to people who are injured or becomes ill suddenly. Therefore, first aid is

just not important for accidents or injuries but also important in people who suddenly become ill like cardiac arrest, epistaxis, choking, and many more. Furthermore, Malaysian Red Crescent, describe that if individuals are equipped with basic first aid knowledge, they could save a person life. A study found that it is vital to make sure that individuals get enough training to handle with such events including university students as the incidences of emergencies is steadily increasing nowadays [6].

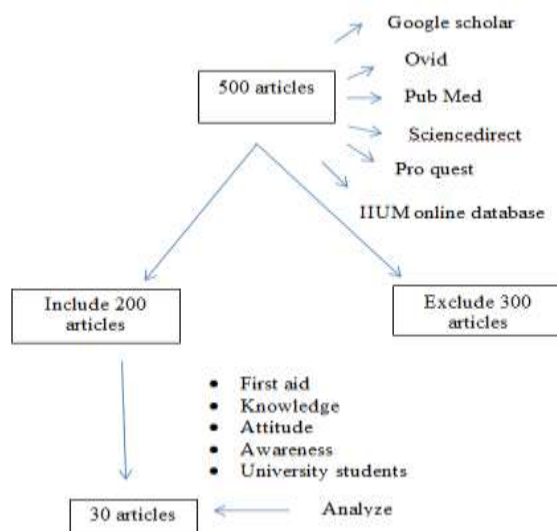
Previous study found that improved first aid training reduced the rate of accidental injury [7]. Every minute from the initial care to the advance care can be the difference between life and death when emergency situation occurs in public [8]. Individual who provides initial care, like first aid, plays a vital role in sustaining

life and communicating with the emergency facilities. Thus, this literature review was aimed to find out the knowledge, awareness, and attitude related to first aid among university students.

**METHODS**

**Search Strategy**

The researcher did literature search through google scholar, Ovid, Pub Med, Sciencedirect, and Pro quest online databases. Initially the researcher found that 500 articles related to this study. After analyzation, only 30 articles were selected. The flow of literature search as shown in figure 1.



**Fig-1: Literature search flow**

**FINDING OF THE LITERATURE**

**First Aid**

First aid is characterized as the immediate assessment and interventions performed with minimal or no medical equipments by a bystander [9]. First aid also can be defined as a set of mostly basic measures to provide immediate emergency treatment of painful injury or life threatening cardiac or respiratory crises [8]. While according to Malaysian Red Crescent, first aid is the care given to injured person or suddenly becomes ill immediately.

First aid can be life saving and limit damage until the arrival of help from expert [10]. At work, school, home, and in public locations, first aid can be an effective life-preservation tool [11]. Both articles highlight the vital of first aid in saving life in their definitions of first aid. Thus, administration of first aid minimized the injury consequences [12].

**Importance Of First Aid**

When a sudden and unexpected emergency happens, fast reaction is needed. A trained first aider and CPR responder can attempt to reestablish heart function and supply oxygen to the lungs at the scene without a doctor’s order [8]. According to Rawlins *et al.* for every 24–36 persons who receive CPR training one life is saved and being an important component of the cardiac chain of survival, out-of-hospital survival rate will also improve with CPR [13]. Increasing in the number of citizens capable of performing CPR, and

thus increase the rate of bystander CPR is one of the goals of CPR training.

Bystanders will be prepared to respond and provide straightaway plus efficient treatment for variety of incidents such as alerting the emergency medical system (EMS), maintaining the airway, breathing and circulation, respiratory and cardiac arrest, and hemorrhage control with basic first aid training [14]. First aid must be taught precisely to a broad spectrum of individuals within the community, workplace, and health care environment in order to improve the emergency response and outcome.

According to Sönmez *et al.* in injuries that occur as a result of school accidents, teachers are the first people who responsible to help the child and perform first aid practices [15]. First aid practices are vital in terms of preventing death and further harm with simple interventions [16]. Therefore, teachers should know the rules of basic first aid practices.

**Knowledge Related To First Aid Among University Students**

According to Deepak abd Nayak, sufficient knowledge and skills about what he is doing, and be encouraging and reassuring to the victims must be equip in every first aider [17]. Numerous experts trust that in emergency situations, even a limited understanding of first aid would be an important service [18]. A little bit of knowledge and skill about basic first aid in

emergency of bleeding, shock, sprain, snake bite, dog bite, and others should be have by almost everyone [17]. But there were also insufficient of adequate knowledge on taking care of an emergency without hospital setting at the site of accident or emergency [19].

