

Summary results of a survey conducted during the 2012 whalewatching season in Hervey Bay, Australia.

G. D. KAUFMAN AND P.M. KAUFMAN

Pacific Whale Foundation, 300 Ma'alaia Road, Suite 211, Wailuku, Maui, HI 96793, USA

Introduction

Since 1987, whalewatching in Queensland has grown at an average annual rate of 8.5%. In 2008, *ca.* 350,000 tourists participated in a whalewatching tour in that state, representing 21% of Australia's total figure (O'Connor *et al.*, 2009). Hervey Bay and Moreton Bay are the two significant areas for whale watching tourism in Queensland. Hervey Bay is known as the whalewatching capital of the Australia, where this type of tourism activity started in 1987, and continues to attract the largest number of large cetacean watching tourists (*ca.* 65,000 in 2008; O'Connor *et al.*, 2009). The whalewatching industry is directly responsible for 2 to 4% of Hervey's Bay total regional income (Stoeckl *et al.*, 2005). However, Hervey Bay has seen a decline in whalewatching numbers since 1998, when numbers plateaued. There are indications that increasing regional competition along the southern coast of Queensland has impacted on numbers at Hervey Bay, as tourists are now able to go whalewatching closer to large population and tourist centers (O'Connor *et al.*, 2009). In addition, changing visitor and operator profiles and a devolving relationship between industry and resource managers raised questions about the future viability of the whalewatching industry in Hervey Bay (Peake 2011). Pacific Whale Foundation began commercial whalewatching tours in Hervey Bay in 2012, based on the successful model of its operations in Maui, Hawai'i, USA (since 1980). A survey was conducted aiming at understanding the dynamics of the participants, along with their motivations and expectations from the experience. A summary of the results from this survey is presented here to be used as the basis of developing a long-term strategy for the revitalization of a once vibrant whalewatching industry.

Methods

Study area

During the 2012 whale season (August to October), survey data were gathered from tourists on Pacific Whale Foundation whalewatching tours, based in Hervey Bay, Queensland, Australia (figure 1). Hervey Bay is located 295 kilometers north of Queensland's capital Brisbane.



Figure 1: Map showing the location of Hervey Bay, Australia (Created using Google Earth, © 2013 Google Inc.)

Survey questionnaire

The following questions were asked to passengers after participating in a trip:

1. Prior to this trip, have you ever participated in a whalewatch tour?
2. Prior to this trip, have you ever participated in a whalewatch tour in Hervey Bay?
3. Have your experiences on this tour made you more likely to visit Hervey Bay again?
4. Which of the following were determining factors in your choice to visit Hervey Bay?
5. Please rate the following factor in terms of its importance to your decision in choosing a whalewatch tour (1 - lowest priority, 5 - highest priority).
6. Has this experience made you more likely to participate in another whalewatch trip?
7. How important is it to you that your whalewatch tour includes an educational program for children?
8. Where is your permanent residence?
9. In what year were you born?
10. What is your gender?
11. What is the highest level of education you have achieved?
12. Would you recommend this whalewatch tour to your friends/family?
13. If you have, or you intend to, spend additional money aside from ticket price on this tour- please indicate where you did or intend to spend additional money.
14. Do you plan to spend additional days in the Hervey Bay area as a result of participation in this whalewatch tour?
15. I would like to receive additional information from Pacific Whale Foundation about.

Survey protocol and analysis

There were no incentives for participating in this survey, which was strictly voluntary. Surveys were collected by Pacific Whale Foundation staff members onboard the whalewatching vessel. Collected surveys were each assigned a number with participants' responses exported into an Excel spreadsheet and number coded, when appropriate.

To facilitate the analysis of the survey questionnaire, the age of each participant was categorized into a specific age-class (*i.e.*, < 20, 20-29, 30-39, 40-49, 50-59, 60-69, 70-79, and 80-89). Participants whose permanent residence was within 100 kilometers of Hervey Bay were considered locals. Consequently, responses to question 14 from local people were excluded from the analysis. Descriptive statistics were conducted for each question.

Relationships between responses to certain questions and demographic information (*i.e.*, gender, and age,) were examined by performing chi-squared analysis. To determine if there were differences in responses among age-class and gender, chi-squared results were interpreted to assess if the proportions varied significantly. A p-value less than 5% was considered significant and the null hypothesis that proportions do not vary was rejected and a gender or age-class effect was observed. Only fully completed surveys were used in this analysis.

Responses to the questionnaire may be a function of the “type” of whalewatcher (*i.e.*, first time or repeat). For example, repeat whale watchers may be more likely to recommend a tour and return to Hervey Bay as they have already participated in such tour. A Latent class regression model was therefore developed for both gender and type of whalewatcher using the poLCA function in R (Linzer and Lewis, 2011) to determine if gender and repeat whale watchers would answer differently to questions 3, 6, and 14:

- Have your experiences on this tour made you more likely to visit Hervey Bay again?
- Has this experience made you more likely to participate in another whalewatch trip?
- Do you plan to spend additional days in the Hervey Bay area as a result of participation in this whalewatch tour?

Results

Between August and October 2012, passengers who participated in a whalewatching tour with Pacific Whale Foundation in Hervey Bay, Australia completed a total of 194 surveys. Not all questions in the survey were answered (Table 1), ranging from 30.4% (question 15) to 100% (question 1). Overall, 74% (n = 144) of the surveys were completed.

Table 1: Percentage of participation per question for the 194 survey questionnaires completed in Hervey Bay, Australia.

Question Number	Total responded to question
1. Prior to this trip, have you ever participated in a whalewatch tour?	194 (100.0%)
2. Prior to this trip, have you ever participated in a whalewatch tour in Hervey Bay?	193 (99.5%)
3. Have your experiences on this tour made you more likely to visit Hervey Bay again?	166 (85.6%)
4. Which of the following were determining factors in your choice to visit Hervey Bay? (check all that apply)	155 (79.9%)
5. Please rate the following factor in terms of its importance to your decision in choosing a whalewatch tour (1 - lowest priority, 5 - highest priority):	193 (99.5%)
6. Have this experience made you more likely to participate in another whalewatch trip?	186 (95.9%)
7. How important is it to you that your whalewatch tour includes an educational program for children?	187 (96.4%)
8. Where is your permanent residence?	187 (96.4%)
9. In what year were you born?	176 (90.7%)
10. What is your gender?	191 (98.5%)
11. What is the highest level of education you have achieved?	178 (91.8%)
12. Would you recommend this whalewatch tour to your friends/family?	189 (97.4%)
13. If you have, or you intend to, spend additional money aside from ticket price on this tour- please indicate where you did or intend to spend additional money: (please check all that apply)	175 (90.2%)
14. Do you plan to spend additional days in the Hervey Bay area as a result of participation in this whalewatch tour?	140 (72.2%)
15. I would like to receive additional information from Pacific Whale Foundation about: (please check all that apply)	59 (30.4%)

Descriptive statistics for each question

In Hervey Bay, slightly more participants participated for the first time in a whalewatching tour (54.6%, n = 106; figure 2). For those who had taken part in this type of wildlife trip, *ca.* a third did it in Hervey Bay (n = 58). An additional 10% (n = 20) had done a whalewatching trip more than once in the region (figure 3).

