

**AN EXPLORATORY SURVEY OF CUSTOMER SATISFACTION  
WITH PARTICULAR REFERENCE TO THE SERVICES  
PROVIDED BY THE MARITIME, AIR AND BORDER HEALTH  
OFFICES (USMAF) AND HEALTH CARE SERVICES FOR  
NAVIGATING, MARITIME AND CIVIL AVIATION PERSONNEL  
(SASN)**

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## **1. Introduction**

The topic of Customer Satisfaction relevant to Public Administration and the related detection and evaluation systems has been the subject of political and economic debates for years. Researchers, rulers and the public administration itself have tried to determine those factors that assume a crucial role in the planning and development of systems capable of perfecting and optimising the productive levels of work and the effectiveness of its action, with the aim of achieving a high level of citizen-user satisfaction. Customer satisfaction is pertinent to any business reality, it follows that in recent years its significance has also grown in the public sector. Public institutions have historically had a predominantly bureaucratic-administrative character, accompanied by a lack of aptitude in terms of effectiveness, efficiency and quality, which has contributed to penalising the image of the entire sector. However, the public sector has long been considered unproductive and inefficient, probably due to the lack of a policy based on a culture capable of introducing management tools and techniques characterised by a high level of innovation.

The situation, however, showed signs of change and improvement from the mid-1980s onwards, a period in which the first real attempts were made to break out of the deficit circuit in which the public system was now embedded. This was made possible by a gradual implementation of management plans, innovative operating models and tools closer to a marketing-oriented logic.

Certainly, the radical evolutions and multiple regulatory changes that have taken place over the last fifteen years have been able to bring about an essential change in the *modus operandi* of the Public Administration. First of all, the relationship between the State and the citizen has changed; where the administration is at the service of the entire community, which is obliged to guarantee services that meet the expectations of citizens, who show themselves to be particularly attentive and demanding with regard to the activities carried out by the public sector. In conjunction with what has just been asserted, starting in the

2000s, the way was taken in Italy to change and modernise the Public Administration by issuing the “Directive on the detection of quality perceived by citizens”, aimed at perfecting and strengthening communication and the relationship between administration and citizens. The aforementioned directive has placed very precise recommendations in favour of the institutional set-up to ensure that Customer Satisfaction can lend itself to “defining new ways of providing services or interventions to improve existing ones, sizing their technical characteristics to the actual needs of citizens and businesses” and to “favour the involvement and participation of the user in the phases of access, use and evaluation of the service, so as to strengthen the relationship of trust between administration and citizen”.

## **2. The conceptualization of Customer Satisfaction in the duality of cognitive and affective characters, a holistic and prospective view**

The etymology of the term “satisfaction” derives from the Latin: *satis* (enough) *facio* (to do); a word intended to interpret that effort made to be able to fulfil something and thus achieve something adequate (Tjiptono and Gregorius, 2011). In logical continuity of what has just been asserted, some authors claim that satisfaction is the ability to meet customers’ needs (Wijaya, 2011); (Yang and Fang, 2004); (Au *et al.*, 2008). Satisfaction is that process of evaluation by the user (Bitner as quoted in Akbar and Parvez, 2009) whereby perceptions, liking or dissatisfaction (Kotler and Keller 2006) can be compared with the expectation expected by customers to use goods or enjoy services (Parasuraman as quoted in Dib and Alnazer, 2013).

Although theoretical studies on the subject have attempted to provide various definitions of the concept of customer satisfaction, to date there has not been one notion that shows an unambiguous and agreed explanation (Mok *et al.*, 2017). Reviewing the literature, the construct of Customer Satisfaction appears to be a multidimensional concept, which is why it is analysed from both a marketing, psychological and behavioural perspective. Lin (2019) defines consumer satisfaction with a psychological state resulting from the experience related to purchase and/or consumption. Yakhlef (2015) asserts that the customer experience plays a significant role in determining a high level of satisfaction as well as business success since the customer will continue to choose the same service offered. It follows that the company will maximise its efforts to increase product quality in order to make the customer satisfied. Thus, the level of satisfaction will influence the consumer’s future choices (Chen and Lin, 2015).

