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Perceived onboard passengers' experience: flight attendants' point of view

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Abstract.

BACKGROUND: Cabin research is mostly based on passenger reports. However, it is also important to consider the perceptions of flight attendants as onboard service providers, since they can convey a complementary view shedding light on important aspects related to passenger experience.

OBJECTIVE: This study seeks to analyze flight-attendants' perception regarding passengers' inflight activities and experience.

METHODS: Twenty-eight flight attendants were interviewed on more than twenty-three inflight activities that were extracted from a brainstorming session. A survey was designed based on these activities and was distributed to flight attendants.

RESULTS: Overall, flight attendants perceived the activities 'resting/relaxing', 'sleeping' and 'using the restroom' for comfort as the most important activities to passengers, while activities 'talking to neighbors' and 'thinking and observing' were the least important ones. Interesting was the fact that flight attendants scored satisfaction of some activities higher than passengers.

CONCLUSIONS: Flight attendants had a similar idea on importance of activities of passengers, but they valued some activities as more satisfactory.

Keywords: passenger satisfaction, activities, participatory design, cabin design, passenger experience, flight attendant,

Introduction

Passenger experience is a recent interesting topic in air travel (De Lille et al [1]). Despite the industry focus and attention for airport passenger experience, very little is known about passenger needs in flight [2][3]. It is important to understand these needs since they play an important role in airline profitability. Inflight activities represent measurable components of passenger experience [4]. For airlines to expand their knowledge on what affects the passenger experience, it is mostly common to focus on passengers as users of the cabin and the services. While focusing on passengers for eliciting knowledge is critical in understanding passenger experience, there is an additional way to define and assess passenger experience; this includes eliciting knowledge from flight attendants as subject matter experts. This target group can provide valuable key information on passengers' perceptions of various activities and the overall related experience. This expert knowledge is the result of their regular interactions in the cabin when providing services to passengers. They observe passengers in the cabin, listen to their complaints and comments and provide them with the services they ask for. They can convey a complementary viewpoint on important aspects that affect passenger experience.

Methodology

The study was initiated with a brainstorming session involving 10 human-centered design experts that, through retrospective knowledge elicitation, enabled them to recall twenty-three inflight- activities that they most often performed during their long-haul commercial flights (more than 6 hours)(Table1). Based on these activities, a survey of 10 questions was then designed and submitted to flight attendants. Twenty-seven flight attendants participated in this survey. Respondents were asked to rate on 5-point Likert scales, from "not at all important" to "extremely important" their perception of how important the above-mentioned activities are to passengers. Similarly, they were also asked to rate their perception on how satisfactory these activities are to passengers, ranging from "not at all satisfactory" to "extremely satisfactory". These results were analyzed and were compared with the results from a previous research with passengers on their perception of inflight experience related to various activities [4]. The passenger-perception study consisted of a survey of 26 questions, which were answered by 93 respondents. To check whether there is a significant difference between flight attendants and passengers in perception of passenger experience, Fisher's F-tests for assessing the equality of variances were initially conducted. The tests assess the null hypothesis on whether two normal populations have the same variance. If the variances are equal, we then used the two-sample t-test with equal variances. This way we could

determine if the means of two sets of data are significantly different from each other or not. For the significant F-test results, we used Welch's t-test, or t-test with unequal variances.

Table 1: Twenty-three activities that passengers perform during long-haul flights

1. Resting/Relaxing	
2. Sleeping	13. Walking in the cabin (exercise)
3. Listening to Music	14. Taking care of family/kids
4. Reading books/magazines/e-reader	15. Being physically active/stretching
5. Talking to other groupmates	16. Looking outside of the window
6. Talking to neighbors	17. Egress in/out of the seat
7. Eating/drinking	18. Using the restroom
8. Thinking and observing	19. Listening to flight communication
9. Working on laptop, tablet etc.	20. Boarding
10. Playing, working with cell phone	21. Deboarding
11. Watching in-flight movies	22. Interacting with flight attendant
12. Checking real-time flight info.	23. Adjusting seat features

