

ANNEX 7

Task 2 - Report of Analysis of reviews or complains from trampoline park users

1. Introduction

The opinion of users is very important to understand and find problems in the use of a specific service.

Conducting a content analysis of online reviews available in different platforms allows a more detailed analysis of them. The main objective was to reach new information about the current problems in the perspective of the users of the trampoline parks.

2. Selection and Characterization of the Sample

Regarding the trampoline parks selection, based on location criteria, 7 European countries were selected allowing for a greater representativeness and diversity of practices and cultures from different European zones. Thus, the following countries elected were Portugal, Spain, France, Switzerland, Germany, United Kingdom and Denmark. Subsequently, the existing trampoline parks in each country surveyed through an online search based on the Google search engine.

Table 1.

Number of trampoline parks by country

Country	Portugal	Spain	France	Switzerland	Germany	United Kingdom	Denmark
Nº of Parks	6	34	33	9	88	84	15

To fulfil the requirement of analysing reviews of eight different trampoline parks, 6 parks from foreign countries and 2 parks from Portugal were randomly selected (Table 2). Notwithstanding the greater ease of analysis by the common language factor, the inclusion of two parks in

Portuguese territory sample was considered pertinent because, for achieving its objective the study methodologically collects other data in Portugal.

The criterion for inclusion of the selected parks was based on the following requirements: (1) digital platforms been rated and/or commented for at least one year and (2) the sum of comments from digital platforms is over 100 reviews. In cases where the park does not meet the defined criteria, a new randomization is performed.

Table 2.
Sample of trampoline parks in analysis.

Country	Trampoline Park
Portugal	BOUNCE
Portugal	Jumpers
Spain	City Jump (Getafe)
France	Fly Academy Trampoline Park
Switzerland	Skills Park (Bern)
Germany	Airtime (Nuremberg)
United Kingdom	Energi Trampoline Park (Preston)
Denmark	Jump A Lot

In order to get as much information as possible on the main users' complaints, the screening of obtained reviews through official websites (Park Official Website and Facebook Official Page) and generic/informative websites (TripAdvisor and Google), settled on two cumulative criteria:

- Reviews with ratings rated 1, 2, and 3 (on a Likert scale of 1-Very Poor/Don't Recommend 5-Very Good/Recommend);
- Reviews with complaints or negative description about the trampoline parks.

Regarding the characteristics and/or information obtained about the trampoline parks that compose the sample, they were organized on the following criteria (table 3):

- Opening date;
- Location;
- Space area or dimension.

Regarding the evaluation of the users from the parks in analysis, the digital platforms presented 11,411 reviews. Based on previous requests for complaints, 560 comments were extracted (see Annex A).

Table 3.
 Characterization of the eight selected European parks.

	Trampoline Park	Opening date	Location	Space area or dimension
1	Bounce	December 11, 2015	Carnaxide, Portugal	+100 trampolines 3.250m ²
2	Jumpers	March 17, 2018	Porto, Portugal	9 Stations 2000m ²
3	City Jump Getafe	2016	Madrid, Spain	+40 trampolines 1500m ²
4	Fly Academy - Trampoline Park	October, 2017	Courcouronnes, France	>2500m ²
5	Skills Park - Bern	2018	Bern, Switzerland	—
6	Airtime Nuremberg	August 8, 2017	Nürnberg, Germany	4000m ²
7	Energi Trampoline Park Preston	October 17, 2015	Preston PR1 4HZ, United Kingdom	130 Trampolines
8	Jump A Lot	2017	Røddekro, Denmark	4000m ² indoor 10000m ² outdoor

3. Methodology data analysis

On the 560 reviews that constitute the sample, a content analysis was performed following the model proposed by Bardin (1977). The creation of the category system based on the use of the inductive method, in which from the data analysis emerged categories inductively elaborated, and whenever necessary, in sub categories and sub subcategories, and each one was associated with a definition or description.

In order to guarantee the quality, some criteria for the construction of the categories was followed: (1) Exclusivity; (2) Inclusion / exclusion rules; (3) Homogeneity and (4) exhaustivity.

With regard to the corpus, it was segmented by semantic criteria that oscillate between complete sentences or excerpts, and so constituting the registration units. In short, the category system consists of four Categories, eight Subcategories and seven Subcategories (see Annex B).

