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Survey

A Survey on Public Acceptance of Ride-along Program in a Voluntary Ambulance Service in Hong Kong

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Abstract

Objective

To evaluate the willingness and acceptance of first aid course participants on a proposed project of ambulance ride-along attachment and their preferences, as the means to enhance public understanding of emergency medical services and the implementation of first aid knowledge into practice.

Method

Questionnaires were distributed to students who attended the first aid courses in Hong Kong St John Ambulance Association to collect their opinions on ambulance ride program.

Result

4,600 questionnaires were collected. The proportion of male and female was similar. The majority were from the working population (65.8%). Only 2,103 (45.7%) responded that they would participate in the project. Further analysis showed that the female gender, the younger generation and those with higher educational background were more interested to join the program. The majority of those interested were willing to spend only one day or less (62.3%) and pay the minimum fee of HK\$100 (53.6%).

Conclusion

Less than half of the respondents were interested to join ambulance ride-along program. Even those interested were not keen to spend much time and money. This information may be useful for future planning of similar programs in Hong Kong.

Keywords: Questionnaire; Ambulance Ride; Voluntary

Introduction

In developed countries, it is not uncommon for ambulance services inviting citizens, students and potential prehospital care providers to take a 'ride-along' program to familiarize them to the field of prehospital emergency medical services [1-8]. It is believed that inviting interested citizens to get first-hand knowledge in an ambulance is in the best interest of the community and the services. Certainly, there are risks inherent in riding at potentially high speeds and dealing with situations where a person's life may be at risk. However, with appropriate safeguards, the general public can ride safely and gain a good perspective on the emergency medical profession and services.

In an effort to promote community based support, strengthen inter-agency alliances, and foster a strong recruiting foundation, it had been suggested that a similar program might help Hong Kong St John Ambulance – a voluntary charity organization running a small fleet of about 14 ambulances. However, this idea was new to Hong Kong and it was uncertain whether the general public would accept such a program. As students of first aid classes presumably have more interest and knowledge in emergency care, and such program may also enhance the quality of a first aid course by demonstrating the application of first aid knowledge into real-life practice, the Hong Kong St John Ambulance Association – the teaching arm of the organization – took up the mission to carry out a questionnaire survey, as the first step for further planning, to investigate this special group of citizens' acceptance and preference on an ambulance ride-along program.

Method

Students who attended the First Aid or Cardiopulmonary Resuscitation / Automated External Defibrillation courses in St John Ambulance Association were invited to complete a questionnaire (Appendix) on voluntary basis during a 2-month period from 1st March 2013 to 30th April 2013. The questionnaires were distributed at the time of examination, and examiners would collect the completed forms afterwards and send to the administration for analysis and further action. The demographic data of the respondents were collected. They would be asked whether they were interested to join the ambulance ride-along program. For those who gave positive response, they would be further asked about their preference on the program duration, day of the week and attachment fee. Potential factors that might influence their acceptance of the program were analyzed by the chi-square test. The correlation of willingness to join the ambulance-ride program with sex, age group and educational level was analyzed by logistic regression.

Result

A total of 6,000 questionnaires were distributed in the study period and 4,600 questionnaires were finally returned (76.7%); 2,250 were male and 2,331 were female (19 respondents did not indicate their gender). The majority belonged to the age group 21 to 40 (2,691 or 58.5%), followed

by the age group 41 to 60 (1,097 or 23.8%). (Figure 1) While 2,007 (43.6%) of them had educational background of secondary level, post-secondary level and university or above accounted for 1,093 (23.8%) and 1,412 (30.7%) respectively. The majority of the respondents were working (3,029 or 65.8%) and 1,268 (27.6%) were students.

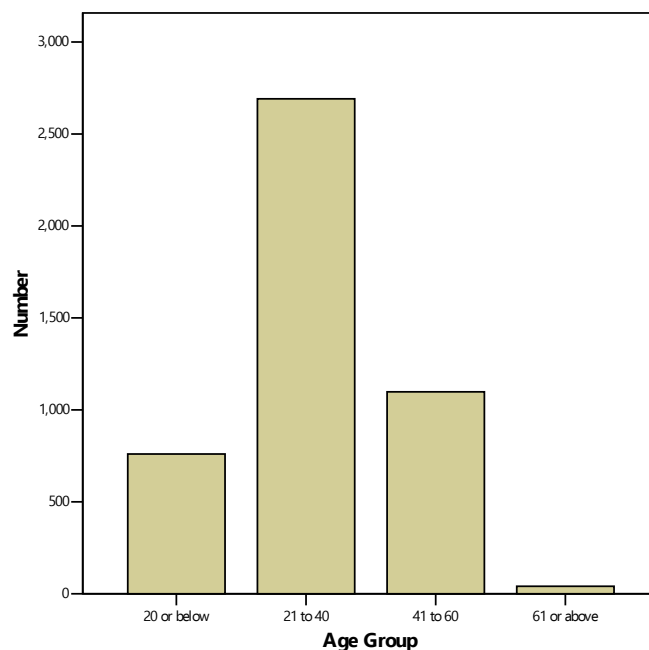


Figure 1. Age distribution of the respondents.