Chahal and Dutta, (2015) emphasise that user satisfaction can be defined as that judgement or evaluation pertaining to a given service and the relative cost incurred to enjoy it, as well as the customer's perception of pleasure or disappointment resulting from the evaluation of their expectations and perceived performance (Leninkumar, 2019). From this perspective, expectations take the form of those guidelines by which the customer evaluates the product, which is why the level of satisfaction is not merely dependent on the good or service itself, but is also conditioned by previous experience. Therefore, it should be emphasised that the level of satisfaction is not limited to the mere evaluation of the product, but rather includes the sacrifices the consumer has made in order to benefit from a given good or service and the associated expectations of it. In addition, the literature analysis carried out shows that satisfaction is described as a cognitive construct, i.e. as that outcome produced by an evaluation process in which reason has a conspicuous predominance.

Based on the approach of Angelova and Zekiri (2011); Ali *et al.* (2015), argue that service quality is a key element in determining the level of customer satisfaction. Therefore, Gupta (2014) states that in order for a high level of customer satisfaction to be achieved, any private or public organisation must provide services that are characterised by a high level of quality. Oliver's (2010) studies suggest that goods and services can be conceived as "satisfactory" if they are able to meet users' expectations.

### 3. Analysis of the Context of the Study

The aim of this research work is to examine the level of satisfaction actually perceived by users of the services provided by the Offices of Maritime, Air and Frontier Health (USMAF) and Services for the Health Care of Seagoing, Maritime and Civil Aviation Personnel (SASN). The survey has moved within the context of the Ministry of Health; the latter, in order to fulfil its functions of public health protection, benefits from the operational contribution of the various decentralised structures, which, operating according to their own technical specificities, carry out significant activities on the national territory aimed at the supervision and control of the various sectors of competence.

In 2015, following the issuance of the Ministry of Health Decree of 8 April 2015, a different and renewed division of the competences and relative functions of the central and peripheral Offices was achieved. The Offices of Maritime, Air and Frontier Health (USMAF), which were previously managed from a technical point of view by the General Directorate for Health Prevention, following this decree have been merged with the General Directorate for Health Professions and Human

Resources of the National Health Service, thus arriving at a new name, i.e. Offices of Maritime, Air and Frontier Health and Territorial Services for the Health Care of Seagoing Personnel (USMAF-SASN). It is necessary to specify that in addition to the merging of responsibilities, a new territorial structure of the USMAF-SASN has been designed, with a reduction in the number of Management Offices from 15 to 8. The new entity USMAF-SASN therefore exercises all the health, medico-legal and welfare functions previously entrusted to the two separate peripheral offices of the Ministry of Health. The Ministry of Health, through the Territorial Services for the Health Care of Seagoing, Maritime and Civil Aviation Personnel (SASN), guarantees health care, in Italy and abroad, to both seagoing personnel, in navigation or boarding activities, if they are ashore for the relevant rest or compensatory rest periods, or in the case of leave of absence from boarding, provided that they are employed by the ship-owner. The healthcare services provided include general and specialist medicine, as well as pharmaceutical assistance. In addition to examinations, clinical examinations of instrumental diagnostics and, in certain circumstances, minor surgical operations are carried out in the SASN. Assistance to seafarers also includes rehabilitation, dental examinations and therapies, hydrothermal cures, phonetic rehabilitation, and eyeglasses; these services are mainly provided through third-party health facilities that have an agreement with the Ministry of Health. The USMAFs, located throughout the national territory, operate mainly in the main ports, airports and border points and perform tasks related to international prophylaxis and the supervision and control of passengers, goods and vehicles crossing the border. However, some services are also directed at citizens and travellers who can use the USMAF outpatient clinics in order to obtain certifications, obtain general indications on travel medicine and specific information on preventive vaccinations.