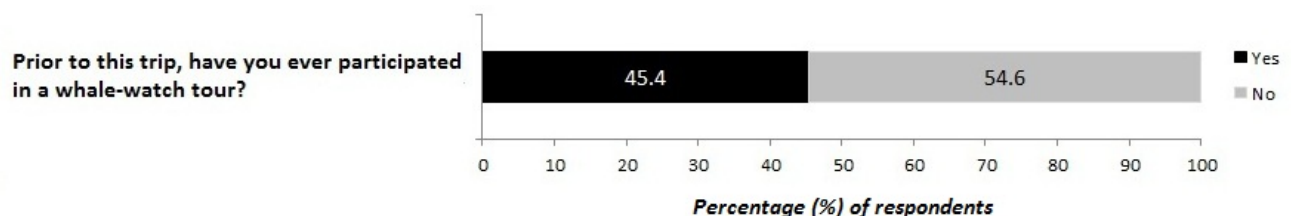


Figure 2: Response to the question “Prior to this trip, have you ever participated in a whalewatch tour?” for a 2012 whalewatching survey in Hervey Bay, Australia (n = 194).

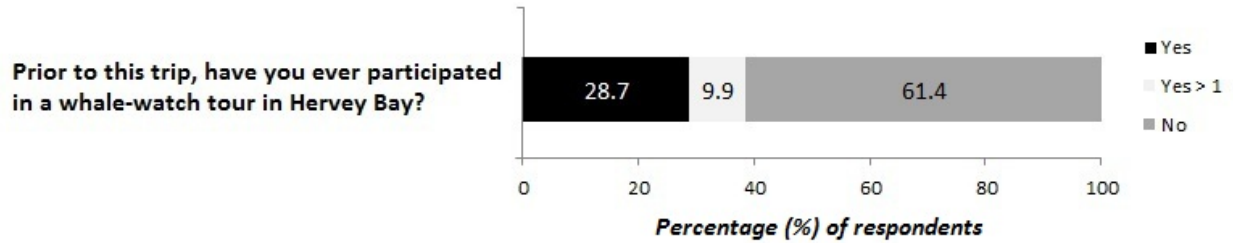


Figure 3: Response to the question “Prior to this trip, have you ever participated in a whalewatch tour in Hervey Bay?” for a 2012 whalewatching survey in Hervey Bay, Australia (n = 193).

The participation in a whalewatching trip had a very strong influence on the likelihood of tourist visiting Hervey Bay again (ca. 90%, n = 149; figure 4).

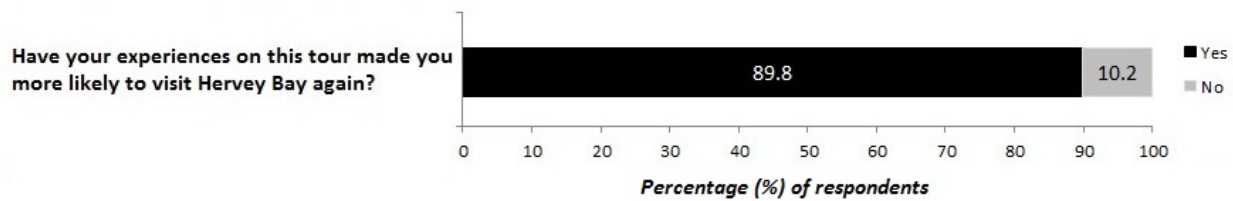


Figure 4: Response to the question “Have your experiences on this tour made you more likely to visit Hervey Bay again?” for a 2012 whalewatching survey in Hervey Bay, Australia (n = 166).

The opportunity to take part in a whalewatching tour was the primary reason for the large majority of participants to visit Hervey Bay (ca. 78%, n = 121), followed by distance required to travel to the area (34.2%, n = 53), availability of accommodation within their budgets (31.0%), and availability of tours/attractions suiting their interests (29.7%, n = 46; figure 5).

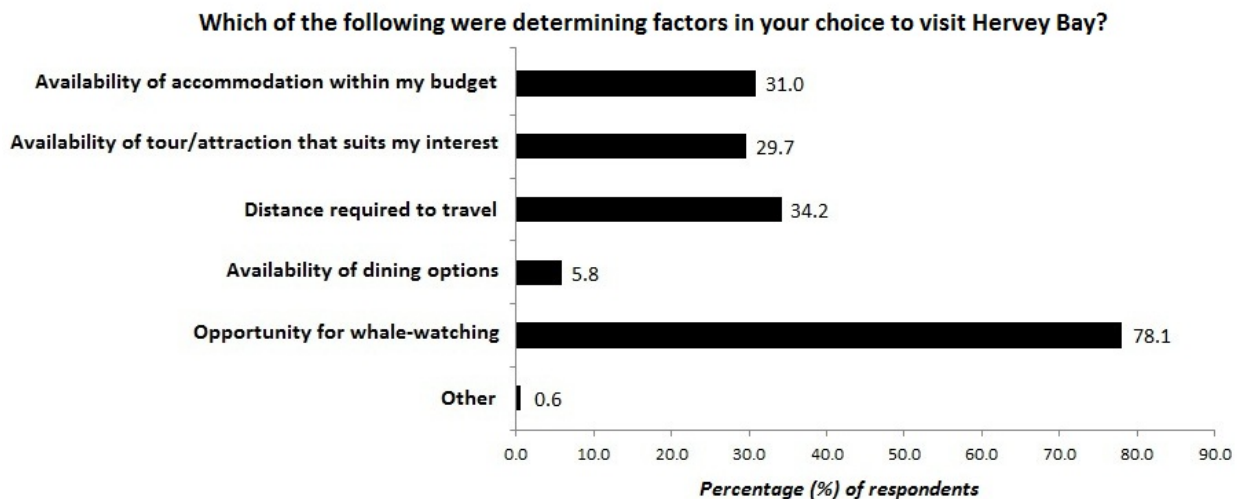


Figure 5: Response to the question “Which of the following were determining factors in your choice to visit Hervey Bay?” for a 2012 whalewatching survey in Hervey Bay, Australia (n = 155).

The most important factors that influenced participants in deciding to take a whalewatching tour were profits supporting research and conservation (49.5%, $n = 94$, $N = 190$), ticket price (39.9%, $n = 77$, $N = 193$), the presence of professional naturalist guide onboard (39.4%, $n = 74$, $N = 188$), and vessel amenities (30.7%, $n = 58$, $N = 189$). Departure time (24.9%, $n = 47$, $N = 189$) and distance to Hervey Bay (19.7%, $n = 35$, $N = 178$) were the two least important factors (figure 6).

