

Attitudes to travel health amongst participants in ‘high risk’ outdoor sports while abroad

M M Cullen

Abstract

Introduction: The number of people travelling from the UK for leisure purposes has risen dramatically over recent years. Some travellers participate in what is considered ‘high-risk’ sporting activities while abroad. Such people may be described as ‘sensation seekers’ and their attitudes to safety can be thought to be reckless. This study aimed to determine the attitudes to travel health of those who participate in such activities abroad.

Methods & Results: Seventy-six people responded to a survey of travellers who had undertaken outdoor sports or adventure activities abroad in the previous two years. 42% of respondents had travelled outside Europe and North America. The most popular activities were hill-walking, mountaineering, rock climbing, skiing and scuba-diving. Most undertook their activity on a regular basis prior to travel, organised the activity independently while abroad and spent more than three days participating in it while there. Overall 36% sought pre-travel health advice, although 72% of those who travelled outside Europe and North America did so. Most sought advice from their medical practice or from sources such as books and websites. Compliance with advice appeared to be good overall, with the exception of anti-malarial chemoprophylaxis, insect-bite avoidance and altitude sickness prevention. 22% of respondents reported having health problems while abroad, the most common being gastrointestinal illness and accidents or injuries. 79% of travellers carried a first aid kit and 43% of those reported that they used it, painkillers and sticking plasters most frequently.

Conclusions: Overall, it did not appear that participants in high risk sporting activities were any more likely to take risks with travel health than most travellers. Information about travel health risks and precautions should be available through guide books and websites frequently referred to by participants in their specific sports.

Introduction

The number of people travelling from the UK for leisure purposes has risen dramatically over the past 20 years. Amongst this group of travellers are those who travel to participate in risk activities such as rock climbing, mountaineering and scuba diving. General travel health principles apply to them in the same way as any other traveller, while sport-specific health advice may also be appropriate.

Many reports since the 1960s have associated participants in such sports with high risk-taking or ‘sensation-seeking’ personality types. This trait was defined by Zuckerman in 1979 as “the need for varied, novel, and complex sensations and experiences and the willingness to take physical and social risks for the sake of such experiences”. A relationship between score on Zuckerman’s Sensation-Seeking Scale (1983) and participation in a ‘high risk’ activity has been demonstrated. However, certain positive personality characteristics, such as conscientiousness and emotional stability, have also been linked with high-risk sports participants (Kajtna, 2004).

This study aimed to determine whether the attitudes to travel health of travellers who participated in high-risk outdoor activities while abroad were significantly different from the average traveller with respect to pre-travel health advice, first aid kit use and health problems encountered.

Method

A questionnaire was distributed to travellers who had participated in an outdoor sports activity while abroad during the previous two years. Rock-climbers and scuba-divers were targeted specifically. The questionnaire aimed to determine the respondents' level of experience and confidence at their activity, whether they organised the activity independently while abroad, their accessing of pre-travel health advice, health problems encountered while abroad and use of a first aid kit. A general question about car seatbelt use aimed to identify general attitude to risk-taking. An incentive to encourage entry to the study was a prize draw for an outdoor shop gift voucher was used.

Results

Seventy-six completed questionnaires were returned. Most respondents (71; 93%) were UK residents with the remainder living in Europe or North America. Thirty-two (42%) had travelled outside Europe and North America to participate in their activity (Table 1). The majority had undertaken their activity(ies) on a regular basis prior to travel and had organised them independently with or without the help of a local guide or advisor (Table 2). Fifty-four respondents (71%) spent more than five days doing the activity, seventeen (22%) spent 3-5 days and five (7%) 1-2 days.

Twenty-seven respondents (36%) sought travel health advice prior to their trip (Table 2). Of those, seventeen (63%) sought advice from their general practice, fifteen (20%) from sources such as the internet or travel books, five (7%) from a travel clinic and three (4%) from a tour company. All who responded to the question indicated that the advice received was useful (26). A significantly higher proportion of those travelling outside Europe and North America sought advice compared to those travelling within these continents [23/32 (72%) v. 4/40 (36%); $P < 0.0001$]. The types of health advice received and compliance rates are given in Table 3.