#### **4. The framework of the survey and methodological approach: the survey and analysis of results**

The Customer Satisfaction surveys carried out in this research followed a logical-temporal flow articulated in various phases, which were anticipated by several focus groups within the various offices located throughout the Sicilian regional territory (Augusta, Catania, Mazza del Vallo, Messina, Siracusa, Trapani, Palermo and Porto Empedocle). The purpose of the focus groups was to take stock of the organization and services offered and to allow the definition of the company organization chart. Secondly, these meetings made it possible to define in detail the satisfaction factors to be detected and analyzed for the purposes of the survey. The empirical analysis was carried out by means of a questionnaire, using

the face-to-face interview method. The satisfaction questionnaire was filled in by the user immediately after he/she had used the service. This made it possible to arrive at a perceptive assessment and at the same time reduce the time required for data collection. The act preparatory to the administration of the questionnaire was the obtaining of consent to the processing of data, pointing out the regulations of the GDPR - General Data Protection Regulation, (EU/2016/679). This act made it possible to receive consent and process the data as well as eliminate the bias effect associated with a nominative analysis. The questionnaire that was adopted for the Customer Satisfaction survey of the USMAF-SASN offices was structured in accordance with the Servqual methodology (Parasuraman *et al.*, 1988, 1991), regarding each individual aspect of the service to be examined. The questions were structured in a fairly simple and elementary form, precisely for this purpose specific, concise, unambiguous phrases were used and the use of double negatives was avoided. This made it possible to minimize misinterpretation of the question by the respondent. Therefore, the estimated average time for the complete completion of the questionnaire was approximately 10 minutes.

The survey concerning the analysis of the quality of services provided by the USMAF-SASN offices and the relative level of user satisfaction was carried out from July 2020 to July 2021, where 1,500 questionnaires were administered in the various Sicilian offices. The response rate was 65%, for a total of 55% usable questionnaires. In turn, these were made valid through a completeness and consistency check in accordance with the Servqual model. In detail, questionnaires that were complete or had 80% of valid answers were considered valid for the survey. A total of 585 were considered validly completed. The sampling criterion provided for the administration of the questionnaires to a number of users equal to 10% of the average turnout for the time span of Q2 2021 (April-June). Specifically, 160 questionnaires were administered in Augusta, 230 and 150 in Catania and Mazara del Vallo respectively; 170, 190 and 200 questionnaires were administered in Messina, Syracuse and Trapani, depending on the number of users in the period under consideration. In Palermo and Porto Empedocle, 250 and 150 users were interviewed respectively. The total number of questionnaires administered was highly significant, as it made it possible to carry out a general study on all the services. They were broken down as shown in Table 1.

Figure 1 is the result obtained in the first question of the questionnaire, in which respondents were asked about their level of satisfaction regarding waiting times, in terms of days or hours elapsing between the request for a service and its performance. Again, with reference to the territorial breakdown, it was found that waiting times were very satisfactory for users. Observing the Figure in detail, it can be seen that a higher percentage of satisfaction derives from the users who used the services provided in the districts of Palermo and Syracuse with a percentage of

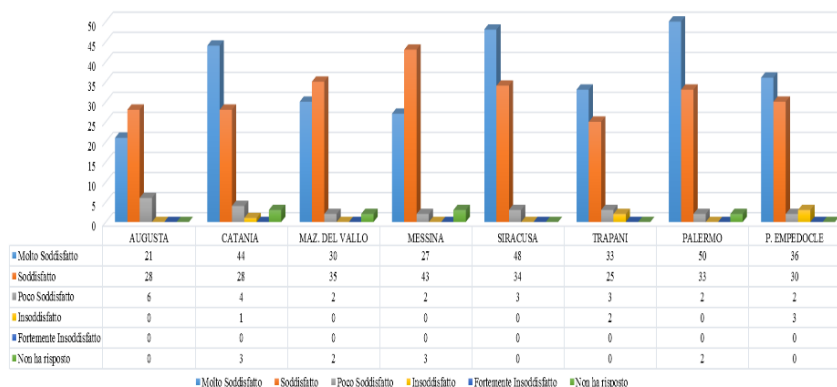
58% and 57% respectively, where the respondents attributed a maximum score of 5. Again, within the aforementioned territorial districts, the users who expressed a rating of 4 were 37% and 40%, with only 2% and 3% declaring that they were "not very satisfied" with this characteristic. In detail, in the questionnaires administered in Palermo, 2% did not answer this question. Catania, Trapani and Porto Empedocle, according to the number of questionnaires administered, 55%; 52% and 50% of users indicated that they were "very satisfied" with the waiting time, and 35%, 40% and 43% stated that they were "satisfied" for this reason in the questionnaire they gave a score of 4.