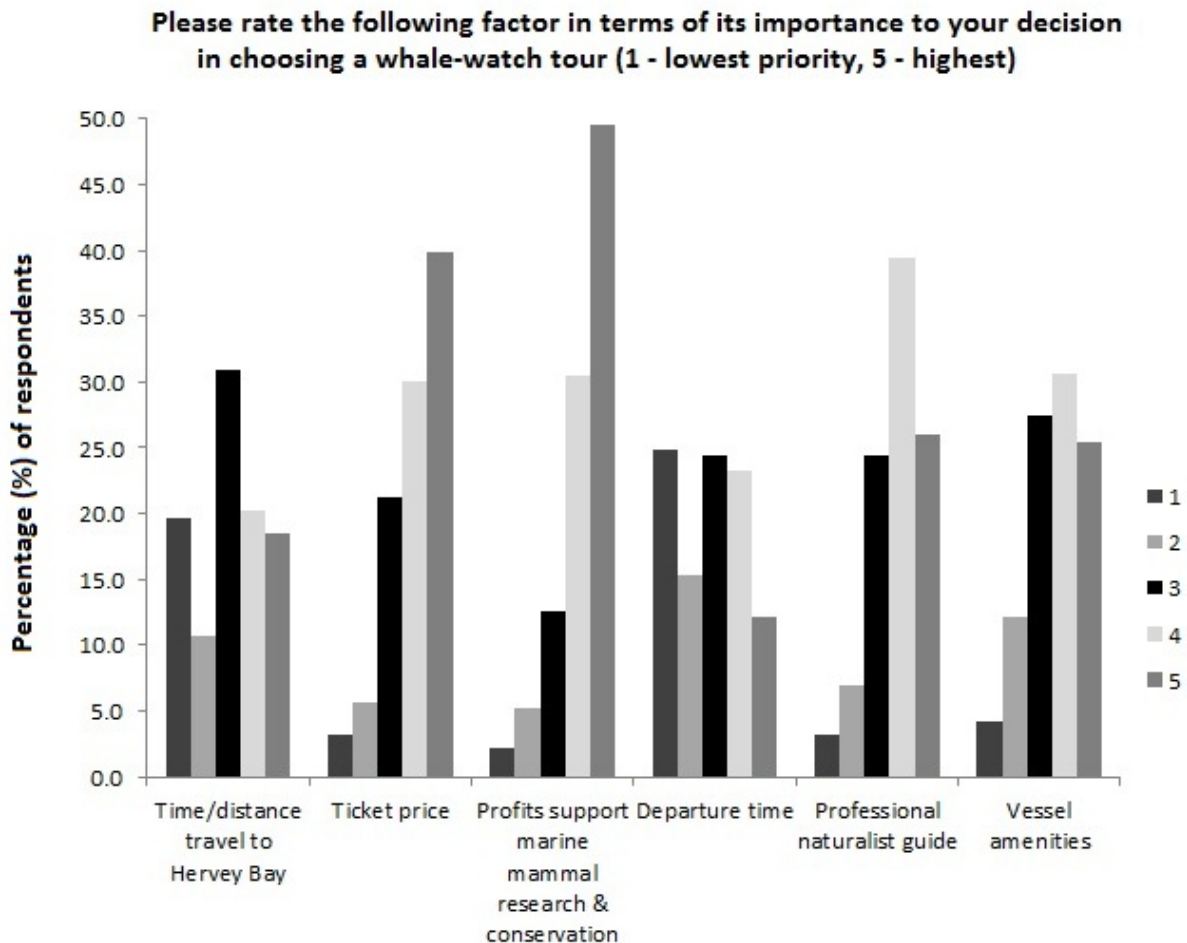


Figure 6: Response to the question “Please rate the following factor in terms of its importance to your decision in choosing a whalewatch tour?” for a 2012 whalewatching survey in Hervey Bay, Australia ($n = 193$).

Following their experience on a whalewatching trip, the large majority of participants 92.5% (n = 172) were likely to take part in another trip (figure 7).

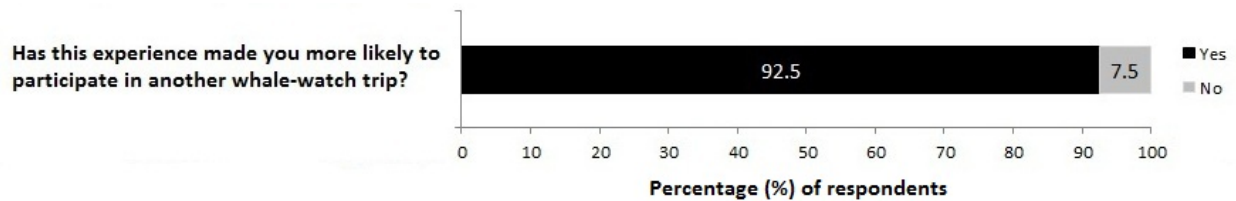


Figure 7: Response to the question “Has this experience made you more likely to participate in another whalewatch trip” for a 2012 whalewatching survey in Hervey Bay, Australia (n = 186).

The majority of the participants (82.4%, n = 154) felt that it was important to extremely important (levels 3 and 5) that a whalewatching trip included an educational program for children (figure 8).

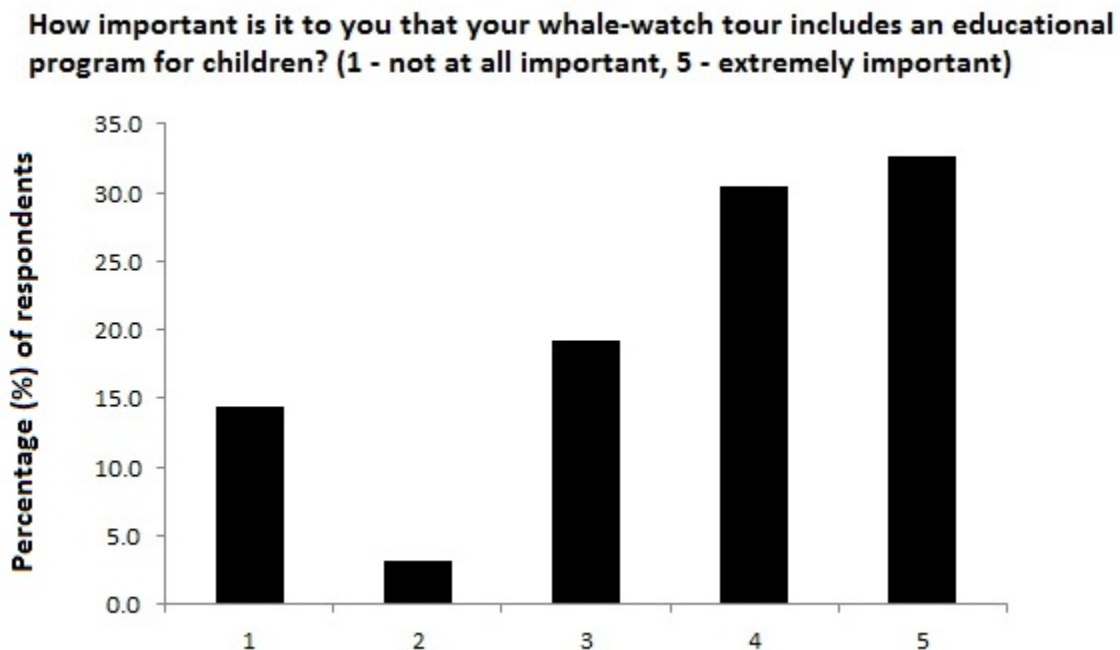


Figure 8: Response to the question “How important is it to you that your whalewatch tour includes an educational program for children?” for a 2012 whalewatching survey in Hervey Bay, Australia (n = 187).