Of the 27 who sought pre-travel advice, the majority (23; 85%) undertook their activity outside Europe and North America. Of those who did not seek pretravel health advice (48; 63%), the most common reason quoted was that they did not think it was necessary for this trip (67%) or they knew what would be advised from previous trips (25%). Of the nine out of 32 (28%) who had travelled outside Europe and North America and did not seek pre-travel advice, eight stated that they knew what would be advised from previous trips and one that it was not necessary.

Seventeen out of 76 travellers (22%) reported having health problems during their trip (Figure 1), 15 commenting that the problem was not preventable in their opinion. Four people required medical assistance while abroad and one on return home. Of those who organised their activity independently, 18% (10/55) reported experiencing health problems while 33% (7/21) of those who used a commercial company reported health problems ($P = 0.16$).

Sixty respondents (79%) travelled with a first aid kit (Table 2). Of these, 15 (25%) experienced a health problem although 26 (43%) reported using their first aid kit. Of those

without a first aid kit, only two out of 16 (13%) reported a health problem. The most frequently used items from the first aid kit were painkillers (14), sticking plasters (12), medications for diarrhoea or other gastro-intestinal upset (6) and antiseptic creams, wipes and fluids (4). The majority (56/57; 98%) would not change the contents of their kit based on their recent experience.

Almost all respondents (73/76; 96%) said they would wear a seatbelt in the car even if it wasn't a legal requirement. All who said they might not were rock climbers (3).

Discussion

Kajtana et al (2004) define high-risk sports as "any sport where one has to accept a possibility of severe injury or death as an inherent part of the activity", commenting that high-risk sports athletes were more conscientious, with higher energy and emotional stability. Although those involved in high-risk sports may be associated with 'sensation-seeking' personality types, these positive traits may suggest that the enjoyment resulting from controlling the risk effectively is coupled with appropriate and adequate preparation and safety awareness as well as an ability to cope well when things go wrong. Although the type of activities and degree of risk varied amongst respondents to this survey, most (78%) were regular participants in their activity and spent more than three days of their trip doing their sport (92%), suggesting a high level of commitment and fairly intense involvement.

The proportion of travellers to non-temperate countries in this study who sought travel health advice (72%) compares favourably with the survey by Van Herck et al (2004) of tourists from Europe to developing countries where 60.9% sought health advice (n = 5,465). Of those who did not seek pre-travel advice, a higher proportion in the present study (89% compared with 40.9% in Van Herck's study) stated that they already knew what would be advised. It may be true of high-risk sports participants that they often already having the required knowledge if their level of 'conscientiousness' is high. However, the complex nature of travel health risk assessment may mean that some risks are not appropriately assessed by the traveller him/herself.

Compliance with the advice appeared to be comparable with published reports. Sixty-five percent reported always following malaria advice and 67% followed advice regarding insect bite avoidance. Piyaphanee et al (2009) reported 57.6% of international backpackers in malarial areas of Thailand taking malaria chemoprophylaxis and 53.9% using insect repellent most of the time.

Only two of seven people who received altitude advice said they routinely followed the advice. Merritt et al (2007) reported that travellers to high altitude in Peru demonstrated a lack of knowledge about acute mountain sickness. They suggested dispersing information about altitude through guide books and websites. Given the frequency of referral to alternative sources of travel information amongst the population surveyed, this study would concur with their recommendations.

Reporting of health problems by individuals may vary considerably, with the degree of severity being interpreted differently by different people. Poretz (1992) describes the type of 'macho' behaviour used by backpackers to overcome problems and crises for which they are unprepared and that this type of coping mechanism was understandable to allow them to get to a place where help could be obtained. Of the majority of travellers who took a first aid kit with them in this study, 27% reported experiencing a health problem but 43% reported that

they used their first aid kit. Clearly some people considered minor ailments as ‘health problems’ while others treated the problem but did not report it as such. Interestingly, of those who did not take a first aid kit, a lower proportion (13%) reported a health problem. This may represent a difference in interpretation of the term.