The reliability of the coding process was ensured by an agreement between coders based on Cohen's Kappa coefficient and an average K of 0.76 (SD = 0.16). Specifically, based on definitions of categories, subcategories and subcategories, an independent researcher asked to code reviews of four of the parks under review (random selection of 50% of the parks under review).

4. Results

In the categorization process 249 registration units were obtained, which in turn were coded into four categories (see Table 4). The results obtained will be further analysed through their dense description and examples of recording units.

Table 4.

Categories, number of parks, number and percentage of registration units.

Categories	Parks (n)	Registration Units	
		f	%
Safety	8	144	58%
Accidents, injuries and diseases	5	29	12%
Hygiene and health	6	53	21%
Others	5	23	9%
Total		249	100%

The obtained registration units mostly report situations or questions related to the users' safety (58%), namely, with the rules of use and safety, the conditions of the equipment, the capacity of the space/trampoline area and the equipment, and the supervision provided in the practice of the activity. In second place, emerge negative assessments related to issues associated with the quality and hygiene of the park's facilities and equipment (21%). With lower incidence are reported situations of accidents or injuries that occurred during the practice of the activity in the park (12%), and other situations that have implications on the practice of the activity (9%), as for example the lack of accessibility or inclusion of more vulnerable audiences.

a. Safety

With regard to security, table 5 identifies the subcategories that characterize the main issues mentioned by users.

Table 5.
Subcategories of Safety, number of parks, number and percentage of registration units.

Subcategories	Parks (n)	Registration Units	
		f	%
Safety and use policy and rules dissemination	6	26	18%
Capacity	7	33	23%
Staff	6	51	35%
Users	4	20	14%
Conditions of equipment's in the bounce area	5	14	10%
Total		144	100%

The reviews obtained refer to a higher percentage of factors inherent to the *Staff* who perform functions in the area of bounce (35%). Specifically, complaints concern inadequate or insufficient supervision (76%) by staff during the activity: “A lot of inattention by some monitors who get together in conversations instead of being mindful of children and suggesting risky exercises for children who need better monitoring” or “Sometimes monitors instead of helping clients take the trampolines to demonstrate their skills (I pay a lot for fun, not for looking at them)”. Also, unable to intervene in emergency situations (24%): “And nobody has deigned to ask for the boy and to ask for help after having bleeding and lose the very disappointing knowledge” or “the members off staff asked if I was ok and one only offering an ice pack (no first aid offered)”.

Regarding the subcategory *Capacity* (23%), the reviews show that users understand the number of people per activity or space as a factor that may compromise the safety of the activity or the park itself. Mostly, these negative user ratings describe a high frequency of users over a certain period of time in the overall area of the trampoline park (82%): "Halle was completely overcrowded (28.12.2017), in my opinion many people were allowed in, there was hardly a vacant spot in the whole hall" or "If they accepted fewer people they would enjoy much more at the same time". Finally, in the jump area (18%), “But a lot of people in the trampoline ring” or “A

lot of people are on the trampoline at the same time, maybe you should reduce the jump quota a bit" (see Annex D).

In the subcategory *Safety and use policy and rules dissemination* (18%), negative reviews highlight the safety policies and safety rules / rules of the respective park. With a higher incidence (50%) there are negative evaluations focused on providing initial information on park safety policies and standards: "I jumped for an hour, so this employee came that I would have to move my socks now immediately otherwise I am not allowed to jump further. I had my own heels, which were accepted at the cash register. Cashier employee, so also totally rude: 'ne she didn't claim, etc.'" or "We booked online and had to fill in the on-site liability statement (unfortunately this was not announced anywhere, but it's not a big problem)".

Then, with little difference of occurrences (46%), negative evaluations refer to the insufficient briefing or deficient provision of indications/rules for the safe practice of the activity: "The explanation of the rules was made on top of the sound system and one of the children in the group could not hear, being immediately accused of being inattentive" or "I had felt a little concerned when I said where do we go for the safety talk and the girl behind the desk just pointed towards the benches. There was a TV screen with a video on a loop just showing a few basic rules". *Exposure of safety rules and warnings* in the different areas of the park proved to be a less mentioned assessment in the reviews obtained (4%) (Annex D).

Notwithstanding the lower incidence, the *Users* subcategory (14%) emphasizes that people consider differences in simultaneously users may compromise the safety on trampoline specifically age or weight: "My son is 5 years old, met 1.10m and weighs 20 kilos, there are 15 of them who are big and fat, what would happen to a child of these physical characteristics falling up to a 5 year old?" and "It's a good place but they should have separate area in the corner for kids under 5/6 because it's risky for under 5s to jump with adults or older kids."