A study found that most of nursing students aware that first aid was the initial help given to a victim of accident, 48% knew the exact way to handle case of choke on some food, 86% were aware that positioned victim to sit comfortably is important in case of suspected heart attack, only 16% knew that direct pressure should be applied on the wound in case of severe bleeding due to cut injury in arm whereas many answered that arm should be kept in cold water and 62% knew that if a victim lying on ground and not responding, airway should be checked first [20].

While in Malaysia, according to Sinnappar *et al.* in dealing with common emergencies that occur in the institution, the staff and volunteers in Persatuan Kanak-kanak Istimewa Kajang (PKIK) only have substantial pre-existing knowledge [20]. Previous experiences dealing with an emergency; knowledge passed informally to the staff and volunteers or acquired knowledge regarding first aid from previous formal training are the only sources of their pre-existing knowledge.

#### **Awareness Related To First Aid**

As a student one must have the awareness on first aid in order to do for himself or to help others in an accident [21]. Mortality rates will be reduced and general health of population will be improved if focus on safety strategies in emergency and public awareness are expand [22]. A vast majority (94%) of children agreed that it was very important for them to learn first aid, and most wanted to learn more despite their lack of knowledge [23]. Medical student had poor awareness regarding first aid, and was average in awareness regarding the fire safety before the training while after the training, their awareness regarding both first aid and fire safety was significantly increased [22].

First aider will deals with the whole situation including the injured person and the injury or illness when providing first aid. The difference between life and death between temporary and permanent disability and between rapid recovery and long hospitalization is depending on the first aider knowledge and skill on first aid. Hence, having awareness on first aid among students is essential so that they may help their own or any others in the society [21].

The survival of the patient long enough till experienced medical help arrives is sufficient for survival was ensured by the knowledge of BLS and practice of simple CPR techniques from the first aider [24]. First aider able to resuscitate a victim effectively

with proper practice of the techniques and maneuvers. Ideally, the awareness on BLS and CPR to medical personnel is invaluable and everyone should know about it.

#### **Attitude Related To First Aid**

A study found out that attitudes toward first aid implementation were better among students whose teachers implemented the program enthusiastically and were more knowledgeable in first aid [25]. In terms of effectiveness of their skills, these students also performed higher self-efficacy scores, such as, a higher degree of confidence [25].

A researcher suggested that the degree and seriousness of injuries that athletes experience will decrease if student athletes are provided with first aid training [26]. In order to identify how they should treat injuries effectively, he promotes students learning techniques to identify their injuries themselves. Consequently, on and off the playing field, students have a more positive attitude toward dealing with themselves and their injuries.

Another study found that overall, female students were more unknowledgeable than males but scored significantly higher in the areas in which students as a whole were more knowledgeable, their attitudes overall and in their attitude to the importance of first aid were also significantly more positive [27]. On the other hand, a study found that giving and acquiring knowledge, attitudes toward giving and learning first aid were important [25]. It is likely that a positive feedback mechanism exists between the two factors.

#### **First Aid Training Program**

In the context of both man-made and natural mass casualty incidents and disasters, the potential value of first-aid training for laypersons has recently assumed at a heightened importance [10]. In order to strengthen interest, motivation, and the ability to provide first aid skills, first-aid education should begin early. Another study suggested that lifesaving first aid (LSFA) skills, including BLS and cardiopulmonary resuscitation (CPR) should have been learned by all fit laypersons above the age of ten years and teaching first aid should be compulsory [28].

Furthermore, school setting is the most likely setting for incidents such as asthma attacks, epileptic seizures, sports injuries, and others which may require first aid interventions since children and teachers spend most of their time within a school setting [29]. In order for the teachers to be able to put first aid into practice, Therefore teachers should be trained in first aid procedures and keep updating their knowledge and skills in the light of recent first aid guidelines.

### **First Aid Skill Retention**

Healthcare professionals and laypersons often face criticism for lack of basic lifesaving skills within the need for effective initiation of first aid intervention being known. Lack of training and appropriate instruction, limited practice, lack of self-efficacy, and poor skill retention contribute to the inadequate skills of basic lifesaving [14].

### **Barriers in Providing Proper First Aid Interventions**

In a study on Post-crash management of road traffic injury victims in Iran, stakeholders' views on current barriers and potential facilitators, according to Zavareh *et al.* proper first aid interventions are far from good especially in low-and middle-income countries [30]. According to a national survey from 2003, in Iran, only 14% of road traffic injury victims were transported by ambulance and 10% were rescued by trained personnel [31]. Substantial efforts have been made in recent years to improve Emergency Medical Services, not only by increasing the number of ambulances and ambulance dispatch sites but also by providing better equipment, more staff, and educational plans for emergency team members as road traffic injuries are a crucial cause of death in the country [30].