It does not appear, from this study, that those who organised their activity independently were any more likely to suffer health problems while abroad. This may be due to an appropriate assessment of risk by those who were more experienced at managing risk through their sport.

The review by Cossar et al (1990) of illness experienced by travellers returning to Scotland reported that the overall attack rate was 36% (n = 13,816), with gastro-intestinal complaints predominating. This is significantly higher than the overall attack rate of 22% in the present study (P = 0.013), although diarrhoea or other gastro-intestinal upset also predominated, being jointly the most common health problem reported together with accidents and injuries (both 37%). Although the difference in attack rate may be explained by differences in study population and also recall bias, the data derives from different time periods, with Cossar’s population dating back to 1977. Awareness of travel health issues is likely to have increased amongst all travellers since that time.

Of the eleven individuals who received pre-travel advice about diarrhoea prevention, 36% reported having diarrhoea while abroad. In contrast, of the remaining 65 travellers who either did not seek health advice or their advice did not include diarrhoea prevention, 6% reported diarrhoea symptoms. Swaminathan et al (2009) reported that infectious gastrointestinal disease was significantly associated with younger ages and tourist travel (n = 25,867). Females and those who attended a pre-travel medical appointment were also more likely to present with such symptoms. Their results correlate with the results of this study, suggesting that those who seek the pre-travel health advice are less successful at avoiding this risk while abroad. This may be because the travellers who seek advice are less experienced in travel.

In this study, accidents and injuries together were one of the most common health problems encountered (37%). Most respondents stated that the injuries were not preventable, while two commented that improvements in equipment use may have prevented injuries (diving shoes and ice-climbing equipment). The appropriate use of technical equipment in many high-risk sports is an essential component of its safety. This area of travel health advice would normally be outwith the expertise of most travel medicine practitioners. The onus would necessarily be on the traveller him/herself to ensure they had the appropriate level of knowledge and training for the proposed activity.

In this study, seven respondents reported receiving pre-travel health advice on high-altitude illness, while 19 stated that they had participated in mountaineering above 2500 metres. Of those who did not seek pre-travel health advice, more than two-thirds stated that it was not necessary. This may suggest a number of explanations: i) that there is a lack of awareness of the risks of high altitude ii) that the respondents were already knowledgeable about the potential hazards or iii) the respondents did not consider themselves to be at risk. Despite none of the respondents reporting health problems due to altitude, it is important that potential travellers to high altitude are aware of their role in recognising, treating and preventing high altitude illness.

Only about half of those travelling outside Europe and North America to go scuba-diving sought pre-travel health advice, although a greater majority (86%) travelled with a first aid

kit. The proportion of divers experiencing health problems was no different from the rest of the study population, with only one traveller reporting a health problem specifically related to diving (foot injury).

Overall, more than three-quarters of the study group travelled with a first aid kit, with little difference between subgroups. Goodyer et al reported in 2004 that there was little published research on the use of medicines and first aid supplies amongst travellers. They reported that of a cohort of 127 travellers from the UK to South America, Asia, Africa or the Middle East for two weeks or less, the most frequently used items from the first aid kit were analgesics, medications for the treatment of diarrhoea, antiseptics and sticking plasters. The results of the present study correlate closely with their findings. It is suggested that the types of additional dressings carried should depend on the type of activity being undertaken (Goodyer, 2004).

A crude measure of the risk-taking behaviour of the study group was taken by asking whether the traveller would wear a seatbelt in the car if it was not required by law. A clear majority (96%) responded that they would, while of those who would not, rock climbing was the common sport. Although the survey did not examine the reason for this response, explanations could include the possibility that some respondents prefer to manage risk in their own way rather than following general rules or alternatively that some 'sensation seeking' personalities are attracted to risk per se.