The large majority (87.0%, n = 160) of the participants in this survey were from Australia, followed by Europeans (8.2%, n = 15), and New Zealanders (2.2%, n = 4, figure 9). Furthermore, just over half of the Australian participants (53.6%, n = 81, N = 151) were local (*i.e.*, living within 100 kilometers of Hervey Bay). A large proportion of the participants was relatively young, with 44.0% (n = 77) of participants under 40. Seniors (> 60 years) represented

an additional 24% (n = 42; figure 10). Age ranged from years of age with a mean of 45.1 ± 1.3 SE (n = 175). Most participants were also female (ca. 65%, n = 123; figure 11).

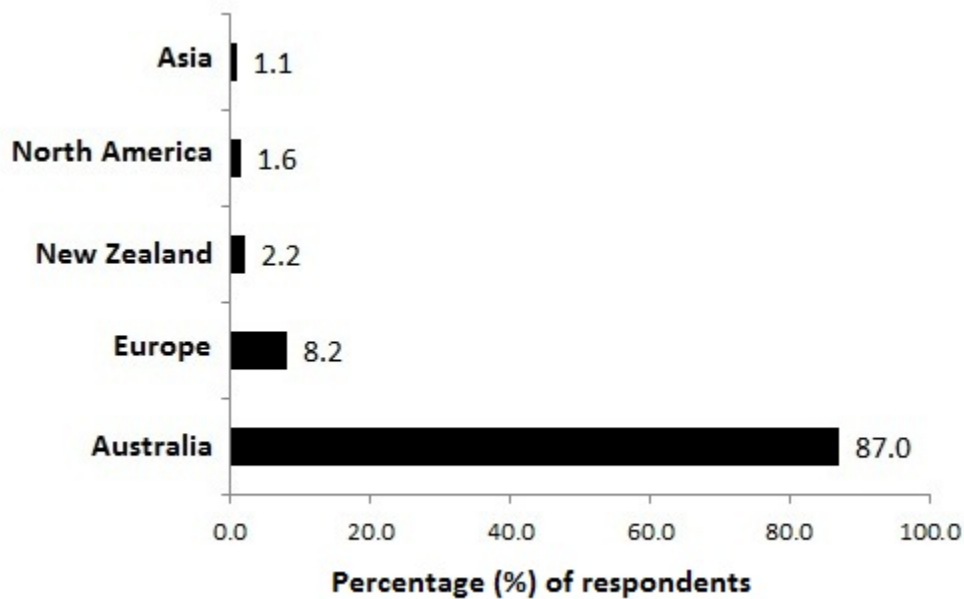


Figure 9: Response to the question “Where is your permanent residence?” for a 2012 whalewatching survey in Hervey Bay, Australia (n = 187).

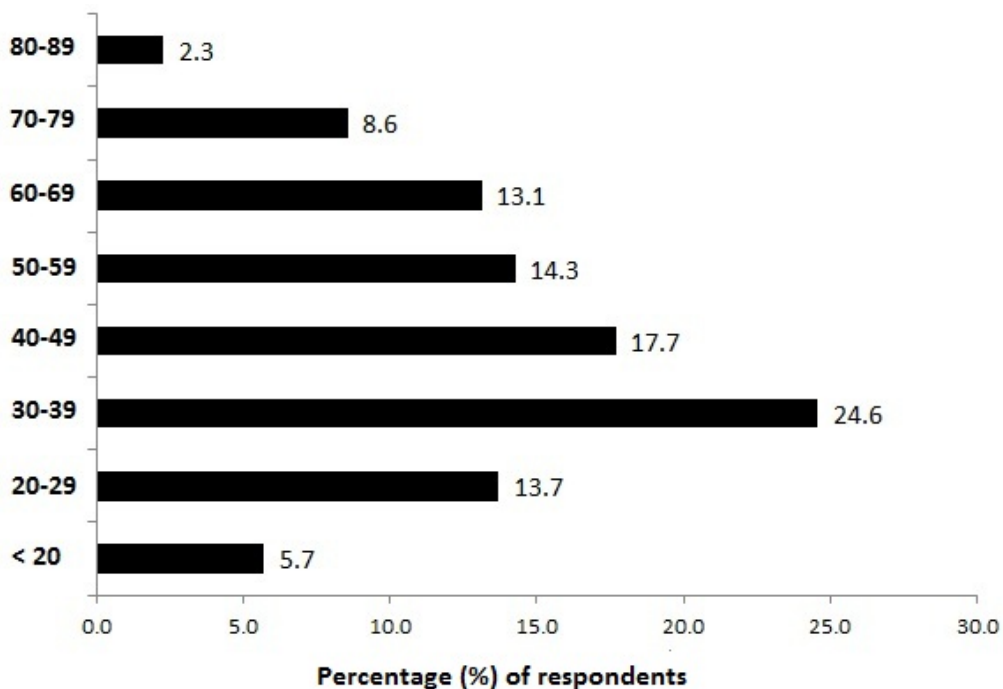


Figure 10: Response to the question “In what year were you born?” for a 2012 whalewatching survey in Hervey Bay, Australia (n = 176).

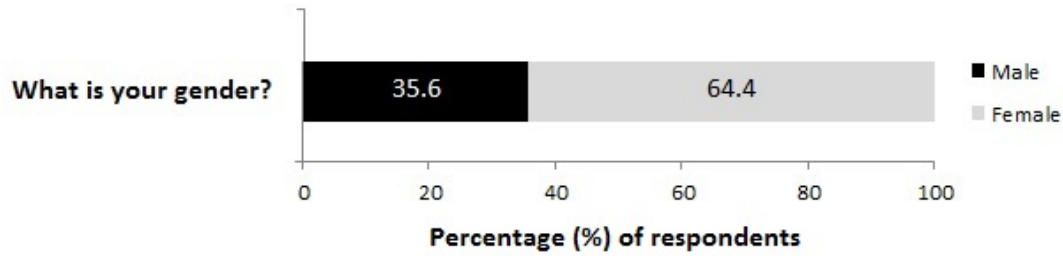


Figure 11: Response to the question “What is your gender?” for a 2012 whalewatching survey in Hervey Bay, Australia (n = 191).

