Motivation and Satisfaction Among Polyclinic Volunteers at the 2002 Winter Olympic and Paralympic Games

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Running title: Polyclinic volunteer motivation and satisfaction

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Background: The Olympics and Paralympic Games rely on volunteers to provide essential services, including medical care of athletes, to an extent that may be unmatched by other sporting events. Despite the growing reliance on and importance of volunteers, no studies have been published characterizing the motivation or factors responsible for the satisfaction of Olympic and Paralympic healthcare volunteers.

Hypothesis: There are significant motivational differences between Olympic and Paralympic Polyclinic volunteers.

Study Design: Prospective cohort study.

Methods: All 2002 Polyclinic healthcare providers were asked to voluntarily complete a questionnaire containing a modified Special Event Volunteer Motivation Scale. Information regarding satisfaction with the volunteer experience was also collected.

Results: There was no significant difference in motivation summary scores or in satisfaction summary scores based on event worked. There was a negative correlation between age and motivation summary scores, but age showed no association with satisfaction summary scores. There was a strong positive correlation between motivation and satisfaction. Physician respondents had lower mean motivational scores than did non-physician volunteers. Significantly fewer physician than non-physician volunteers planned to use their volunteer experience to help market their professional practices.

Conclusions: There were no significant motivational differences between Olympic and Paralympic volunteers. The 2002 Polyclinic volunteers appear to have been motivated by a complex process that might be described as "enlightened self-interest," and all were satisfied with their experiences. Our results may assist organizers of future Games in selecting motivated volunteers and in creating rewarding work environments for them.

Since being established by Pierre de Coubertin in 1896, the modern Olympic Games have grown into the largest sporting event in the world. The Paralympic Games, an outgrowth of the International Wheelchair Games inaugurated by Sir Ludwig Guttman in 1948, have similarly grown since their inception, and have become the second largest international participatory sporting event worldwide. To an extent perhaps unmatched by other sporting events, the Olympic and Paralympic Games depend on volunteers to provide a variety of essential services ranging from transportation and translation to medical care. Indeed, since the 1980 Lake Placid Winter Olympics, when an estimated 6,000 volunteers were selected and trained for the Games, the Olympics have become increasingly reliant on a capable cadre of volunteers (Table 1). Not surprisingly, Dr. Jaques Rogge, President of the International Olympic Committee (IOC), has concluded, "...without [volunteers], sport and Olympism would be orphans. It would not be possible to organize the Olympic Games and competitions at all levels without volunteers' commitment and dedication."

The New York Declaration, ⁹ adopted by attendees of the World Congress on Olympic and Sport Volunteerism (hosted by the IOC and the United Nations), defines a volunteer as, "one who freely chooses, without any expectation of monetary or material gain, to contribute his or her time, energy, skills, experience, service and support to an organization." As seen in Table 1, approximately 20,000 volunteers participated in staging the 2002 Olympic and Paralympic Winter Games in Salt Lake City, Utah. It has been estimated that the Salt Lake Organizing Committee (SLOC) received more than three applications for each volunteer position. Volunteers were selected after a thorough interview and screening process, and were required to participate in an extensive pre-Games training program. The results were, by all accounts, outstanding, and the reliance on volunteers (including those positions previously staffed only by

salaried employees) has been credited as an important ingredient of the financial success of the Games. According to one observer, "Salt Lake took volunteerism to an art form; they set the new standard." ¹⁰

