

# Lessons Learned at World Youth Day: Collecting Data and Using Postcards at Mass Gatherings

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## Abbreviations:

WYD = World Youth Day

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## Abstract

**Introduction:** World Youth Day (WYD) and its associated activities were held in Sydney, Australia from 15–20 July 2008. The aims of this research were to pilot the use of postcards at mass gatherings and to collect baseline data of how young people (age 16–25 years) identify factors that may affect their health and safety when attending mass gatherings.

**Hypothesis:** The concerns of young people in relation to their health and safety at mass gatherings are poorly understood. It was decided that postcards would be an effective method of data collection in the mobile mass gathering environment.

**Methods:** The research setting was the Pilgrim Walk at WYD. Participants on this walk were young people. To measure their health and safety concerns, a postcard was developed using a Likert scale to rank their attitudes on a continuum.

**Results:** Young people stated that staying hydrated, having enough to eat, and being safe in a crowd were important to them. They also indicated that they perceived, overcrowding, getting to and from an event, and violent behavior as the greatest risks to their health and safety at a mass gathering.

**Conclusions:** The problems with postcard distribution at a “mobile” mass gathering have been identified. Even so, results gathered showed that young people were focused on “in the moment” aspects of their health; such as access to food and water. They also had concerns for their safety due to potential overcrowding and/or violent behavior.

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## Introduction

World Youth Day (WYD) and its associated activities were held in Sydney, Australia between 15–20 July 2008. Mass gatherings, such as WYD, are becoming a common phenomenon in today’s society.<sup>1,2</sup> With an opportunity such as WYD, the authors sought to investigate aspects of a mass gathering that a young person identifies as unsafe or risky to them whilst attending WYD, or for that matter, any other large, youth event. Therefore, the research aimed to identify the immediate health problems of young people to improve the proficiency of health professionals to more effectively support young people attending mass gatherings. To this end, it was hypothesized that the concerns of young people in relation to their health and safety at events of this kind are poorly understood, and that postcards would be an effective method of data collection in the mobile mass-gathering environment.

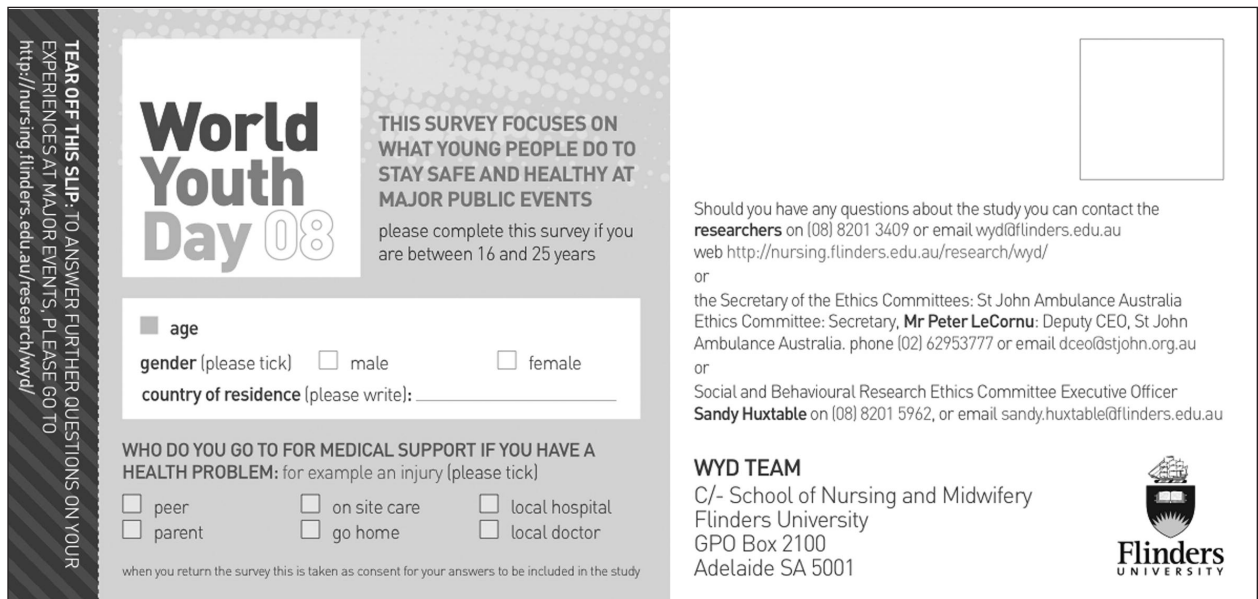
### *Background of World Youth Day*

World Youth Day is the largest organized event for youth in the World.<sup>3</sup> The event is organized by the Catholic Church and allows youths from around the world to experience a pilgrimage of faith. The event was established by Pope John Paul II in 1986 and occurs every 2–3 years. Previous events were held in Rome, Toronto, and Cologne. World Youth Day 2008 was the first such event to take place in Australia, and also was the first Australian visit of Pope Benedict.