This study has the limitation of relying on travellers' remembering their travel preparations, health and response to health problems while on holiday up to two years previously. The answers to some questions may be better recalled than others e.g. minor health problems and specifics of first aid kit use. Statistical analysis is limited by the number in the study population.

Conclusions

The results of this study suggest that travellers who participate in high-risk outdoor activities while abroad cannot be considered 'reckless' with regard to travel health risks. They are no less likely to seek pretravel health advice than other travellers to non-temperate countries. The source of health advice received is arguably of a higher quality than some other travellers as it is more commonly from a medical practice rather than a tour company. The high level of awareness of risk associated with their sport may make them more perceptive of personal risks in general. However, assessment of travel health risks can be complex and should ideally be made with reference to good quality and up-to-date information. For those who do not seek pre-travel health advice from a recognised healthcare provider, information including sport-specific recommendations should be available through high quality and readily accessible resources.

Acknowledgements

I would like to acknowledge the following for their contributions to this project:
Cotswold, Oxford Road, Manchester, for a donation of a £25 gift voucher for the prize draw.
Awesome Walls Climbing Centre, Stockport, for allowing me to distribute survey questionnaires to climbers.
Dave Cullen, for hosting the survey questionnaire on his website
Caroline Driver, project supervisor on DTM course.

References:

- Cossar JH, Reid D, Fallon RJ, Bell EJ, Riding MH, Follett EA, Dow BC, Mitchell S, Grist NR, 1990. A cumulative review of studies on travellers, their experience of illness and the implications of these findings. *Journal of Infection*, 21(1), pp27-42.
- Goodyer L, Gibbs J, 2004. Medical supplies for travelers to developing countries. *Journal of Travel Medicine*, 11(4), pp 208-211.
- Kajtana T, Tusak M, Baric R, Burnik S, 2004. Personality in high risk sports athletes. *Kinesiology*, 36 (1), pp 24-34.
- Merritt AL, Camerlengo A, Meyer C, Mull JD, 2007. Mountain sickness knowledge among foreign travelers in Cuzco, Peru. *Wilderness and Environmental Medicine Journal*, 18(1), 26-29.
- Piyaphanee W, Wattanagoon Y, Silachamroon U, Mansanguan C, Wichianprasat P, Walker E, 2009. Knowledge, Attitudes, and Practices Among Foreign Backpackers Toward Malaria Risk in Southeast Asia. *Journal of Travel Medicine*, 16 (2), pp 101–106.
- Puretz SL, 1992. First-aid supplies for backpacking. *British Journal of Sports Medicine*, 26(1), pp 48-50
- Swaminathan A, Torresi J, Schlagenhauf P, Thursky K, Wilder-Smith A, Connor BA, Schwartz E, von Sonnenberg F, Keystone J, O'Brien DP for the GeoSentinel Network, 2009. A global study of pathogens and host risk factors associated with infectious gastrointestinal disease in returned international travellers. *Journal of Infection*, 59, pp 19-27.
- Van Herck K, Van Damme P, Castelli F, Zuckerman J, Nothdurft H, Dahlgren AL, Gisler S, Steffen R, Gargalianos P, Lopez-Velez R, Overbosch D, Caumes E, Walker E, 2004. Knowledge, attitudes and practices in travel-related infectious diseases: the European airport survey. *Journal of Travel Medicine*, 11(1), pp 3-8.
- Zuckerman, M, 1983. Sensation seeking and Sports. *Journal of Personality and Individual Differences*, 4, pp 285-293.