The Salt Lake City Olympic and Paralympic Polyclinic, which was operational from January 29, 2002 through March 19, 2002, relied heavily on volunteers during the 48 days it was open. Approximately 270 volunteer physicians, nurses, physical therapists, and other medical professionals staffed the Polyclinic around the clock during that interval. Medical, dental, optometry, laboratory, radiological, pharmaceutical, and physical therapy services were all available. Although many of the individuals staffing the Polyclinic continued to receive wages from their respective employers during their volunteer assignment, they did not receive compensation from SLOC for the services rendered at the Polyclinic. Furthermore, their work at the Polyclinic was in fact voluntary, and thus each can be considered a "volunteer" as defined by the New York Declaration. Located within the athlete's village, the Polyclinic served as the central access point for medical services during the two events. During the operational period, the Polyclinic recorded approximately 2,600 visits by athletes, delegation officials, and other accredited personnel. Like the Games of which it was a part, the Polyclinic met with considerable success. Johann Koss, MD, himself a gold-medal winning athlete and member of the IOC, stated following the Olympic Games, "There has never been, in my experience, a better appearing or functioning Polyclinic in any Games. Their leadership, the quality of the medicine being practiced, and the warmth and generosity of their staff have been absolutely outstanding." This success reflects in large part on the effort of and positive team spirit engendered by the volunteers.

Volunteerism has been declared to serve as a foundation of the Olympic movement, but despite the growing reliance on and importance of volunteers, no studies have been published in the medical literature characterizing the motivation of Olympic and Paralympic healthcare volunteers. Furthermore, there are no published reports that analyze the factors contributing to the satisfaction of Olympic or Paralympic healthcare volunteers. The goal of this study, therefore, was to gain insight into the motivation and factors responsible for the satisfaction of Polyclinic volunteers during the 2002 Salt Lake City Olympic and Paralympic Games.

METHODS

The study protocol was reviewed and approved by the Marshfield Clinic Institutional Review Board, and permission to conduct the study was obtained from the medical commissions of both the IOC and the International Paralympic Committee. Volunteer healthcare workers staffing the Polyclinic during the Olympic and Paralympic Games were asked to voluntarily complete a 70-item questionnaire containing a 22-item modified Special Event Volunteer Motivation Scale (SEVMS).⁵

For this study, Farrell's 28-item SEVMS instrument was modified to make the questionnaire shorter by removing those items thought to be irrelevant to the Polyclinic experience. The modified instrument still contained items that reflected the four motivational factors identified in Farrell's study. Also contained within the questionnaire (see Appendix) was a 24-item section in which respondents were asked to offer feedback regarding factors deemed potentially relevant to their satisfaction with the Polyclinic volunteer experience. Responses to items in both the motivational and satisfaction instruments were provided using a 5 point Likert scale, ranging from 1 (strongly disagree/negative) to 5 (strongly agree/positive). Signs were

posted throughout the Polyclinic encouraging volunteers to participate (Fig. 1). Standard summary statistics were used to describe the survey results and the characteristics of the respondents. Chi-squared analyses were used to compare responses on discrete measures between physician and non-physician volunteers, and the Wilcoxon rank sum test was used with continuous measures. Principle components factor analysis⁶ and analysis of internal consistency using Cronbach's alpha statistic⁴ were used to determine the validity of creating summary scores for the 22 SEVMS items and the 24 satisfaction items.

Nineteen of the 22 modified SEVMS items correlated strongly (Cronbach's alpha = 0.88), while three items were very weakly or negatively correlated with others. Factor analysis verified that the remaining items reflected a single strong factor, and a motivation summary scale was created as the mean over the 19 items. Similar analysis suggested good internal consistency (Cronbach's alpha = 0.85) and a strong primary dimension for satisfaction, and a summary score was created as the mean over all 24 items. The Pearson correlation coefficient was used to evaluate the association between age and the motivation and satisfaction scores. Results were deemed statistically significant at the 5% level (P < 0.05).

RESULTS

One hundred thirty-six of the Polyclinic's 270 volunteers (50%) returned questionnaires. The mean age of the respondents was 40 years (range 24–73), and 52% of the respondents were male. Forty-eight percent of the respondents were "physicians" (i.e., medical doctors or other terminally-degreed medical professionals including dentists, optometrists, and podiatrists), 27% certified athletic trainers or physical therapists, 14% nurses, 10% medical technologists or assistants, and 1% other medical professionals (emergency medical technicians). Nine percent of

the respondents did not identify their profession. The 59 physician respondents represented 73% of the total Polyclinic physician volunteer force. Table 2 lists the profession of the study participants. Only 15 (11%) of the respondents reported prior Olympic or Paralympic volunteer experience.