Overall, less than half of the respondents (2,103 or 45.7%) expressed willingness to join the ambulance ride-along program. Among them, female tended to show greater acceptance (50.8%; $p < 0.001$) of the program. Those aged 20 years or below expressed stronger acceptance (52.0%) while those aged between 41 to 60 years showed the lowest acceptance (38.6%). (Table 1) The age distribution between both genders was similar in the age groups below or equal to 40 years compared to the general population in Hong Kong (Figure 2 and Table 2). The participants of age below or equal to 40 years represented about 75% of our respondents.

Table 1. Relationship of the characteristics of the respondents to their willingness to join the ambulance ride-along program.

	Agree to join ambulance ride program	
	Yes	No
Sex (Total Respondents = 4,564)		
Male	919 (40.9%)	1,327 (59.1%)
Female	1,178 (50.8%)	1,140 (49.2%)
$P < 0.001$		
Age Group (Total Respondents = 4,572)		
20 years or below	395 (52.0%)	365 (48.0%)
21 to 40 years	1,267 (47.2%)	1,417 (52.8%)
41 to 60 years	420 (38.6%)	667 (61.4%)
61 years or above	18 (43.9%)	23 (56.1%)
$P < 0.001$		

Education (Total Respondents = 4,570)		
Primary level	24 (34.3%)	46 (65.7%)
Secondary level	827 (41.4%)	1,172 (58.6%)
Post-secondary	496 (45.4%)	596 (54.6%)
University or above	752 (53.4%)	657 (46.6%)
P<0.001		
Occupation (Total Respondents = 4,562)		
Student	617 (48.7%)	650 (51.3%)
Working	1,334 (44.3%)	1,679 (55.7%)
Housewife	68 (54.4%)	57 (45.6%)
Others	76 (48.4%)	81 (51.6%)
P=0.01		

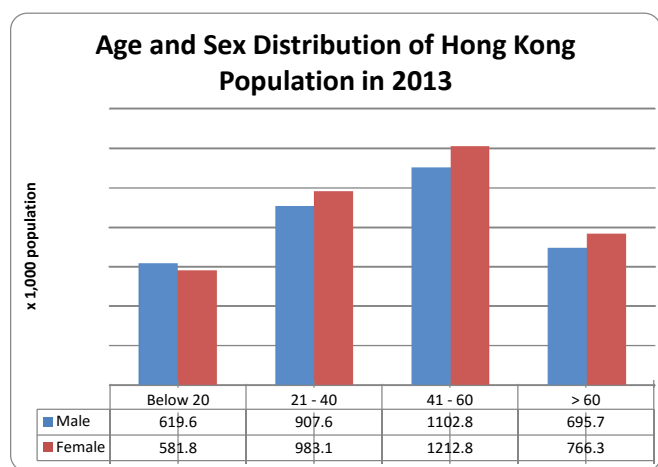


Figure 2. Age and Sex Distribution of Hong Kong Population in 2013 [20].

Table 2. Relationship between Sex and other baseline characteristics.

	Sex	
	Male (2,246)	Female (2,329)
Age Group (Total Respondents = 4,575)		
20 years or below	391 (51.4%)	369 (48.6%)
21 to 40 years	1,264 (47.1%)	1,418 (52.9%)
41 to 60 years	565 (51.7%)	527 (48.3%)
61 years or above	26 (63.4%)	15 (35.6%)
P=0.07		
Education (Total Respondents = 4,572)		
Primary level	32 (45.1%)	39 (54.9%)
Secondary level	1,108 (55.3%)	896 (44.7%)
Post-secondary	496 (45.5%)	595 (54.5%)
University or above	610 (43.4%)	796 (56.6%)
P<0.001		
Occupation (Total Respondents = 4,567)		

Student	627 (49.4%)	641 (50.6%)
Working	1,541 (51.1%)	1,475 (48.9%)
Housewife	2 (0.4%)	124 (99.6%)
Others	73 (46.5%)	84 (53.5%)
P<0.001		

There was increasing willingness to join the ambulance ride-along program with the rise in educational level. More than half of the housewives (54.4%) welcomed the program while only less than half of the students and working population would join (p=0.01). (Table 1) A logistic regression model was conducted using enter method and it showed the odds to agree to join the ambulance-ride program will be increased by 1.42 for female sex (p<0.001), decreased by 0.75 for going up in one age group (p<0.001) and increased by 1.24 for going up an educational level (p<0.001).