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Figure 1a—Postcard distributed at World Youth Day



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Figure 1b—Postcard distributed at World Youth Day

Most people attending mass gatherings are well and in the prime of health; however, these events produce a “higher incidence of injury or illness than occur in the general population”.<sup>4</sup> Both Milsten *et al*<sup>1</sup> and Arbon<sup>2</sup> found that weather and environmental factors result in heat-related illnesses at these events. In particular, Milsten<sup>1</sup> focused on the Papal visits to both San Antonio and Denver and found that other factors also were evident, such as event-type and duration, crowd mood, attendance, crowd density, age (a younger crowd is considered to be more mobile, and therefore, at greater risk), and, in particular, alcohol and drug use.<sup>2</sup>

**Methods**

*Setting*

The field in which data were collected was the Pilgrim Walk on 19–20 July 2008. The Pilgrim Walk started in North Sydney, crossed the Sydney Harbour Bridge, and finished at Randwick Race Course. The total length of the walk was 9 kms<sup>3</sup>, and data collection commenced approximately half way into the Pilgrim Walk. The pilgrimage led to an evening vigil and final Papal Mass at Randwick racecourse on the 20th. The 19th and 20th of July (Saturday and Sunday) were the days chosen for data collection, and this experience forms the basis of this study.<sup>3</sup> The Pilgrim walk presented a “mobile environment” for data collection.

### Participants

Participants in this study were young people who were attending the Pilgrim Walk during WYD festivities, and accepted and completed a postcard given to them during the WYD Pilgrim Walk. For the purpose of this study, young people were defined as 16–25 year olds.

### Study Design

For young people to be able to consider possibilities regarding their own health and safety, a postcard was developed to ascertain just what was central to them for them to stay safe and healthy at mass gatherings. It has been well established that “postcards” are used as a means of enhancing survey response in medical research;<sup>5–8</sup> however, there is minimal literature documenting the use of these postcards as a primary method of data collection. The postcard used in this study was developed as a short survey method to attract the attention of the young person and to provide an efficient way of collecting data in a “mobile crowd” environment (Figures 1a and 1b). Therefore, a Likert scale was used to identify the participants’ perception of what would affect their health and safety. The numbered scale was used so that participants could rank their attitudes on a continuum with the aim of identifying what young people may indicate as a health and safety issue when attending mass gatherings.<sup>9</sup>

By scanning through adolescent health literature, nine items that young people might encounter at a mass gathering were identified. Participants were asked to rate the importance of each of items (with 1 being the most important and 9 being the least). The survey also included a 10<sup>th</sup> item, an “other”, so that the participants would have an opportunity to identify any health/risk issue that may have been overlooked by the researchers. For this pilot study, there were no particular assumptions regarding what would be found, and researchers were led solely by adolescent health literature.

Then, these items were framed around two main themes: (1) *safe and healthy*; and (2) *risk*. In addition, the survey asked young people what health behavior was most likely to affect them at the event. These three scales were set as an exploratory measure to determine safety and risk in relation to the health of a young person at a mass gathering with no particular variable being the focus. The other side of the postcard included demographics, such as age, gender and country of residence. The final question asked the participant where they would go if they required medical support during a mass gathering. This question, in particular, was aimed at identifying what type of onsite support young people would be likely to use at a crowded event. All postcards had fixed postage stamps so that they could be returned via mail; alternatively the postcards could be dropped off at designated St John tents. Ethics approval was obtained from both Flinders University and St John Ambulance.

### Data Processing

All clean data was entered into an Excel spreadsheet [Microsoft, Redmond, Washington] and the scores were averaged out, to provide a mean of the Likert Score ranking. The three data sets were processed separately; “safe and healthy”, “risky” and “most likely to affect you”. Postcards

that were completed incorrectly or were incomplete were defined as “dirty data”.

### Results

Preliminary results indicate that young people have definite opinions about what they need to stay safe and healthy at mass gatherings. Although 1,200 postcards were distributed, to date only 79 postcards were returned (0.066%). In these postcards, young people stated that the following were important to them: (1) staying hydrated (2.7); (2) having enough to eat (3.8); and (3) being safe in a crowd (3.9). They also indicated that they perceived the following as the greatest risks to their health and safety at a mass gathering: (1) overcrowding (3.4); (2) getting to and from an event (4.5); and (3) violent behavior (4.5) (Table 1). Specific to WYD, young people identified the ability to get around, peer pressure, and sexual harassment as being most likely to affect them. Demographic data collected showed the average age of participants was 19.5 years, with the majority being female and from Australia. In relation to where the young person was most likely to seek medical support, their peers were most commonly identified as the preferred support person at a mass gathering.