Results and discussion

Overall, flight attendants perceived activities ‘resting/relaxing’, ‘sleeping’ as well as ‘using the restroom’ as the most important passengers’ activities, while activities ‘talking to neighbors’ and ‘thinking and observing’ were the least important ones (Figure 1). On the other hand, they perceived the highest passenger satisfaction for activities ‘resting/relaxing’ and ‘sleeping’ as well as ‘watching IFE’. Moreover, they think of activities ‘talking to neighbors’ and ‘being physically active’ as the least satisfactory ones to passengers (Figure 2).

The t-test analysis showed that there seems to exist a significant difference between passengers and flight attendants in perception of the importance of activities to passengers. For activities ‘Talking to other groupmates’, ‘Listening to Music’, ‘Looking outside the window’, ‘Working on laptop/ tablet’ and ‘Taking care of family and kids’ a significant difference is observed (Table 2). Flight attendants considered the importance of ‘Talking to other groupmates’ much more than what the passengers themselves perceived. Similarly, they considered the activities ‘Listening to Music’, ‘Working on laptop/ tablet’ and ‘Taking care of family and kids’ of more importance than the passengers themselves. On the other hand, activity ‘Looking outside the window’ is considered less important to passengers compared to flight attendants.

Regarding the perception of satisfaction, the t-test analysis showed more similarity between the two groups of participants. Except for the activity 'Listening to Music', the satisfaction perception is not different in both groups (Table 3). Flight attendants' perception of the satisfaction raised by the activity 'Listening to Music' is higher compared to the passengers' assessment of their satisfaction with the mentioned activities.