Among those who gave positive response to future participation in ambulance ride-along program, most expressed interest to acquire experience during the ambulance ride, followed by those who wished to apply their first aid knowledge and skills in real-life situations. (Table 3)

Table 3. The reasons of the respondents for joining the ambulance ride-along program.

Reason	*Number
Wish to apply first aid knowledge into practice	1,059
Wish to experience the work in the ambulance	1,398
Wish to learn more about this profession to prepare for future full time or voluntary work	703
Others	73

*Multiple choices allowed

Saturday and Sunday were the two most popular days of the week for ambulance attachment. (Table 4) Most considered one day (858 or 40.8%) or less (452 or 21.5%) would be adequate for the ride-along. (Figure 3) More than half (1,128 or 53.6%) indicated that they preferred the lowest fee of HK\$100 (1 US\$ = 7.8 HK\$). (Figure 4) The first choice for regions of attachment, in descending order of popularity, were New Territories, Kowloon and Hong Kong Island (the three regions of Hong Kong from north to south).

Table 4. The preference of the day of the week for the ambulance ride.

	*Number
Monday	154
Tuesday	114
Wednesday	109
Thursday	85
Friday	132
Saturday	959

Sunday	958
Any day	439

*Multiple choices allowed.

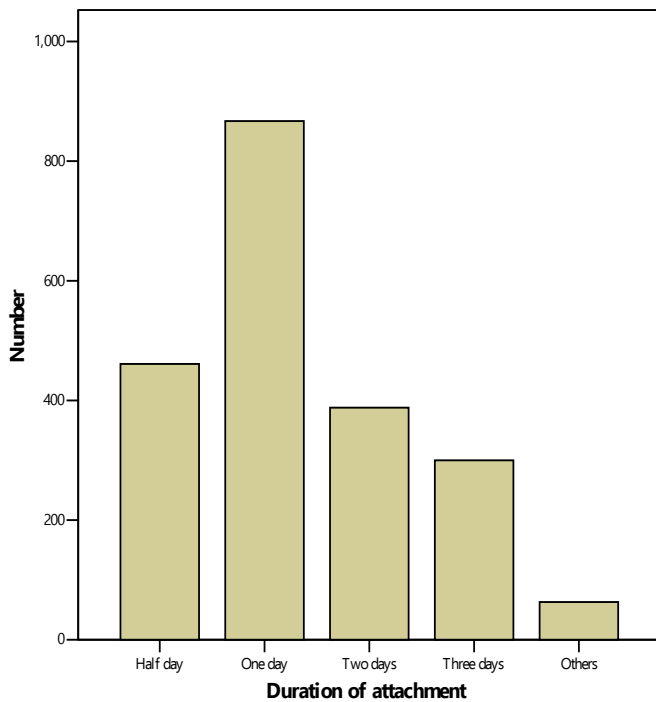


Figure 3. The Preferred duration for the ambulance ride-along program.

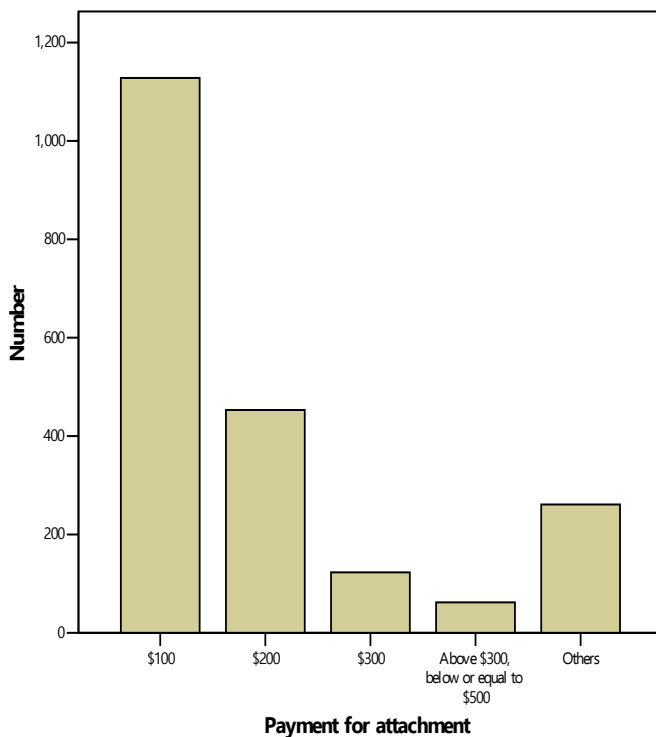


Figure 4. The preferred amount of payment for the ambulance ride-along program.

