

## 5. Visitor perceptions of impacts

Perceptions of 26 specific impact items were surveyed, covering social impacts, physical impacts, and impacts associated with the facilities and services (refer Appendix 1, Question 5). Visitors were asked to respond to each item using the response options of 'not experiencing the impact', 'experiencing it, but not being bothered', 'being bothered a little', and 'being bothered a lot'. The complete list of responses, as summarised in Figure 7 shows that in the main, most visitors did not experience these impacts. This may be because the impacts did not occur, or because they were not noticed by the visitor.

When visitors did notice impacts, most were not bothered by them. This response could be considered 'tolerance' of the impacts. However, when most of those noticing an impact were bothered by it, it could be considered 'intolerance' of the impact source. From Figure 7 impacts indicative of inappropriate behaviour by others appeared least acceptable to visitors. These included littering of huts, campsites and tracks, seeing toilet paper and waste, and seeing wood cut for fires. Few of those noticing these impacts were not bothered by them. While these appear to represent the least acceptable types of impacts, they were not extensively reported here.

The most prominent impacts reported here are indicated through combining the responses of those who were bothered by impacts, and those who simply noticed them. These 'impact aware' responses often represented a considerable majority of the visitors. Impact examples, including the percentage of visitors who were aware of them, included "Seeing too many in huts" (72%), "Seeing too many on the track" (66%), "Track trampling/widening" (65%), "Track trampling/short-cuts" (59%), "Seeing too many big groups" (56%), and "Overdevelopment of tracks" (52%). These were the most prominent impacts noticed on the Tongariro Circuit, although it should be remembered that there is a clear distinction between the impacts being "noticed" and being "negative"<sup>8</sup>.

The only highly negative impact was "Uncertain water hygiene", which bothered many more visitors than any other impact. It was a response to the statement "Uncertainty about the water always being safe to drink". From consultations with managers, it can be concluded that this response most often represents general caution about water quality, rather than being a direct reaction to hygiene problems experienced on the visit. It was not clear if this caution was related to all water sources on the trip, or just those in trackside streams.

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<sup>8</sup> What contributes to the progression from noticing and tolerating an impact, to becoming bothered by it (e.g., it becomes negative) represents an important question for future research.