### **DISCUSSION**

The purpose of this literature review was to find the gap within the existing literatures related to the knowledge, awareness and attitude regards to first aid among universities students. Although most of literatures had highlighted that first aid should be part of everyone's basic education, some studies showed that most of the universities students in different countries are lack with the appropriate first aid knowledge [6, 8, 31]. There were not enough resources to find the knowledge, awareness and attitude regards to first aid among universities students especially among Malaysian students. The studies in this literature were done mostly in India and Middle East countries where the academic methods and socio demographic data are different from Malaysia. Therefore, the researcher would like to suggest for further study especially for Malaysian University Students regarding first aid's knowledge.

### **LIMITATION OF THE STUDY**

This review is not only focus on one certain University course only due to lack of resources. The review studies done about universities students from different courses; not only nursing, medical or sciences courses. Furthermore, this review included the study done on knowledge of first aid and CPR among college students and lay person [8, 13]. Initially, the writer intended to do systematic approach in this literature. However, the second stage for systematic review is a search for relevant data from research that matches certain criteria for instance the writer should only select research that is good quality and answers the defined question. Nevertheless, due to limited of studies, the

writer has widened the criteria of the undergraduate students from focusing at a certain course to various courses and first aid and CPR' knowledge.

### **CONCLUSION**

Based on the findings of this review, it can be concluded that majority of University students had inadequate level of first aid knowledge, awareness and attitude towards its practice. Importantly, the findings indicated that socio-demographic characteristics such as gender, age, year of study and first aid training experience had significant association with the level of first aid knowledge among University students. Thus, the knowledge, awareness and attitude of first aid among the University students should be explored more in the near future.

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### **REFERENCES**

1. World Health Organization. Road traffic injuries 2017. Retrived 5<sup>th</sup> May 2018 from <http://www.who.int/mediacentre/factsheets/fs358/en/>.
2. Sleet DA, Baldwin G, Marr A, Spivak H, Patterson S, Morrison C, Holmes W, Peeples AB, Degutis LC. History of Injury and Violence as public health problems and emergence of the National Center for Injury Prevention and Control at CDC. *Journal of safety research*. 2012 Sep 1;43(4):233-47.
3. Puvanachandra P, Hoe C, El-Sayed HF, Saad R, Al-Gasseer N, Bakr M, Hyder AA. Road traffic injuries and data systems in Egypt: addressing the challenges. *Traffic injury prevention*. 2012 Mar 1;13(sup1):44-56.
4. Sane J, Ylipaavalniemi P, Turtola L, Niemi T, Laaka V. Traumatic injuries among university students in Finland. *Journal of American college health*. 1997 Jul 1;46(1):21-4.
5. Mohamed N, Wong SV, Hashim HH, Othman I. An overview of road traffic injuries among children in Malaysia and its implication on road traffic injury prevention strategy. *Kajang, Selangor: Malaysian Institute of Road Safety Research*. 2011.
6. Joseph N, Kumar GS, Babu YR, Nelliyanil M, Bhaskaran U. Knowledge of first aid skills among students of a medical college in Mangalore city of South India. *Annals of medical and health sciences research*. 2014;4(2):162-6.
7. Abernethy L, MacAuley D, McNally O, McCann S. Immediate care of school sport injury. *Injury prevention*. 2003 Sep 1;9(3):270-3.
8. Sun F. Access to EMS Services and Training, Knowledge, and Perceptions Related to First Aid and Cardiopulmonary Resuscitation (CPR) Skills Among College Students.
9. Kumar SD, Kulkarni P, Srinivas N, Prakash B,