Figure 2 lists the leading motives for volunteering (broken down by event worked), while Figure 3 compares the results from physician volunteers with those from non-physician volunteers. Figure 4 lists the factors that ranked highest and those that ranked lowest on the volunteer satisfaction scale (also broken down by event worked), and Figure 5 compares satisfaction data derived from physicians versus non-physicians. As discerned from inspecting Figures 2 and 3, the most cited motives were largely service oriented, but the respondents did also endorse some motives that indicated a simultaneous desire for self-fulfillment. There was a negative correlation between age and the motivation summary score that was of borderline statistical significance (r=-0.20, P=0.05), but age showed no association with the satisfaction summary score (r=0.02, P=0.82). In addition, physician respondents had a lower mean motivational score than did non-physician volunteers (P=0.009).

There was no significant difference in the motivation summary score (P=0.92) or in the satisfaction summary score (P=0.30) based on event worked. There was a strong positive correlation between motivation and satisfaction (r=0.42, P<0.001). Volunteers searching for a challenging educational opportunity that would broaden their horizons tended to be most satisfied with their volunteer experience. Although the vast majority of volunteers felt that their experience met or exceeded their expectations, physicians tended to be somewhat less satisfied by their experience (although the observed difference did not reach statistical significance, P=0.08). Significantly fewer physician than non-physician volunteers planned to use their

volunteer experience to help market their professional practices (P=0.039), although an equivalent percentage of physicians as non-physicians felt that the experience would benefit their careers.

DISCUSSION

The scientific literature investigating motivation of volunteers at sporting events is sparse. The available studies appear to present two somewhat contradictory theoretical constructs to explain what motivates individuals to contribute their time and energy to such undertakings. Strigas et al. 8 investigated motivational factors among volunteers for the Florida Gulf Beaches Marathon, and identified five motivational factors: material, leisure, egoistic, purposive, and external. Williams et al. examined volunteer motivation during the 1994 Men's Skiing World Cup competition in Whister, B.C., Canada. 11 They reported the most important reason for volunteering was socialization with people who shared common interests, but did not undertake a more formal analysis of the responses to their questionnaire.

Farrell et al.⁵ found that among volunteers at the 1996 Canadian Women's Curling Championship, four empirical factors contributed to volunteer motivation (purposive, solidary, external traditions and commitments), and concluded that motivation was a multidimensional phenomenon with predominantly purposive incentives. Farrell et al. employed a 28-item questionnaire based on research performed by Cnaan and Goldberg-Glen,³ and named their derived instrument the Special Event Volunteer Motivation Scale. Interestingly, however, Cnaan and Goldberg-Glen originally reported that 22 of the 28 motives commonly reported in the human resources volunteerism literature could be adequately represented by a single factor, and thus concluded that motivation for volunteering represented a unidimensional social

phenomenon, and that "volunteers are both altruistic and egoistic. That is, volunteers do not distinguish between types of motives; rather they act on both."³

The modified SEVMS used to measure motivation in our study produced a unidimensional grouping of volunteer motives. From a practical standpoint, this determination permitted us to simplify the correlation analyses subsequently performed investigating the relationship between motivation and other factors. While from a theoretical standpoint our results would appear to support the conclusions of Cnaan and Goldberg-Glen,³ it seems reasonable to submit that further research will be needed to sort out the demographic and methodological factors influencing the motivation of volunteers for a given sporting event. We suspect that it will prove difficult to arrive at a simple theoretical model that consistently predicts or explains the motives of groups of individuals with varying professional, socioeconomic, and cultural backgrounds volunteering at different sporting events that themselves differ in status and scope. As Cnaan and Goldberg-Glen state: "Another question... is whether some models are applicable to specific populations of volunteers."