In terms of education, *ca.* 60% of the participants had attended college (figure 12), including 9.0% who obtained a postgraduate degree (Master’s and PhD level).

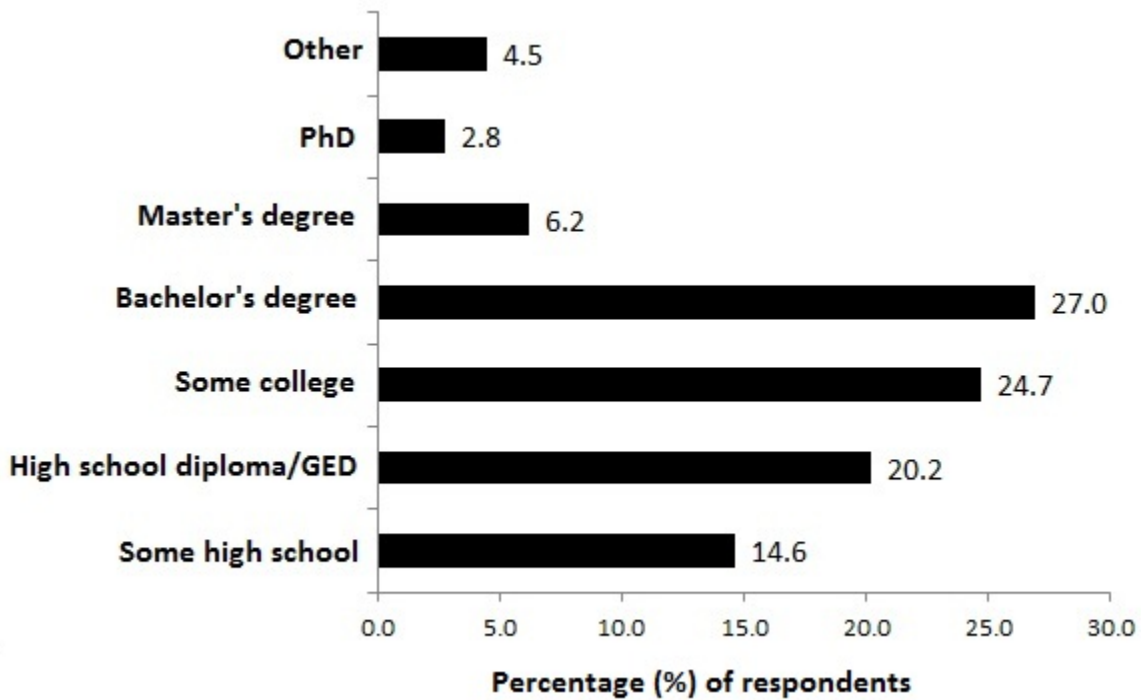


Figure 12: Response to the question “What is the highest level of education you have achieved?” for a 2012 whalewatching survey in Hervey Bay, Australia (n = 178).

Almost all participants (95.8%, n = 181) would recommend the whalewatching trip they took part in to their friends/family (figure 13).

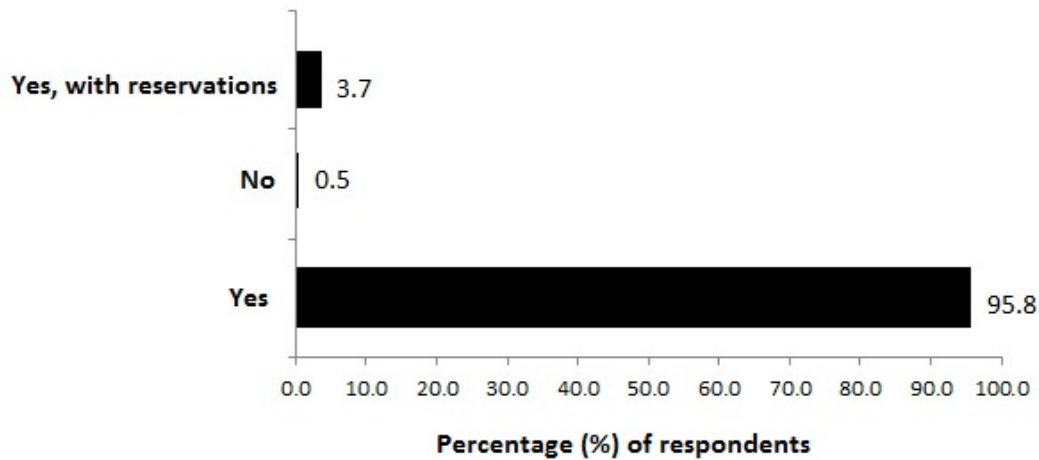


Figure 13: Response to the question “Would you recommend this whalewatch tour to your friends/family?” for a 2012 whalewatching survey in Hervey Bay, Australia (n = 189).

While onboard a whalewatching tour, most participants would spend additional money aside from the ticket price on food and beverages (82.9%, n = 145), followed by souvenirs (30.9%, n = 54; figure 14).

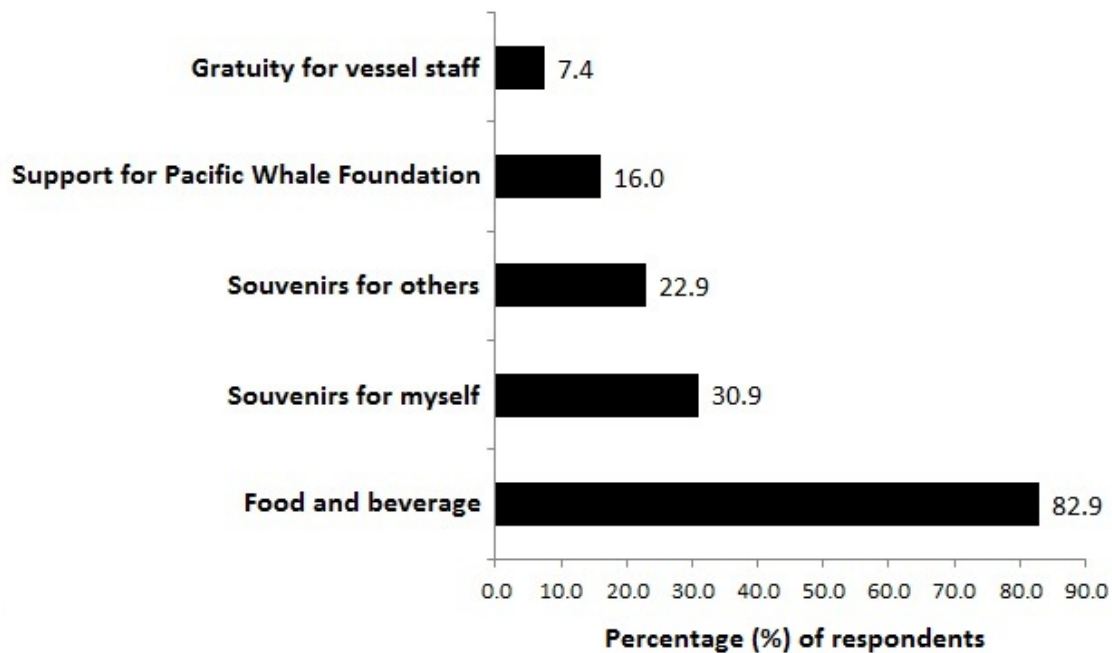


Figure 14: Response to the question “If you have, or you intend to, spend additional money aside from ticket price on this tour- please indicate where you did or intend to spend additional money?” for a 2012 whalewatching survey in Hervey Bay, Australia (n = 175).