- Hugara S, Ashok NC. Perception and practices regarding first-aid among school teachers in Mysore. *Natl J Community Med.* 2013;4(2):349-52.
10. Van de Velde S, Heselmans A, Roex A, Vandekerckhove P, Ramaekers D, Aertgeerts B. Effectiveness of nonresuscitative first aid training in laypersons: a systematic review. 2009.
  11. Agarwala S, Gemenne F, Brücker P, Ionesco D, Herrmann M, Svarin D. International Federation of Red Cross And Red Crescent Societies (IFRC) 2014, Emergency appeal operations update. Bangladesh: Floods.
  12. Howard R, Houghton C. Improving parental first-aid practices. *Emergency Nurse (through 2013).* 2012 Jun 1;20(3):14.
  13. Rawlins L, Woollard M, Williams J, Hallam P. Effect of listening to Nellie the Elephant during CPR training on performance of chest compressions by lay people: randomised crossover trial. *Bmj.* 2009 Dec 14;339:b4707.
  14. Andersson L, Al-Asfour A, Al-Jame Q. Knowledge of first-aid measures of avulsion and replantation of teeth: an interview of 221 Kuwaiti schoolchildren. *Dental Traumatology.* 2006 Apr;22(2):57-65.
  15. Sönmez Y, Uskun E, Pehlivan A. Knowledge levels of pre-school teachers related with basic first-aid practices, Isparta sample. *Turkish Archives of Pediatrics/Türk Pediatri Arşivi.* 2014 Sep;49(3):238.
  16. Uskun E, Alptekin F, Oztürk M, Kişioğlu AN. The attitudes and behaviors of housewives in the prevention of domestic accidents and their first aid knowledge levels. *Ulusal travma ve acil cerrahi dergisi= Turkish journal of trauma & emergency surgery: TJTES.* 2008 Jan;14(1):46-52.
  17. Deepak M. A study on assessment of knowledge on practice regarding first aid measures among the self help groups in selected areas of Mangalore with a view to develop information module. *Age (yrs).* 2012;1:25-30.
  18. Semwal V, Jha SK, Rawat CM, Kumar S, Kaur A. Assessment of village health sanitation and nutrition committee under NRHM in Nainital district of Uttarakhand. *Indian Journal of Community Health.* 2013 Dec 31;25(4):472-9.
  19. Khan A, Shaikh S, Shuaib F, Sattar A, Samani SA, Shabbir Q, Rasheed AZ. Knowledge attitude and practices of undergraduate students regarding first aid measures. *Journal of the Pakistan Medical Association.* 2010;60(1):68.
  20. Swetha C, Suchitra MN, Sahana BN. A study on assessment of knowledge attitude and practices regarding first aid among nursing students. *International Journal of Current Research.* 2015;7(6):1673-5.
  21. Kalaiyarasan G. A Study on First Aid Awareness among Higher Secondary School Students in Sivagangai District. *International Journal of Multidisciplinary Approach & Studies.* 2015 Jan 1;2(1).
  22. Singh A, Mansuri S, Chaudhari A, Brahmabhatt N, Bhabhor H, Talsania N. An Interventional Study on Awareness Regarding First Aid and Fire Safety Among the Second Year Undergraduate Medical Students of BJ Medical College, Ahmedabad. *Int J Sci Study.* 2015 Jul 1;3(4):94-7.
  23. British Red Cross. 2010. <https://www.redcross.org.uk/>.
  24. Aroor AR, Saya RP, Attar NR, Saya GK, Ravinathanan M. Awareness about basic life support and emergency medical services and its associated factors among students in a tertiary care hospital in South India. *Journal of emergencies, trauma, and shock.* 2014 Jul;7(3):166.
  25. Engeland A, Røysamb E, Smedslund G, Sjøgaard AJ. Effects of first-aid training in junior high schools. *Injury control and safety promotion.* 2002 Jun 1;9(2):99-106.
  26. Thornburg GK. Ice ice baby. *Muscle & Fitness.* 2002; 63, 105-110.
  27. Al-Khamees N. A Field Study of First Aid Knowledge and Attitudes of College Students in Kuwait University. *College student journal.* 2006 Dec 1;40(4).
  28. Bollig G, Wahl HA, Svendsen MV. Primary school children are able to perform basic life-saving first aid measures. *Resuscitation.* 2009 Jun 1;80(6):689-92.
  29. Bildik F, Kılıçaslan İ, Doğru C, Keleş A, Demircan A. The need for first aid awareness among candidate teachers. *Turkish Journal of Emergency Medicine.* 2011;11(4):166-70.
  30. Khorasani Zavareh D. Toward safety promotion among road users: Epidemiology and prevention of road traffic injuries in Iran. 2009.
  31. Khorasani-Zavareh D, Khankeh HR, Mohammadi R, Laflamme L, Bikmoradi A, Haglund BJ. Post-crash management of road traffic injury victims in Iran. Stakeholders' views on current barriers and potential facilitators. *BMC emergency medicine.* 2009 Dec;9(1):8.
  32. Khatatbeh M. First aid knowledge among university students in Jordan. *International journal of preventive medicine.* 2016; 7.