All categories of Polyclinic healthcare volunteers were represented among the study participants. As evidenced by the data in Table 2, however, the response rate among physicians was considerably higher than for the other volunteer healthcare professionals who chose to participate in the study. The reason for this observation is not immediately obvious to us. We were reasonably satisfied with the 50% overall response rate, given that participation was strictly voluntary and that individuals who wished to participate had to first find and then complete the form. Signs encouraging participation were posted and verbal reminders were given, but there was no financial or tangible incentive for the volunteers who chose to participate. Despite this, our rate is comparable to that obtained by Williams et al. in their 1994 investigation. Responses

to the motivation scale items reveal that the Polyclinic volunteers were generally service oriented, i.e., they valued the opportunity to contribute to the success of the Games and make a difference in the lives of the athletes participating in this unique event.

Kofi Annan, Secretary General of the United Nations, has stated that "The traditional view of volunteering as purely altruistic is evolving into one characterized by benefits to everyone involved, in other words, reciprocity. The notion of 'enlightened self interest' captures well the reciprocity that is at the root of volunteering." The results of our study would appear to support Mr. Annan's contention. The leading motive, that of contributing to the success of a once in a lifetime event, itself suggests a component of altruism (donation of services) and of self-interest (being a part of a unique event). Our study indicates that while the leading motives of Polyclinic volunteers were largely service-oriented and seemingly altruistic, their motivation also reflects the reciprocity about which Mr. Annan spoke (e.g., the opportunity to work with elite athletes, broadening one's horizons).

Entering into the study, we suspected that there might be significant motivational differences between Olympic and Paralympic Polyclinic volunteers. However, this hypothesis proved to be incorrect. There was no significant difference between motivational scores based on the event worked, although there were slight differences in the rank order of the mean responses to items in the modified SEVMS and satisfaction scale among the three subgroupings identified (Olympics only, Olympics + Paralympics, and Paralympics only). There were no significant gender-specific motivational factors, but female respondents did have higher satisfaction scores than male respondents. In addition, physicians had somewhat lower mean satisfaction scores than did non-physician volunteers (although this did not reach statistical significance). Furthermore, although the underlying incentives for participation appeared to be similar for the physician and

non-physician cohorts, physicians had slightly different (generally lower) motivation scores compared to non-physician volunteers. This is reflected in the significantly lower mean motivation score among physicians than the non-physician group. The practical importance of this observation is unclear, but we suspect it reflects an intrinsic conservatism on the part of the physician cohort. In this regard, it is, however, worth noting that the physician cohort was less interested in using their Polyclinic experience for self-promotion after the Games than was the non-physician cohort.

Satisfaction was assessed using a series of questions that also formed a unidimensional scale. We found that satisfaction scores were quite high, with 91% of respondents indicating that the experience met or exceeded their expectations and 97% reporting that they would be willing to volunteer again in a similar capacity. Those areas receiving the lowest scores related to pregames communication and training, aspects that may not have been unique to Polyclinic volunteers/management. Housing and cost of living also scored poorly on the satisfaction scale, reflecting the high demand for and cost of housing during the Salt Lake City Games. The factors scoring most highly on the satisfaction scale indicated that the volunteers valued the interpersonal relationships into which they entered, and found satisfaction in the appreciation demonstrated by the athletes for the care they received. Physicians tended to have lower overall satisfaction scores, particularly with regard to the administrative aspects of the volunteer experience, such as pre-Games training and the allocation of shifts during the operational period. It is possible that these lower scores reflect specific concerns among the physician volunteers, or it may be that the lower scores reflect a higher set of expectations shared by the cohort of physician respondents. We observed a strong positive correlation between motivation and

satisfaction scores. Whether the specific items that correlated highest with satisfaction have positive predictive value must await further study.

CONCLUSIONS

Although Salt Lake City Polyclinic volunteers were generally well satisfied with their volunteer experience, it may not be unreasonable to suggest that future volunteer managers create more effective means of communicating and interacting with volunteers prior to the start of the Games.

As mentioned, the leading factor contributing to volunteer satisfaction was the athlete's appreciation of the services rendered. This implies that positive feedback and public recognition of the volunteers' dedicated efforts should be a routine strategy for volunteer personnel management, an observation that has been eloquently espoused by Brettell.² Furthermore, it may be that the demographics of the Salt Lake City Polyclinic healthcare volunteer corps (young, relatively inexperienced) may have contributed to its success, as these are factors cited by Brettell as potentially contributing to the memorable warmth and hospitality of the volunteers at the 2000 Sydney Olympic and Paralympic Games. It is also interesting to note that our data demonstrated a negative correlation between age and motivation.