Tables (3) and figures (1) on following pages

Table 1
Distribution of travel destinations

<i>Continent</i>	<i>Number of responses</i>
Europe	54
Asia	15
North America	13
Africa	11
South America	6
Australasia	5
Antarctica	0
Total	103

Figure 1

Distribution of health problems encountered

Type of health problems encountered while abroad

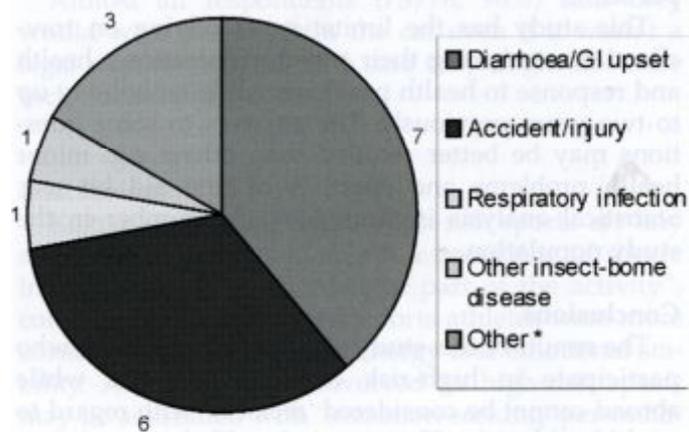


Table 2

Summary of results

Activity undertaken abroad	No. of respondents	No. seeking travel advice (%)	No. taking first aid kit (%)	Travel outside Europe and North America		
				No. of respondents	No. seeking travel advice (%)	No. taking first aid kit (%)
Walking/Hill-walking (below 2500m)	32	15 (47%)	27 (84%)	18	15 (83%)	15 (83%)
Rock climbing	25	6 (24%)	20 (80%)	9	6 (67%)	6 (67%)
Skiing/snowboarding	20	4 (20%)	15 (75%)	2	1 (50%)	2 (100%)
Hill-walking/mountaineering (above 2500m)	19	9 (47%)	17 (89%)	11	9 (82%)	10 (83%)
Scuba-diving	19	9 (47%)	16 (84%)	15	8 (53%)	12 (86%)
Mountaineering involving snow & ice	11	1 (9%)	8 (73%)	2	1 (50%)	1 (50%)
Mountain biking (grade 2 or above)	7	1 (14%)	6 (86%)	2	1 (50%)	2 (100%)
Canoeing/kayaking	4	2 (50%)	4 (100%)	1	1 (100%)	1 (100%)
Road cycling (greater than 100 miles total)	4	2 (50%)	4 (100%)	2	2 (100%)	2 (100%)
Jungle treks	2	2 (100%)	2 (100%)	2	2 (100%)	1 (100%)
By level of experience						
Any activity, regularly prior to travel	60	16 (27%)	47 (78%)	21	14 (67%)	16 (76%)
Any activity, had tried before	12	8 (67%)	10 (83%)	8	6 (75%)	8 (100%)
Any activity, never tried before	5	4 (80%)	4 (80%)	4	4 (100%)	3 (75%)
By means of organising activity						
Any activity, organised independently, with/without local guide/advisor	55	15 (27%)	43 (78%)	21	14 (67%)	18 (78%)
Any activity, organised through commercial company	21	12 (57%)	17 (81%)	11	9 (82%)	9 (82%)

Table 3***Type of pre-travel health advice received***

<i>Type of advice</i>	<i>No. of respondents</i>	<i>Followed the advice?</i>				
		<i>Yes (%)</i>	<i>Mostly (%)</i>	<i>Some (%)</i>	<i>No (%)</i>	<i>No response</i>
Vaccinations	24	20 (83%)	1 (4%)	-	1 (4%)	2 (8%)
Anti-malarials	17	11 (65%)	2 (12%)	2 (12%)	1 (6%)	1 (6%)
Water purification	3	2 (67%)	-	-	1 (33%)	-
Prevention of diarrhoea, other infections	11	9 (82%)	2 (18%)	-	-	-
Insect bite avoidance	12	8 (67%)	2 (17%)	1 (8%)	-	1 (8%)
Animal bite advice	5	-	-	-	-	4
Altitude sickness	7	2 (26%)	3 (43%)	-	-	2 (29%)
Access to medical services abroad	4	-	1	-	-	-
Travel insurance	9	6 (67%)	-	-	-	3 (33%)
Specific personal health concerns	2	2 (100%)	-	-	-	-