Participation in a whalewatch trip had no influence of the length of stay within the Hervey Bay region for approximately three quarter of the respondents (74.7%, n = 71; figure 15).

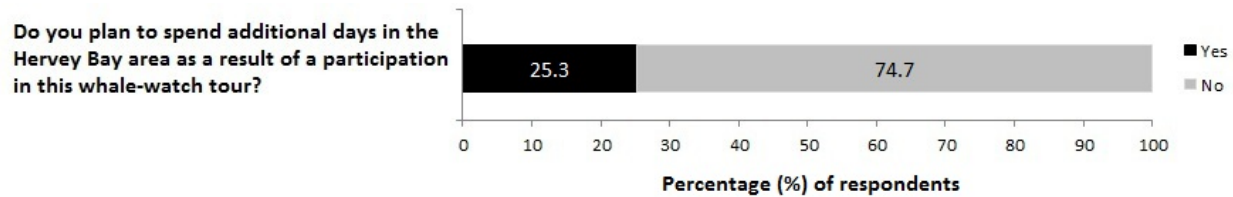


Figure 15: Response to the question “Do you plan to spend additional days in the Hervey Bay area as a result of participation in this whalewatch tour?” for a 2012 whalewatching survey in Hervey Bay, Australia (n = 95).

Finally, in terms of receiving additional information from Pacific Whale Foundation, most participants did not answer that question (69.6%, n = 135). Of those who did, volunteering and adopting wildlife received the most interest with *ca.* 50% (n = 27 and 29, respectively).

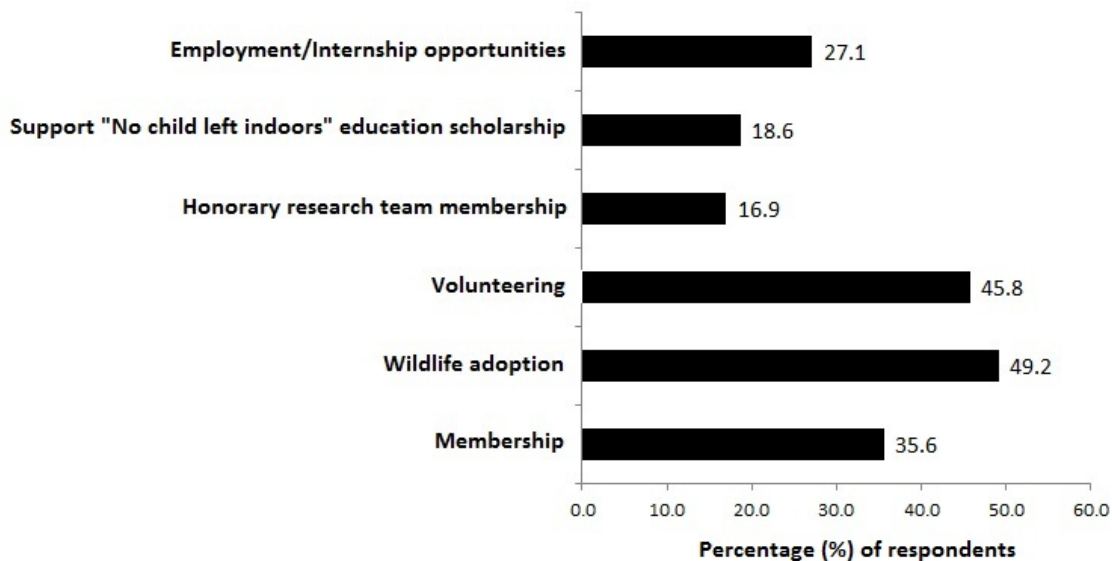


Figure 16: Response to the question “I would like to receive additional information from Pacific Whale Foundation about” for a 2012 whalewatching survey in Hervey Bay, Australia (n = 59).

Influence of demographic information of participants on the survey

Demographic information of participants (*i.e.*, age-class and gender) were taken into account explore the potential influence of those factors on participants’ interests. Age-class and gender had a significant effect ($p > 0.05$) on certain responses. Importance of ticket price, departure time and presence of professional naturalist were found to vary significantly among individuals of different age classes (Tables 2 and 3). Alternatively, money spent on gratuity varied significantly among male and females, where females were more likely to spend additional money of gratuity (Tables 4 and 5).

Table 2: Response to several questions for a 2012 whalewatching survey in Hervey Bay, Australia, while taking into account age-class. Results are expressed as proportions of total respondents and separated by age-class (n = 144).

Age	Age composition	New Whale Watchers	Rated medium to high priority when choosing whale watching tour							Additional spending during the tour				Request for additional information					
			Travel Time/Distance	Ticket Price	Profits Support Research	Departure Time	Professional Naturalist On Board	Vessel Amenities	Children Education Program	Food and Beverage	Souvenirs	PWF Membership or Donation	Gratuity For Vessel Staff	Membership	Wildlife Adoption	Volunteering	Honorary Research Membership	Support For Education Scholarship	Internship/Employment Opportunity
<20	0.07	0.04	0.06	0.06	0.06	0.04	0.06	0.05	0.06	0.06	0.02	0.01	0.00	0.01	0.02	0.02	0.01	0.01	0.01
20-30	0.15	0.09	0.11	0.14	0.13	0.10	0.13	0.12	0.12	0.12	0.10	0.03	0.02	0.02	0.02	0.03	0.01	0.01	0.01
30-40	0.26	0.15	0.17	0.24	0.24	0.15	0.23	0.21	0.22	0.19	0.15	0.06	0.03	0.03	0.04	0.04	0.01	0.01	0.05
40-50	0.14	0.10	0.10	0.13	0.12	0.08	0.13	0.11	0.12	0.11	0.07	0.02	0.00	0.01	0.01	0.02	0.00	0.01	0.01
50-60	0.13	0.08	0.08	0.10	0.13	0.06	0.11	0.10	0.11	0.07	0.06	0.02	0.01	0.01	0.01	0.01	0.01	0.00	0.00
60-70	0.17	0.08	0.09	0.13	0.12	0.09	0.13	0.13	0.10	0.10	0.06	0.03	0.01	0.01	0.01	0.01	0.00	0.00	0.01
>70	0.08	0.05	0.08	0.12	0.12	0.11	0.10	0.12	0.10	0.10	0.04	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.00
Total	1.00	0.58	0.69	0.92	0.91	0.63	0.90	0.83	0.83	0.75	0.49	0.16	0.07	0.11	0.12	0.14	0.04	0.04	0.10

Table 3: Chi-square test results to determine if age-class had an effect on how participants responded to specific questions A) with “yes/no” responses and B) ratings, for a 2012 whalewatching survey in Hervey Bay, Australia ($n = 144$). Significant results are highlighted. Note: d.f. = degree of freedom.