### Discussion

Mass gatherings are becoming a common phenomenon in today’s society, with current healthcare strategies concentrating on the provision of health care treatment services on site. To this end, the aims of this research were to pilot the use of a postcard to collect baseline data of how young people identify the factors that may affect their health and safety when attending mass gatherings. These data will be used in the future to compare perspectives and behavior with other presentation data collected at mass gatherings. Data collected will provide strategies for creating health information for young persons, and will assist in preparedness for mass gatherings.

Understanding health from a young person’s perspective at these gatherings will assist in comprehending what leads them to seek health care in a wider range of settings. Current understandings of young people would suggest that they seek support from peers to resolve health issues, or for resolution of general health problems they may not seek medical attention.<sup>10</sup> Data from this study reflected this phenomenon, with young people indicating that in the first instance they would go to their friends for medical support in a mass gathering environment.

Research is scant on insights into what young people perceive may affect their health at mass gatherings.<sup>4</sup> Importantly, this research will support the development of more effective strategies for the prevention and mitigation of illness or injury for the young person in these settings.

As part of the hypothesis to test the viability of using postcards as a data collection tool in a mass gathering environment, a number of limitations have been identified in relation to using postcards as a data collection tool at mass gatherings.

### The Research Tool

Many limitations of this study were identified; as this survey was in the form of a pilot study, it was not a validated

Issue encountered	Potential Solutions
Mobile Environment	Approach people who are resting or seated, so there is time to explain postcard and assist to answer questions regarding completion of postcard
Time and Resources	Request a designated area to be allocated for the researchers for resting and storage of equipment
Being at WYD	Data collected early in WYD "week" to ensure participants were not too tired
Return of postcards	Reply paid on postcards to reduce cost to researchers

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**Table 1**—Issues encountered and potential solutions (WYD = World Youth Day)

survey instrument.<sup>11</sup> As there was no existing questionnaire to be adapted to serve the purpose of this study, it was decided to develop one. Therefore, the statements selected to use on the postcard were developed from the mass gathering and adolescent health literature. Consequently, part of this study was to test the applicability of these statements in this pilot study. For the purpose of this study, the two key variables were “staying safe and healthy” and “risky” at WYD. Definitions of safety or health were not included, which may be seen as a weakness. However, an aim of this research was to explore the perspective of these variables through the eyes of young people attending mass gatherings.

*The Mobile Environment*

The fact that the crowd was large (approx 350,000 people) and mobile, posed a problem for data collection. In the mobile environment attempting to explain the study and how to fill out the postcard was difficult. Interestingly, the participants who were approached during rest periods on the walk completed the postcard while the researcher waited. This method provided the highest return rate, as all postcards were immediately collected. The difficulty of explaining how to fill out the postcard to groups of people as they walked was not anticipated. Ideally, access to young people inside Randwick racecourse at the end of the Pilgrim Walk would have provided a static crowd that would have been much easier to approach. However, permission had not been granted to allow access to young people once inside the venue (Randwick Racecourse).

*Time and Resources*

Time and resources for this study were limited. This had a significant impact on the number of postcards being distributed and ultimately collected. Only three researchers were actively collecting data among such a large and mobile crowd. The researchers were on foot, with no designated place from which to work. As there was no place to store the postcards, they were carried in backpacks by the researchers. This situation impacted on the amount of postcards carried and distributed to the crowd.

*Being at WYD*

A further limitation was that the researchers had no way of anticipating the impact on the psyche of a young person involved in the WYD. The young people attending WYD

festivities were there on a pilgrimage of faith. This pilgrimage inspired great commitment to their religious beliefs and studies. The young people spoken to while distributing postcards indicated that they were suffering from extreme tiredness having participated in: (1) prayer groups/bible studies quite early in the morning; (2) being involved in events during the day; and (3) not retiring until late in the evening. These young people had been submitting themselves to this routine for more than a week. They had been sleeping on floors, and some even suggested that they had not had enough healthy food to keep them sustained. Some young people also reported that groups of youths were suffering from ailments such as gastroenteritis and or influenza. The researchers had not considered the impact that such an extended event would have on the young person. Furthermore, the decision was made to collect data at the end of the event, and in hindsight perhaps data should have been collected earlier on in the week. Finally, once at WYD the researchers understood the importance of this event to the young people in attendance. For example as Sunday was a day of worship it was inappropriate to approach young people with postcards, which again, limited the number of postcards distributed.

*Return of Postcards*

Postcards were stamped, enabling participants to post the responses directly to the researchers through the postal system. Furthermore, there was an expectation that “red post boxes” in Australia would be easily identifiable to all. The stamped postcards turned out to be an expensive exercise for the limited posted response. In retrospect, a “postage paid” arrangement for the postcards could have been organized through Australia Post as a cheaper option, this has now been arranged for any future research project.