Volunteers have become a sizable component of the work force during large sporting events such as the Olympics and Paralympic Games. Selecting volunteers who are at once competent and have appropriate motives would appear to be important to the success of the undertaking, as evidenced by the tremendous success of the Sydney and Salt Lake City Games. Further study may be warranted to confirm and better understand the theoretical underpinnings of our preliminary observations with regard to the motivation of healthcare volunteers, and to

determine whether our findings might also apply to Olympic volunteers in general or if (as we suspect) they are specific to this unique segment of the volunteer force. The scale used for this study, if validated through further investigation, may prove to be a useful screening tool in the selection of future Olympic or Paralympic healthcare volunteers. Finally, we advocate ongoing investigation and analysis of factors responsible for volunteer satisfaction, so that the athletes of the Games of Athens, Turin, Beijing, Vancouver, and beyond might benefit.

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TABLE 1
Estimated Number of Volunteers for the Summer and Winter Olympic and Paralympic Games

Summer games	Number	Winter games	Number
1984 Los Angeles	28,742	1980 Lake Placid	6,703
1988 Seoul	27,221	1984 Sarajevo	10,450
1992 Barcelona	34,548	1988 Calgary	9,498
1996 Atlanta	60,422	1992 Albertville	8,000
2000 Sydney	62,000	1994 Lillehammer	9,054
2004 Athens (est)	60,000	1998 Nagano	32,579
		2002 Salt Lake City	20,000

Modified from Karlis G (2003) Volunteerism and multiculturalism: a linkage for future Olympics. The Sport Journal 6(3). Available online at http://www.thesportjournal.org/2003Journal/Vol6-No3/Volunteerism.asp

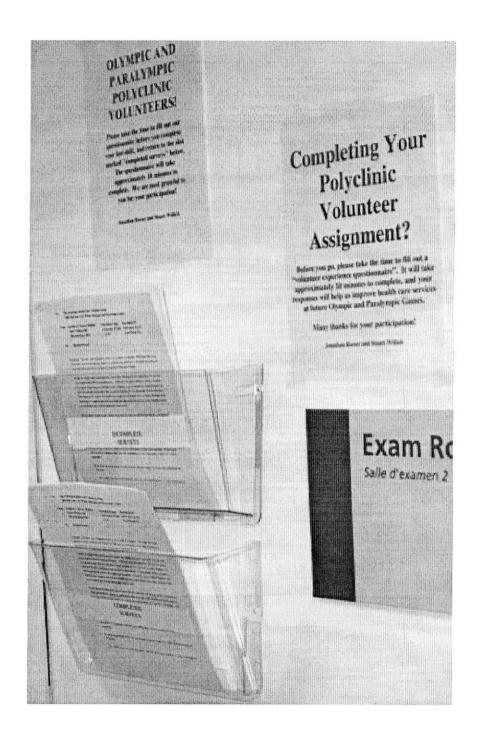
TABLE 2
Study Composition and Percent Participation by Profession

Profession	Number in study	Number total	Percent Participating
Physician	59	81	73
Physical therapist/ATC	33	53	62
Nurse	17	37	46
Medical assistant or technologist	13	88	21
Other medical (e.g. EMT)	1	11 .	9