Discussion

Learning is a complex process. The acquisition of knowledge and skills by lecture and practice in the classroom alone may not be able to help the participants to retain the knowledge and skills which will gradually decay with time [9]. The scope of first aid consists of different simple skills to help victims after injury or acute illness, with the purposes to save lives, prevent disability, relieve pain and promote recovery. In the current situation, first aid is taught in the classroom. The participants can only learn the knowledge through lectures and practice their skills on their partners or manikins. Lecture-based teaching is notoriously inadequate and the participants may have never observed a real case before they face a true patient.

Observation is by all means one of the commonest methods utilized for learning and has been considered to be effective in skills learning [10]. Having people other than paramedics taking an ambulance ride to observe the practice of pre-hospital care was not a new idea. Overseas nursing students had been arranged to take an ambulance ride and they ranked this a highly valuable experience [11]. Ambulance crew may also act as a mentor to facilitate knowledge transfer [12]. As a result, it was anticipated that such a program would be welcomed by first aid students.

It is estimated that in recent years, more than 100,000 Hong Kong people attended first aid courses annually and Hong Kong St John Ambulance contributed about 50% of all first aid training in Hong Kong [13]. Hence our participants should be considered as a representative group of those in Hong Kong who would take first aid training. Furthermore, from the wide distribution of different age groups, educational levels, and occupations in our survey, and with even sex distribution, our sample could be regarded as representative. As expected, we had more young respondents as they were in general more willing to take first aid courses.

However, to our surprise, our survey showed that less than half (45.7%) of the respondents were interested to join the ambulance ride-along program, and the majority of those interested were willing to spend only one day or less and pay the minimum fee. This may be the presage of the failure of a proposal of an ambulance ride-along program for teenagers in Hong Kong, a few months after this survey. As part of the Government's "Hong Kong Our Home" programme, the Fire Services Department proposed an "Ambulance Pioneers On-car Attachment Scheme" to allow 300 members of 13 uniformed youth groups aged 14 or over to follow ambulance crews on duty as observers from 13 depots for a day between 19th August and 1st September, 2013. Responding to the concerns that the youngsters could be exposed to dangerous or gruesome scenes, strong opposition from the Ambulancemen's Union, and patient privacy issue, the Department decided to shelve the program subsequently [14].

From our results, it was observed that the younger generation had greater interest. Perhaps they were more willing to attempt new challenges and had a higher desire for

knowledge and experience. This might also apply to those with higher educational level. On the other hand, more than half of the female sex or housewives were interested, though the number of the latter was small. We had more female with higher educational background which may reflect the phenomenon of female dominance in the acceptance of the program. (Table 2) Naturally, weekends were more popular because of availability.

The above information may be useful for future planning of such programs. However, the sentiment and support of the frontline ambulance crew are vital for success [14]. In addition, safety in ambulance ride is also a concern. Motion sickness can be a significant problem to the observers [15]. During the rapid journey in the ambulance, they can fall down if they do not secure themselves well.³Traffic accident involving ambulance occasionally happened [16]. Safety in ambulance is a great concern in America especially for escorting staff. It has been advocated using feedback system to monitor drivers' performance in order to improve ambulance safety [17]. The safety of the patient in the ambulance should not be underrated. Recommendations have also been made to escorting nurse to minimize the possibility of being injured during patient transport in ambulance [18]. The organizer should be cautious about this potential problem and possible related insurance issue. Most of the previous studies did not elaborate on this topic in details and it has been recommended to further study in the area of patient assessment and management, communications, equipment and resources and non-conveyance [19]. Infectious diseases are another concern [3]. Patient confidentiality, privacy and consent are other potential problems [2,3,5]. Future surveys should also include the concerns of those not willing to join ambulance ride.

Although the response was not as popular as anticipated, we can look at the result from the opposite angle. There are still about 45% of the first aid students interested in joining the program. It might be a good idea to start a pilot on a small scale to cater for only the enthusiastic ones. This might also generate less resistance from the ambulance crew, as this would interfere less with their busy duties.

Conclusion

Less than half of the first aid course participants showed interest to join the ambulance ride program to gain experience in ambulance to apply their first aid knowledge to real-life practice. The female gender, the younger generation and those with higher educational background showed greater interest to participate in the program. The survey also reflected the preferences of those interested to join the program in weekends, stay for one day or less, and pay the minimum fee of HK\$100. This information may be useful for future planning of similar programs in Hong Kong. Future surveys should include the concerns of those not willing to join ambulance ride.

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