Last but not least, the *Equipment Bounce Conditions* subcategory (10%) refers to situations in which equipment exhibits signs of wear, lack of maintenance and / or broken elements that may compromise the safe practice of the activity: "Really poorly protected trampolines or nothing" and "A few safety concerns that need addressing, there were at least 5 visible springs that I could see, I avoided them but children may not be as aware".

b. Hygiene and health

Regarding the Hygiene and health category, Table 6 identifies the subcategories that characterize the main problems mentioned by users.

With high percentage comes the quality and adequacy of support facilities (49%), where reviews report lack of support facilities or a deficient quality: "The "locker rooms" don't have great conditions", "Lack of showers" or " They should also make a source where you can drink water because it is inadmissible to have to go to the bathroom (or pay the exorbitant prices of coffee) to drink water ".

Table 6.

Subcategories of Hygiene and health, number of parks, number and percentage of registration units.

Subcategories	Parks (n)	Registration Units	
		f	%
Hygiene	4	10	19
Quality and suitability	6	26	49
Space ventilation	5	17	32
Total		53	100%

The second most important reviews referred to lack of Ventilation (32%) and air quality: "No Air conditioned, just a few power blowers but were not enough for the place with an outside temperature around 35°" or "I think the corridors smell bad of course with all the movement and sweat, but better ventilation would be very good".

Finally, on Hygiene (19%), negative evaluations mention the deficient quality of park hygiene, in particular bounce areas or support facilities: "Can't believe how poor such a big establishment are on toilet hygiene" and "Very dirty, I understand that it is constantly in use, but I went in with bright red socks and came out with black ones".

c. Accidents, trauma, injury and disease conditions

112% of users have negative evaluations. Users mention incidents during the practice in the trampoline park that resulted in accidents, injuries or other situations of illness: *“Really good place although sad to say my 3 years old broke his leg yesterday during the toddler session. Just a simple fall onto his knee. Now he faces 4-6wks strict non weight bearing in a full leg cast to, hopefully, avoid surgery”, “My daughter fell and hurt her arm,” and “The place was fine, but my son was accidentally kicked, had haemorrhage and had undergone surgery on a broken nose”*.

d. Others

On category *other* (9%), users refer to other situations or issues other than those already covered in the previous categories, but with impact on the safety of their park. Most reported lack of accessibility to public with reduced mobility: *“It's just a shame because anyone who has a disability or even a family with a pram that wants to watch may struggle without these facilities in place” or “If you were a parent, or grandparent, in a wheelchair you certainly wouldn't have been able to be involved in the experience”*.

5. Discussion of the results

The main complaints concern aspects that influence the user safety, namely rules of use and safety, skill level, supervision and equipment conditions. Specifically, most of the negative reviews highlight problems related to staff performance. In “staff inadequate or insufficient supervision” there were mentions of staff supervision not constant or adequate, and times when proper support or monitoring were not provided. On the other hand, some reviews mention the lack of interpersonal skills of staff, referring to situations in which staff communication was slow and sometimes aggressive, especially in situations where children were present. The lack of supervision can be a risk factor for the occurrence of injuries during the activity, so it is essential that the staff knows how to act in specific situations. In “staff intervention in emergency situations” there were reviews like “the procedures in case of accident or injury were not the most appropriate”, or “the reaction was not the fastest”. First aid training is essential for the effective performance of monitors, preventing further damage in the event of these situations. Then it stands out the capacity of the trampoline parks. The results show that users understand the number of people per activity or space as a factor that may compromise the safety of the

activity or the park itself. But mostly these negative reviews are because of a high frequency of users over a certain period, in the overall area of the trampoline park.

Some of the negative reviews are focused on the transmission of the safety policies and safety rules of the park, specifically, in the way they provided prior information on the park safety policies and standards. However, the negative reviews regarding the provision of the briefing, highlighted important aspects that can make a difference in the practice of the activity. The form and location are not always the most appropriate for the briefing, resulting in failures in the transmission of essential safety rules.