A. Questions with “yes” and “no” responses	Chi-square value	d.f.	p-value
1. Have you ever been on a previous whalewatch trip?	3.536	6	0.739
13a. Would you spend additional money on food and beverage?	7.929	6	0.243
13b. Would you spend additional money on souvenirs?	8.263	6	0.219
13c. Would you spend additional money on PWF membership?	4.756	6	0.576
13d. Would you spend additional money on gratuity for vessel staff?	6.474	6	0.372
15a. Would you like to receive additional information on memberships?	2.416	6	0.878
15b. Would you like to receive additional information on wildlife adoption?	5.010	6	0.543
15c. Would you like to receive additional information on volunteering?	5.046	6	0.538
15d. Would you like to receive additional information on honorary research team member?	2.863	6	0.826
15e. Would you like to receive additional information on education scholarship?	5.240	6	0.513
15f. Would you like to receive additional information on internship or job opportunity?	8.880	6	0.181

B. Questions with rating responses	Chi-square value	d.f.	p-value
5a. Importance of time/distance to Hervey Bay	32.400	21	0.117
5b. Importance of ticket price	44.800	24	0.006
5c. Importance of profits supporting research and conservation	25.166	24	0.397
5d. Importance of departure time	42.060	24	0.012
5e. Importance of professional naturalist onboard	39.850	24	0.022
5f. Importance of vessel amenities	29.066	24	0.218
7. Importance of educational program in a whalewatch trip	15.946	24	0.89

Table 4: Response to several questions for a 2012 whalewatching survey in Hervey Bay, Australia, while taking into account gender. Results are expressed as proportions of total respondents and separated by age-class (n = 144).

			Rated medium to high priority when choosing whale watching tour							Additional spending during the tour				Request for additional information					
Gender	Age composition	New Whale Watchers	Travel Time/Distance	Ticket Price	Profits Support Research	Departure Time	Professional Naturalist On Board	Vessel Amenities	Children Education Program	Food and Beverage	Souvenirs	PWF Membership or Donation	Gratuity For Vessel Staff	Membership	Wildlife Adoption	Volunteering	Honorary Research Membership	Support For Education Scholarship	Internship/Employment Opportunity
<i>Male</i>	0.38	0.24	0.24	0.33	0.34	0.27	0.33	0.32	0.29	0.27	0.15	0.06	0.05	0.05	0.03	0.04	0.02	0.01	0.02
<i>Female</i>	0.62	0.32	0.47	0.58	0.58	0.37	0.58	0.51	0.54	0.48	0.34	0.10	0.02	0.06	0.09	0.10	0.02	0.03	0.08
Total	1.00	0.56	0.71	0.92	0.92	0.63	0.91	0.84	0.83	0.75	0.49	0.16	0.07	0.11	0.13	0.14	0.04	0.04	0.10

Table 5: Chi-square test results to determine if gender had an effect on how participants responded to specific questions A) with “yes/no” responses and B) ratings, for a 2012 whalewatching survey in Hervey Bay, Australia ($n = 144$). Significant results are highlighted. Note: d.f. = degree of freedom.

A. Questions with “yes” and “no” responses	Chi-square value	d.f.	p-value
1. Have you ever been on a previous whalewatch trip?	0.794	1	0.373
13a. Would you spend additional money on food and beverage?	0.0896	1	0.765
13b. Would you spend additional money on souvenirs?	2.039	1	0.153
13c. Would you spend additional money on PWF membership?	0.0636	1	0.801
13d. Would you spend additional money on gratuity for vessel staff?	5.091	1	0.024
15a. Would you like to receive additional information on memberships?	0.373	1	0.541
15b. Would you like to receive additional information on wildlife adoption?	0.721	1	0.396
15c. Would you like to receive additional information on volunteering?	0.463	1	0.497
15d. Would you like to receive additional information on honorary research team member?	0.469	1	0.494
15e. Would you like to receive additional information on education scholarship?	0.033	1	0.857
15f. Would you like to receive additional information on internship or job opportunity?	1.577	1	0.209

B. Questions with rating responses	Chi-square value	d.f.	p-value
5a. Importance of time/distance to Hervey Bay	0.656	4	0.957
5b. Importance of ticket price	3.476	4	0.482
5c. Importance of profits supporting research and conservation	4.451	4	0.348
5d. Importance of departure time	6.625	4	0.157
5e. Importance of professional naturalist onboard	3.503	4	0.477
5f. Importance of vessel amenities	3.656	4	0.455
7. Importance of educational program in a whalewatch trip	3.254	4	0.516

Response to questions on the likelihood of recommending the tour and Hervey Bay was largely biased towards repeat and female whalewatchers, which made up 84.0% and 83.8% of positive responses, respectively (Figures 17a and b). Repeat as well as female whalewatchers were the only type of tourists who would spend additional days in the area as a result of the whalewatching tour. Furthermore, repeat whalewatchers were twice as likely to revisit Hervey Bay after taking part in a whalewatch tour than first time whalewatchers (Figure 17a). Finally, similar responses were observed for male and females when asked if they would recommend or repeat the tour (Figure 17b).