In addition, a proportion of unstamped postcards were distributed through the crowd with the instruction on the postcard to drop the postcard off at the St John Ambulance first aid tent. However, St John as a first aid service was not identified using their logo and symbols at this mass gathering, so this method of return also failed.

*Filling Out Postcards*

As previously described, assumptions were made about filling out postcards as a method of data collection. For example, the postcards contained three Likert scales, taking participants

5–10 minutes to complete. This amount of time did not fit well with a moving population, as participants could not walk and fill out the postcard at the same time, which put them at risk of not keeping up or losing their group. This finding is ironic since, the postcard had been designed specifically for a mobile mass gathering population. As stated previously, a 100% return rate was obtained only when the researcher sat with participants as they filled out the postcard. Furthermore, out of the 76 postcards returned, 47 of them were returned correctly completed (60%), leading to the belief that instructions were clear; however, with such a small sample returned one cannot generalize. Issues encountered and proposed solutions have been summarized in Table 1.

The intent of this research was to investigate how to support young people attending a mass gathering, as well as a pilot distributing postcards as a data collection tool. Health messages already exist at these gatherings, as well as in the mass media. However, the majority of these messages focus on high-risk behavior targeted at the visible young person. The purpose of this study was not to identify risky behavior as the norm, merely to understand the immediate concerns of the everyday young person who may attend a mass gathering.

What was found was that young people's concerns were focused on the "now"; for example, food, drink, and the impact of being in a crowd. Understanding the immediate concerns of the young person allows an insight into meeting the health needs of young people (as they perceive them) at mass gatherings, and to assist first aid services in being prepared and aware of the health needs of young people at a mass gathering event. It was hoped that this research would underpin the future delivery of relevant health messages that are palatable for the young person in a mass gathering setting, by addressing the issues that they have identified.

One of the most rewarding aspects of this project was being able to reflect on the experience and review the process of collecting data at the WYD. An outcome of this study has been to evaluate the research tool and make improvement and changes to future research design. For example, the postcard is now generic and can be used at any event, with the inclusion of "postage paid" on the card. The way the postcard has been distributed also has been altered. Researchers now remain in a stationary position and stay with the survey participant while they are filling out the survey, thereby ensuring its return. This also has an impact on how successfully the postcard has been filled out.

### Conclusions

The research project, "Feeling safe and healthy at WYD" was statistically insignificant. Yet, for a new research project team, this experience of collecting data in a mobile population offered a unique research and learning environment. One of the major issues still facing this team is how to engage young people to talk about their health at mass gatherings when they are there for fun, prayer, or to be with their friends. Perhaps it could be argued that health is hardly foremost in the minds of young people when they attend a mass gathering. Even so, this pilot study contributes to developing ways of accessing the opinions of young people attending mass gatherings, and in the long-term contributes to the mitigation of illness and disease for this population at these events.

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### References

1. Milsten A, Maguire B, Bissell R, Seaman K: Mass-gathering medical care: A review of the literature. *Prehosp Disaster Med* 2002;17(3):151–162.
2. Arbon P: Mass-gathering medicine: A review of the evidence and future directions for research. *Prehosp Disaster Med* 2007;22(2):131–135.
3. World Youth Day 2008. Pilgrim Guide, WYD 2008, Australia. Available at [http://www.wyd2008.org/index.php/en/pilgrims\\_registration](http://www.wyd2008.org/index.php/en/pilgrims_registration). Accessed 30 July 2008.
4. Arbon P: Planning medical coverage for mass gatherings in Australia: What we currently know. *Journal of Emergency Nursing* 2005;31(4): 346–350.
5. Pirotta M, Gunn J, Farish S, Karabatsos G: Primer postcard improves postal survey response rates. *Aust N Z J Public Health* 1999;23(2):196–197.
6. Becker H, Cookston J, Kulberg V: Mailed survey follow-ups—Are postcard reminders more cost-effective than second questionnaires? *West J Nurs Res* 2000;22(5):642–647.
7. Bergk V, Gasse C, Schnell R, Haefeli WE: Mail surveys: Obsolencnet model or valuable instrument in general practice research? *Swiss Medical Wkly* 2005;135:189–191.
8. Hill A, Fahrney K, Wheelless S, Carson C: Survey response inducements for registered nurses. *West J Nurs Res* 2006;28:322–334.
9. Taylor B, Kermod S, Roberts K: *Research in Nursing and Health Care: Evidence for Practice*. 3rd ed. South Melbourne: Thompson, 2006.
10. Hutton A: Privacy, independence and peer interaction in an adolescent ward. *Journal of the Children's Issues* 2008;12(1):35–39.
11. Roberts K, Taylor B: *Nursing Research Processes and Australian Perspective*. 2nd ed. South Bank Victoria: Thompson, 2002.