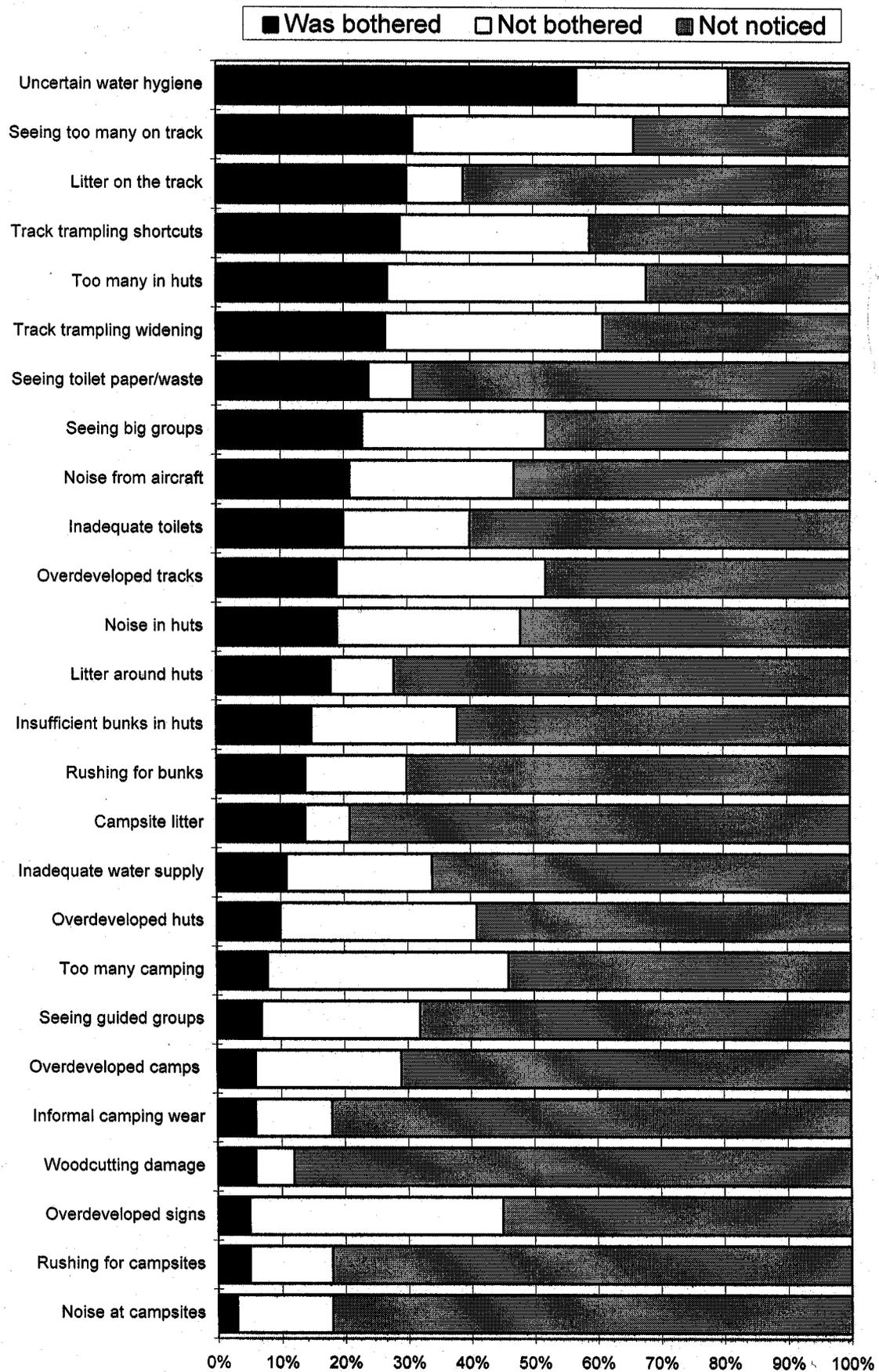


Figure 7. Impact perception responses (n= 1044).

## 5.1 EFFECTS OF AGE, GENDER, NATIONALITY AND CROWDING PERCEPTION

### 5.1.1 Background to analyses

Additional analyses were required to assess whether these impact perceptions varied significantly according to age group, gender, nationality and crowding perception. Table 3 and Figure 8 show the impact perception scales which were created for these analyses (refer Section 4.1.1).

TABLE 3. SUMMARY SCALES FOR SOCIAL AND PHYSICAL IMPACT PERCEPTIONS (REFER APPENDIX 2).

SCALES	DESCRIPTIONS
Physical impacts	Litter/waste, vegetation damage, track trampling/damage
Hut congestion	Insufficient bunks, too many people, noise, rushing for bunks
Track congestion	Too many people/big groups, guided groups, plane noise
Over-development	Excessive level of huts, tracks, campsites, signs
Campsite congestion	Too many people, noise, rushing for sites, informal campsite wear
Water/Toilet/Hygiene	Inadequate water/toilet supply, doubts over water hygiene

### 5.1.2 Significant findings

Differences in these impact scales according to age-group (over and under 40 yrs), gender (male/female), nationality (New Zealand and overseas), and crowding perceptions (Uncrowded/Crowded) were analysed (refer Section 4.1.2 for method). The significant effects and interactions associated with the analysis using these independent variables are summarised in Table 4. These results indicate that visitors who felt crowded were more bothered by almost all types of physical and social impacts.

TABLE 4. SIGNIFICANT EFFECTS ON IMPACT SCALES (REFER TABLE 2 FOR ANALYSIS DETAILS).

SOURCE OF SIGNIFICANT EFFECTS	SIGNIFICANT IMPACT SCALES	MEAN VALUES (ADJUSTED*)	
		Uncrowded	Crowded
Crowded effect <i>F(6,858)=10.79, p=.000</i>	Hut congestion <i>F(1,863)=46.18, p=.000</i>	1.41	1.83
	Track congestion <i>F(1,863)=33.93, p=.000</i>	1.47	1.89
	Campsite congestion <i>F(1,863)=7.70, p=.006</i>	1.18	1.28
	Over-development <i>F(1,863)=5.21, p=.023</i>	1.41	1.60
	Physical impacts <i>F(1,863)=3.77, p=.052</i>	1.55	1.68

\* Mean values for summary scales are divided by the number of constituent items to give a figure interpreted using the original question categories (e.g., 1 = Not noticed 2 = Not bothered 3 = Bothered a little 4 = Bothered a lot).

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