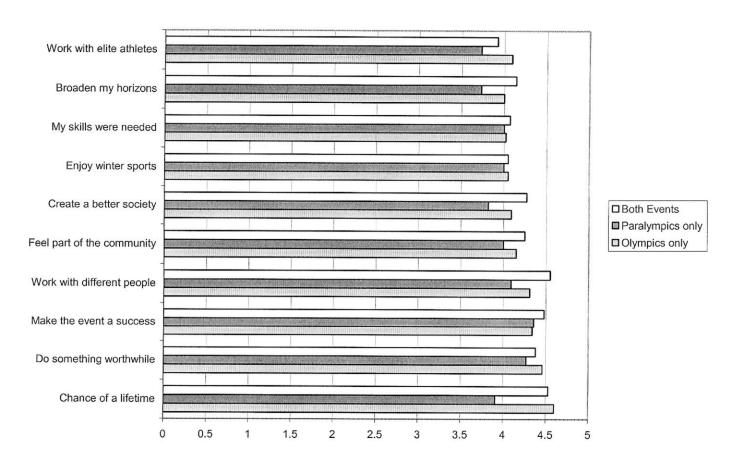
¹³ respondents did not provide information regarding their profession

FIGURE LEGENDS

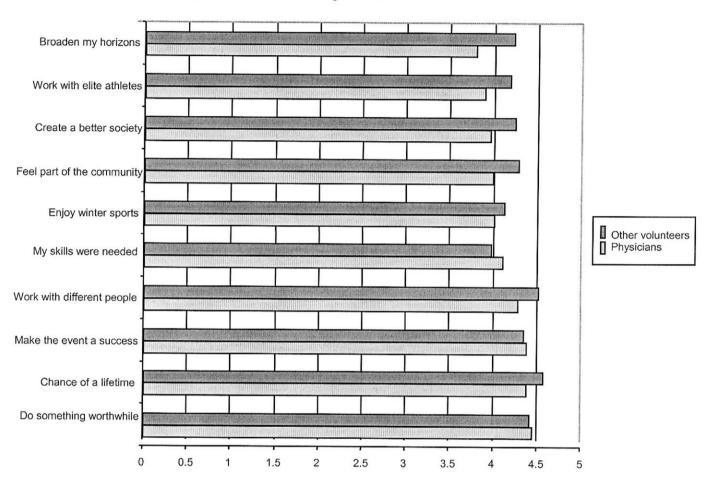
- **Figure 1.** Questionnaires were available and signs encouraging study participation were posted throughout the Polyclinic during the operational period.
- Figure 2. Leading motives for volunteering broken down by event worked.
- Figure 3. Leading motives endorsed by physician volunteers versus non-physician volunteers.
- **Figure 4.** Factors that ranked highest and lowest on the volunteer satisfaction scale broken down by event worked.
- **Figure 5.** A comparison of satisfaction data derived from physician versus non-physician volunteers.



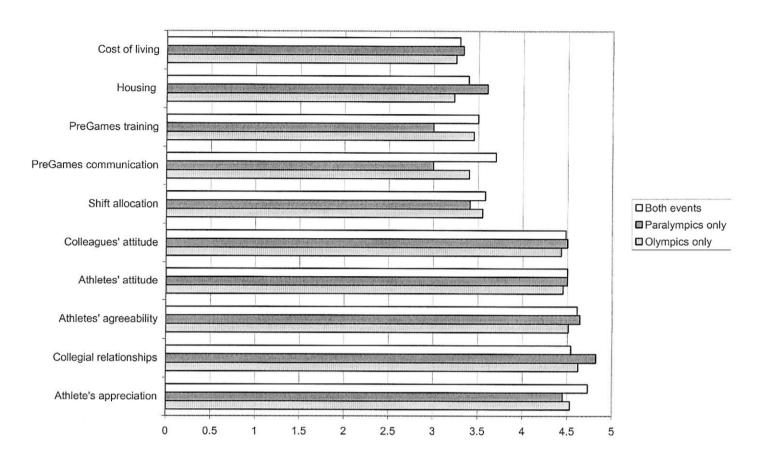
Top Ten Motivation Variables by Event Worked