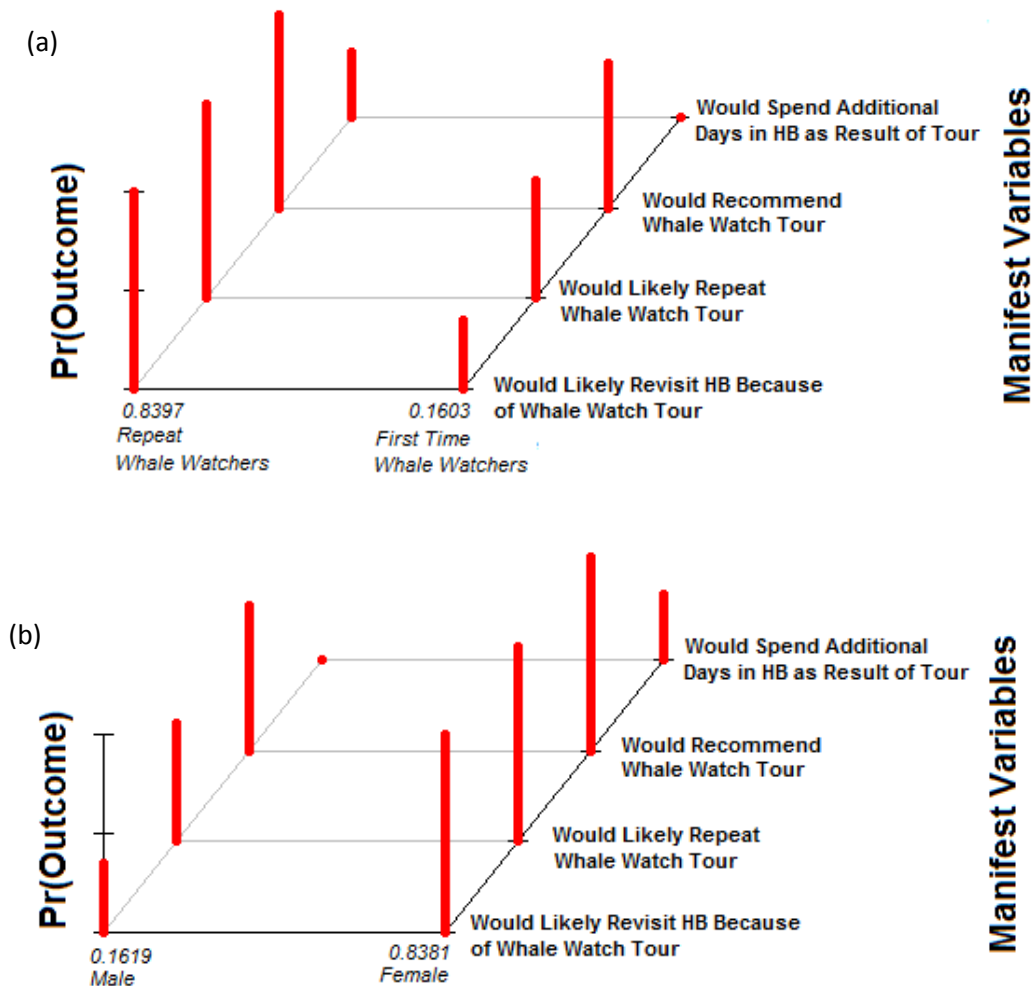


Figure 17: Estimation of two-class basic latent class models for (a) repeat and first time whale watchers and (b) male and female whale watchers. Each group of red bars represents the conditional probabilities, by latent class, of being rated positively by (a) repeat or first time whale watchers and (b) males or females. Taller bars correspond to conditional probabilities closer to 1 of a positive rating.

Discussion

Results of a survey conducted with whalewatchers onboard Pacific Whale Foundation vessel during the 2012 whale season indicated that just over 50% of them took part in their first whalewatch. For repeat whalewatchers, 40% had already participated in a whalewatching trip in Hervey Bay. This could be explained by the fact that the large majority of tourists were Australians, of which 50% were local residents. Participants in this survey were mainly educated, less than 40 years old, and female.

The decision to participate in a whalewatching trip was primarily based on being able to support research and conservation efforts and ticket price. Participants also felt strongly about having an education program for children (83%).

As a result of their whalewatching trip, a large majority of participants were likely to visit Hervey Bay again (90%), do another whalewatch trip (93%), and also recommend it to their friends and family (96%). Finally, although 80% of participants visited Hervey Bay primarily for the opportunity in doing a whalewatching tour, only 25% would stay longer in the area as a result of taking part in this type of trip.

Chi-Square analysis

The significant difference in proportion of ticket price ratings, which ranged from (1 to 5) with age-class is not surprising, with 92 % of individuals considering this of medium to high priority. Rising vacation/travel costs have resulted in consumers becoming more aware of their spending/expenses and therefore ticket prices are a determining factor. Importance of departure time also varied significantly among age classes. It is possible that groups with young children (age class 20-30) may be more likely to get-up early and therefore book an earlier cruise. Furthermore, people may wish to sleep in on their vacation and would prefer a later cruise and may account for the differences observed among departure times. Finally, importance of a trained naturalist also varied significantly among age-class. Interestingly, only individuals aged 40 and below found naturalists to be of little to no importance during a whalewatching tour.

Latent Class analysis

Survey analysis found that repeat whalewatchers were more likely to recommend and revisit Hervey Bay than first time whalewatchers. Given that repeat whalewatchers have already returned to take part in a whalewatching tour these trends are logic. Recommendation of Hervey Bay whalewatching tour was similar among first time and repeat whalewatchers with 73% and 97% positive responses, respectively.

Positive responses for recommendations and revisits were largely biased towards females, representing 84% of those responses in the latent class analysis. Similar responses were observed for recommendation of Hervey Bay whalewatching tour between genders. This suggests that

Pacific Whale Foundation whalewatching tour is well received by new and repeat whalewatchers of both genders.

Conclusion

Hervey Bay has been historically promoted as the “whalewatching capital of the Australia”. However, the region has seen a decline in whalewatching numbers since 1998, when numbers plateaued, which is likely due to increasing regional competition, changing visitor and commercial operator numbers and profiles, and a changing relationship with marine protected area managers (O’Connor *et al.*, 2009, Peake 2011). This survey indicates that tour operators in Hervey Bay would benefit by targeting local female residents, support research and conservation efforts, and offer education programs as well as incentives such as cheaper ticket prices to increase passenger numbers.

Acknowledgments

The authors would like to thank Pacific Whale Foundation and its members for supporting this work. We acknowledge Merrill Kaufman for helping design the initial survey, Andrew Ellis, Cassandra Chronik, Alyssa Firkus for handing out and collecting the survey, Lorraine Holmes for entering the data and Emmanuelle Martinez and Jens Currie for their help with the analysis. Last, but not least, thank to all whalewatch guests who took the time to complete the survey en route to Urangan Boat Harbour.

References

- Linzer, D.A. and Lewis, J.B. (2011). poLCA: An R Package for Polytomous Variable Latent Class Analysis. *Journal of Statistical Software*, 42(10): 1-29. URL <http://www.jstatsoft.org/v42/i10/>.
- Peake, S. (2011) An industry in decline? The evolution of whale-watching tourism in Hervey Bay, Australia. *Tourism in Marine Environments*, Vol 7, Nos ¾, pp. 121-132.
- O’Connor, S., Campbell, R., Cortez, H. and Knowles, T. (2009). *Whale watching worldwide: Tourism numbers, expenditures and expanding economic benefits*. A special report from the International Fund for Animal Welfare, Yarmouth, MA. USA. Prepared by Economists @ Large. 295p.
- R Core Team (2013). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing, Vienna, Austria. ISBN 3-900051-07-0, URL <http://www.R-project.org/>.
- Stoeckl, N., Smith, A., Newsome, D. and Lee, D. (2005). Regional economic dependence on iconic wildlife tourism: case studies of Monkey Mia and Hervey Bay. *Journal of Tourism Studies*, 16: 69-81.