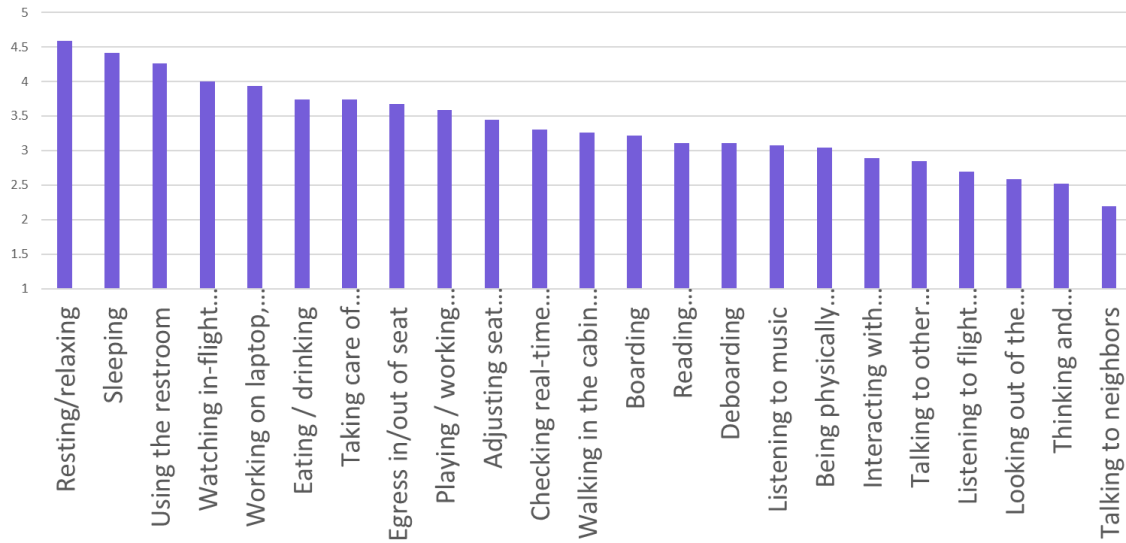


Figure 1: Perceived importance of activities by flight attendants

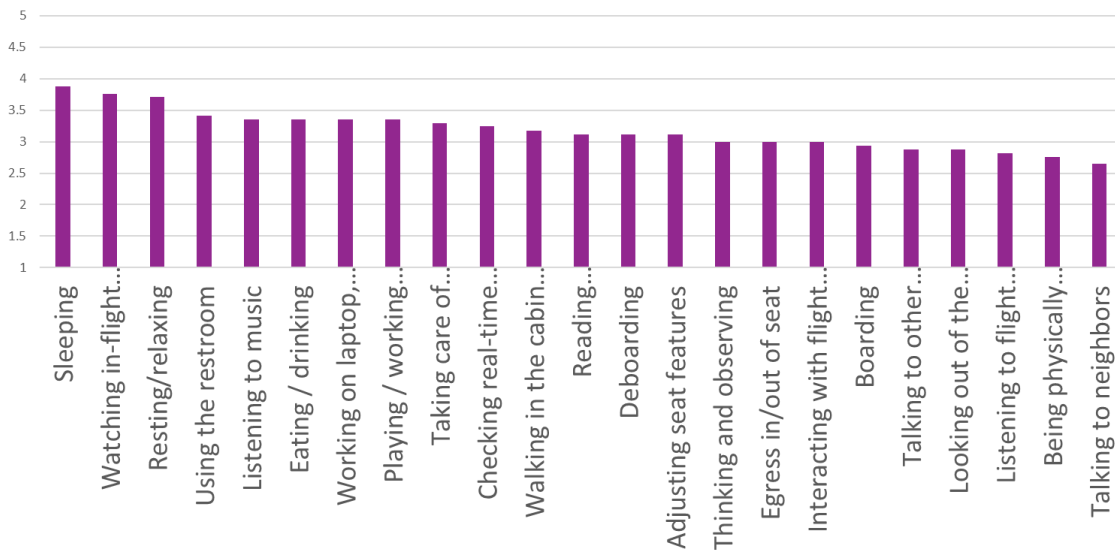


Figure 2: Perceived satisfaction by activities by Flight attendants

Table 2: Two sample t-test for comparison of passenger and Flight attendants on importance of activities

<i>Activities</i>	<i>F- test P-value</i>	<i>t-test P-value</i>	<i>Mean 1*</i>	<i>Mean 2*</i>
Talking to other groupmates	0.0008	0.249	-0.345	-0.148
Listening to Music	0.008	0.921	0.054	0.074
Looking outside of the window	0.033	0	0.436	-0.407
Working on laptop, tablet.	0.035	0.013	0.381	0.925
Taking care of family/kids	0.039	0.898	0.709	0.74
Reading books/ magazines/e-reader	0.052	0.867	0.072	0.111
Egress in/out of the seat	0.053	0.609	0.763	0.666
Walking in the cabin (exercise)	0.146	0.035	0.781	0.259
Checking real-time flight info.	0.155	0.657	0.4	0.296
Playing, working with cell phone	0.197	0.067	0.072	0.592
Watching in-flight movies	0.238	0.082	-0.853	0.053
Resting/Relaxing	0.254	0.073	1.345	1.592
Eating/drinking	0.303	0.086	1.072	0.74
Talking to neighbors	0.386	0.88	-0.781	-0.814
Using the restroom	0.516	0.567	1.363	1.259
Interacting with flight attendant	0.516	0.053	0.309	-0.111
Deboarding	0.566	0.014	0.69	0.111
Sleeping	0.607	0.047	1.072	1.407
Thinking and observing	0.627	0	0.454	-0.481
Being physically active/stretching	0.641	0	0.945	0.037
Adjusting seat features	0.648	0	1.127	0.444
Listening to flight communication	0.906	0.238	0.054	-0.296
Boarding	0.975	0.115	0.618	0.222

1: Passengers 2*: Flight Attendants*

Table 3: Two sample t-test for comparison of passenger and Flight attendants on satisfaction by activities