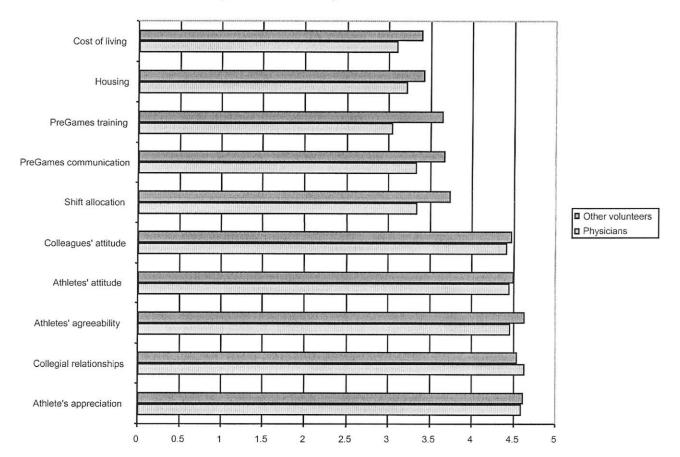
Physician vs Non-Physician Motivation



Top 5 and Bottom 5 Satisfaction Factors by Event Worked



Physician vs Non-Physician Satisfaction



APPENDIX Salt Lake City 2002 Olympic Games Health Care Volunteer Questionnaire

(Modified SEVMS)5

Listed below are several potential reasons why you might have been motivated to volunteer for service to the Olympic and Paralympic Games. For each, please indicate to what extent you agree that the sentiment is applicable.

	7.7				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
9. I wanted to help make the event a success 10. I felt my skills were needed 11. I wanted to work with different people 12. I wanted to do something worthwhile 13. I had nothing else to do with my time 14. Volunteering creates a better society 15. I have past experience providing similar service 16. It was the chance of a lifetime 17. I wanted to develop my skills 18. I wanted to vary my regular activities 19. Being a volunteer at this event is prestigious 20. I enjoy winter sports 21. I wanted to broaden my horizons 22. I wanted an opportunity to work with elite athletes 23. Being a volunteer makes me feel better about myself 24. I wanted to help out in any capacity 25. I wanted an educational experience If I did not volunteer, there would be no one else to carry out the work 27. Volunteering makes me feel part of the Olympic and Paralympic community 28. Volunteering in this capacity is challenging 29. My employer expected me to volunteer 30. I wanted an opportunity to network professionally (Satisfaction questions)			3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	4	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
(outlotte tion questions)					

Listed below are several factors that may have affected your volunteer experience. Please respond as appropriate.

	Buongry				Suongry
	Disagree	Disagree	Neutral	Agree	Agree
39. The physical plant was acceptable	\prod_{1}	\prod^2	\prod_{3}	\Box^4	П⁵
40. The support services provided were adequate	∏¹	2	3	Π4	∏ 5
41. Working relationships were collegial	1	1 2	 3	∏⁴	∏5
42. "Back up" was timely and adequate		\prod^2	3	∏⁴	∏ ⁵
43. The case mix was varied and interesting		\prod^2	 3	П	5
44. The work load was acceptable		\prod^2	\square^3	П	∏ 5
45. The athletes were agreeable to work with	\prod 1	\Box^2	\square^3	∏4	₽
46. The athletes were appreciative of the care I provided		\prod^2	\prod_3	1 4	∏ ⁵
47. I feel that I made a positive contribution to the	_	_	_	_	_
athletes' experience		\prod^2	\prod_{3}	Π*	∏ ⁵
48. Translation services were adequate	Li.	\Box^2	∏3	∏4	∏ 5
49. I was stimulated by the experience	\prod_{i}	\prod^2	□3	₽	5
50. My background was appropriate for the level of	_	_		_	
expertise demanded by the athletes		\Box^2	\square^3	□⁴	□5

Please indicate whether the following factors were positive, negative or neutral aspects of your volunteer experience.

51. Staffing52. Pace of patient-seeing activity53. Attitude of professional colleagues54. Attitude of the athletes	Negative [1.5] 1.5 1.5 1.5	Neutral 3.0 3.0 3.0 3.0	Positive 4.5 4.5 4.5 4.5
55. Opportunity to interact with people from other countries and cultures 56. Facilities 57. Support Services 58. Cost of living 59. Housing arrangements 60. Pre-Games training 61. Pre-Games communication 62. The computerized shift sign-up procedure	1.5 1.5 1.5 1.5 1.5 1.5 1.5	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5