Also, it was highlighted in several reviews that the difference in the age or weight of users that are using the same trampoline simultaneously can compromise the safety of the trampoline's usage. In the safety category, despite having less reviews, some situations were described in which equipment exhibits signs of weakness, lack of maintenance and broken elements that may compromise the safety. Is important to ensure that all equipment is in good condition and obeys the requirements needed to carry out the activity.

The "hygiene and health" of the park was the second category most mentioned in the negative reviews. As referred by consumers it is a physical activity so the park's conditions are important for the health of its users, such as the existence of drinking fountains, number of toilets according to the number of users and changing rooms with showers. On the other hand, it is important that the bounce areas and support facilities have high hygiene quality., Some reviews revealed that lack of hygiene conditions are apparent in the cleanliness of the space, not always the most appropriate and with accumulated dirt. One of these topics was highlighted by the fact that it can affect users' safety during the activity. There was also mention of lack ventilation and bad air quality.

Accidents, trauma, injury, and diseases were the third most mentioned topic in users' negative reviews. The reviews revealed accidents that caused broken members or bruises, and in the worst cases the need to go to the hospital or have surgery. The analysis of reviews led to more information about the body part injured: inferior extremities, upper extremities, trunk/torso (back pain), and face (nose, lips).

At last, there were some reviews that mentioned other negative situations that occurred in the trampoline parks, like the lack of accessibility to the public with reduced mobility. Trampoline parks that allow activities for people with reduced mobility must have in their facilities the

necessary conditions for their accessibility. On the other hand, the existence of common areas (bar, toilets, among others) must also be adapted for different users.

6. Conclusion

The analysis of reviews from trampoline parks users allowed for the understanding their perceptions and opinions regarding the characteristics and operation of the respective parks. On the other hand, negative reviews make it possible to draw insight for future changes in favour of greater safety on trampoline parks.

Aspects related to the park's safety policies and rules are essential to prevent injuries or reduce their probability. The following aspects mentioned by users are considered problematic:

- Staff performance: inadequate and no constant supervision, lack of knowledge for action in case of injuries or emergencies.
 - Have supervision to evaluate the performance of the monitors. Maintain staff knowledge through ongoing training.
- Information on safety policies and park rules: the transmission of information before the purchase of tickets or post-purchase does not always occur, or the information transmitted is not always the clearest for the user. On the other hand, the briefing must take place in appropriate spaces and in such a way that all users can understand the information that is transmitted.
 - Create standard procedures and monitor compliance.
- Rules for equipment usage: simultaneous use of the equipment comprises the safe practice of the activity; and the risk increases with users with physical differences (weight, age).

Although the aspects related to the safety of the park were not so frequent in the users' negative reviews, it is important to consider adequate support facilities in terms of number and good hygiene conditions (drinking fountains, toilets and changing rooms). The cleaning of the equipment and the ventilation of the space are essential factors to ensure an healthy and safe activity.

References

Bardin, L. (1977). *Análise do discurso*. Lisboa: Edições, 70.

Annex A

Table A.

Sample extraction information

N	Trampoline Park	Collection Date	Site	Total Reviews	Reviews Score (Average)	Nº of Reviews Extracted
1	Bounce	26/09/2019	Google	3082	4,4	116
		26/09/2019	TripAdvisor	185	4,5	
		27/09/2019	Facebook	319	4,8	
2	Jumpers	26/09/2019	Google	652	4,5	30
		26/09/2019	TripAdvisor	22	4,5	
		27/09/2019	Facebook	108	4,7	
3	City Jump Getafe	27/09/2019	Google	1051	4,1	104
		27/09/2019	Facebook	65	3,9	
4	Fly Academy - Trampoline Park	30/09/2019	Google	5	5	10
		27/09/2019	TripAdvisor	440	4,6	
		30/09/2019	Facebook	98	4,9	
5	Skills Park - Bern	03/10/2019	Google	280	4,8	15
		03/10/2019	TripAdvisor	124	4,4	
		03/10/2019	Facebook	16	5	
6	Airtime Nuremberg	03/10/2019	Google	2103	4,5	151
		03/10/2019	TripAdvisor	17	4	
		03/10/2019	Facebook	293	4,3	
7	Energi Trampoline Park Preston	21/11/2019	Google	877	4,5	97
		21/11/2019	TripAdvisor	736	4,8	
		21/11/2019	Facebook	175	4,5	
8	Jump A Lot	21/11/2019	Google	427	4,4	37
		21/11/2019	Facebook	336	4,2	

ANEXX B

Table B.