<i>Activities</i>	<i>F- test P-value</i>	<i>t-test P-value</i>	<i>Mean 1*</i>	<i>Mean 2*</i>
Listening to Music	0.002	0.591	0.254	0.352
Eating/drinking	0.061	0.527	0.2	0.352
Looking outside of the window	0.138	0.192	0.218	-0.117
Talking to other groupmates	0.212	0.317	-0.24	0.73
Talking to neighbors	0.255	0.279	-0.09	-0.352
Reading books/magazines/e-reader	0.312	0.806	0.181	0.117
Playing, working with cell phone	0.343	0.328	0.072	0.352
Thinking and observing	0.368	0.125	-0.108	0.872
Taking care of family/kids	0.434	0.418	0.072	0.294

Working on laptop, tablet etc.	0.477	0.356	-0.755	0.275
Adjusting seat features	0.485	0.244	-0.2	0.117
Sleeping	0.507	0	-0.327	0.882
Deboarding	0.511	0.8	0.181	0.117
Watching in-flight movies	0.581	0.184	-0.771	0.151
Egress in/out of the seat	0.613	0.262	-0.272	0
Boarding	0.713	3.40E-01	0.2	-0.058
Checking real-time flight info.	0.714	0.606	0.363	0.235
Interacting with flight attendant	0.72	0.123	0.327	0
Using the restroom	0.738	0.911	0.381	0.411
Listening to flight communication	0.787	2.99E-01	0.109	-0.176
Being physically active/stretching	0.79	0.808	-0.163	-0.235
Walking in the cabin (exercise)	0.833	0.507	-0.018	0.176
Resting/Relaxing	0.893	0.004	-0.072	0.705

1: Passengers 2*: Flight Attendants*

It seems that resting/relaxing/sleeping is important during a long haul flight. Both flight attendants and passengers experience this as important. Bouwens et al. [5] showed in their study on aircraft interiors that in long-haul (6-12 hours) flights nearly 80% of the passengers want to sleep. Their study indicated that sleeping had the lowest comfort score of the studied activities. The studied activities were: sleeping, being bored (doing nothing), gaming, walking, reading, taking away garbage, watching IFE (in-flight entertainment), listening to music and eating/drinking. This low comfort during sleep is probably caused by the aircraft noise and the upright sitting position. The ideal posture for sleeping in a seat has been described by Stanglmeier et al. [6] but it differs from the current position in economy class seats. However, also neighbours might disturb the sleep when they want to pass or make noise and crew might disturb the sleep by messages or serving food when passengers want to sleep. The paper of Tan et al. [7] affirms that both physiological and psychological discomfort, even stress and health risks appear while sleeping in the aircraft. He and Vink, 2020 [8] show that out of 109 frequent flyers only 7.3% of the participants are able to sleep in the cabin during the cruise phase in a long haul flight. 65% is always between sleep and wakefulness, and 15% is awoken the whole flight. Therefore, the problem still is an issue and it is worthwhile to develop solutions for this issue.

In addition, using the restroom is mentioned earlier as an issue in aircraft interiors. Long queues for the toilet can be unpleasant – a finding confirmed by Ratnakar[9], but hygiene is mentioned as well as a problem [10].

The outcomes of this study seem to be in line with other studies (e.g. Bouwens et al. [5] and Vink et al [10]). The agreement between what passengers report and flight attendants report is not surprising as flight attendants are also passengers in free time or when they have 'flights to their work'. However, the set-up of the research has its limitations. Only 28 flight attendants were questioned and the majority is from the Toronto area. This means that generalization of the results should be done with care and more research is needed, whether this difference between passengers and flight attendants can be found in other areas of the world as well.

Conclusion

This paper studies passenger experience from flight attendants' point of view. Comparing the study to the passengers' opinion, the results from the comparison between the two populations of service providers and end users of the cabin confirm the assumption that airline companies' knowledge about their customers' satisfaction by products and services can mostly be considered reliable. However, this knowledge is less reliable in response to real customers' needs. 'Talking to groupmates, listening to music, working on laptop/ tablet and taking care of family and kids' was overestimated.

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