Categories, subcategories, sub-subcategories and their definition.

Category System	Definition
1. Safety	The negative reviews relate to various aspects that influence user safety, namely rules of use and safety, capacity, supervision and equipment conditions.
1.1. Safety and use policy and rules dissemination	The negative reviews focus on aspects related to park safety policy and safety standards/rules
1.1.1. Pre-information	Absence or insufficiency of initial/prior information provided to the customer and/or incongruous information on safety and use rules. This may refer to information provided on site, by email or on the website.
1.1.2. Briefing	Insufficient or deficient explanation before the start of the activity/bouncing, orally or via video, about the rules and other safety indications to fulfil during the activity and/or permanence in space.
1.1.3. Exposure of rules and warnings	Insufficient exposure and display of safety rules, warnings and policy in different areas of the park.
1.2. Capacity	The negative reviews related to the capacity and number of users.
1.2.1. Capacity per equipment	The number of users for equipment or trampoline is higher than that recommended by the park, or considered high.
1.2.2. Capacity per space	The number of users in the park is higher than that recommended by the park, or considered high.
1.3. Staff	The negative reviews are relate to factors inherent to staff performing functions in the bouncing area (that accompanying users during the activity).
1.3.1. Supervision	The supervision in the bouncing area, and also the number of staff per equipment, is reported is insufficient or misfit.
1.3.2. Intervention in case of injury/illness/emergency	The staff team does not present the skills to intervene in emergency situations, such as in case of fall or injury of the user.

1.4. Users	The negative reviews are relate to the differences between users' characteristics - for example age, height, weight and/or skill (beginner or technical) - that can compromise safety in the use of the trampoline.
1.5. Conditions of equipment's in the bounce area	The equipment shows signs of wear and lack of maintenance and/or broken elements. Equipment is considered all existing elements and structures in the bouncing area, namely nets, among other protective elements, trampolines, beacons, ...
2. Accidents, injuries and diseases	Reports or mentions of accidents and/or injuries that occurred in the practice of activity in the park, as well as other situations of illness.
3. Hygiene and health	The negative reviews are relate to the quality and hygiene of the park's support facilities and equipment.
3.1. Hygiene	The bouncing areas or support facilities have deficient hygiene conditions. Support facilities include areas to support the basic needs of the customer (e.g. bathrooms or toilets). Coffees and dining areas are excluded from these facilities.
3.2. Quality and adequacy	The support facilities have a deficient quality or are insufficient (e.g., lack of drinking fountains, insistence of showers). Support facilities include areas to support the basic needs of the customer (e.g. bathrooms or toilets). Coffees and dining areas are excluded from these facilities.
3.3. Space ventilation	The facilities do not present sufficient ventilation and quality impairing the practice of activity and permanence in space.
4. Others	Other comments relevant to the safety, hygiene and health of the client and/or accessibility or inclusion of more vulnerable publics (e.g. management/organization issues that may have an impact on safety).

Annex C

Table C.
Resume of the results

Categories	Registration Units (Total)	Subcategories	f	Sub-subcategories	f
Safety	144	Safety and use policy and rules dissemination	26	Pre-information	13
				Briefing	12
				Exposure of rules and warnings	1
		Capacity	33	Capacity per equipment	6
				Capacity per space	27
		Staff	51	Supervision	39
				Intervention in case of accident/illness/emergency	12
		Users	20		
		Condition of equipment's in the bounce area	14		
		Accidents, injuries and diseases	29		
Hygiene and health	53	Hygiene	10		
		Quality and adequacy	26		
		Space ventilation	17		
Others	23				

Annex D

Table D.

Results of subcategories of subcategory Safety and use policy and rules dissemination (n = 26; 18%)

Sub-subcategories	Parks (n)	Registration Units	
		f	%
Pre-information	4	13	50%
Briefing	4	12	46%
Exposure of rules and warnings	1	1	4%
Total		26	100%

Table E.

Results of subcategories of subcategory Capacity (n=33; 23%)

Sub-subcategories	Parks (n)	Registration Units	
		f	%
Capacity per equipment	4	6	18%
Capacity per space	6	27	82%
Total		33	100%

Table F.

Results of subcategories of subcategory Staff (n=51; 35%)

Sub-subcategories	Parks (n)	Registration Units	
		f	%
Supervision	6	39	76%
Intervention in case of accident/illness/emergency	3	12	24%
Total		51	100%