**Table 1** - *Questionnaires submitted referring to the territorial district.*

<i>Site</i>	<i>N. questionnaires</i>	<i>N. of answered questionnaires</i>	<i>N. of validity questionnaires</i>
<i>Augusta</i>	160	88	55
<i>Catania</i>	230	128	80
<i>Mazara del Vallo</i>	150	111	69
<i>Messina</i>	170	114	75
<i>Siracusa</i>	190	110	85
<i>Trapani</i>	200	126	63
<i>Palermo</i>	250	190	87
<i>Porto Empedocle</i>	150	108	71
<b>Total</b>	1500	975	585

*Source: own elaboration*

Compared to the territorial units of Palermo and Syracuse, in the offices of Catania, Trapani and Porto Empedocle there was a higher percentage of users who assigned a score of 3, i.e. 5.5%, 4% and 3% expressed that they were "not very satisfied" with this factor. Of the respondents from the Catania offices, 3% did not answer this question. With regard to the efficiency times in the districts of Mazara del Vallo, Augusta and Messina from Chart 4.5 it can be seen that in the aforementioned workplaces there is a lower percentage of users who claimed to be "very satisfied", with a percentage of 43.5%, 38% and 36%. Compared to Catania and Palermo, in Mazara del Vallo, Augusta and Messina, there is a greater number of respondents who gave a rating of 4. In percentage terms, they represent 57%, 52% and 50% of the sample surveyed. Analysing the data in percentage terms with regard to non-respondents, it was deduced that Messina and Mazara del Vallo recorded higher percentages compared to the other territorial units with values corresponding to 4.2% and 3.7%. Concerning the level of satisfaction related to the quality of timing, a percentage of 1%, 3% and 4% of users complaining about this aspect was found, attributing a score of 2.

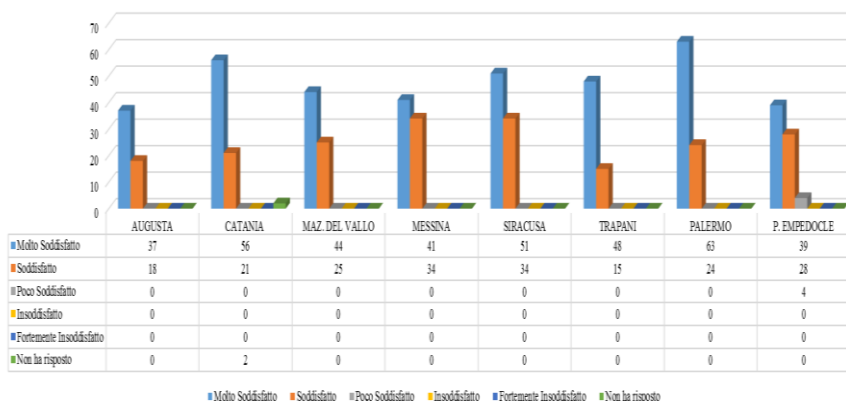
**Figure 1** - Ask ed about the level of satisfaction due to the waiting time of the service.

Source: own elaboration.

The second question of the questionnaire was aimed at finding out the level of satisfaction of the users regarding the professionalism of the employees. Figure 2 shows overall that there was a greater preponderance of users who expressed that they were “very satisfied” compared to the first question. Of the total number of respondents (585), 64.7%, or 379 of them gave the maximum score of 5 concerning the professionalism of the staff. 34%, or 199 of the respondents gave this characteristic a score of 4 out of 5 indicating that they were “satisfied”. Only a small percentage of the overall total, i.e., 0.68% registered in Porto Empedocle, stated that they were “not very satisfied”. With regard to the above-mentioned district, out of 71 respondents, only 4 out of 71, i.e., 5%, gave a rating of 3 out of 5, while 0.51% of respondents gave no rating in the Catania district. It can be seen from Figure 4.6 that there were no respondents who stated that they were “dissatisfied” with this aspect. Analysing the data at a territorial level and in proportion to the number of questionnaires administered, a higher percentage of “very satisfied” users was found in the districts of Trapani and Palermo, which had 75% and 72% respectively, while 25% and 28% of the respondents in the same territorial offices declared that they were 'satisfied'. It was also noted that none of the respondents in the aforementioned territorial units refused to answer this question. The other territorial units recorded lower but still very positive percentages. In terms of percentages, Catania, Augusta, Mazara del Vallo and Syracuse recorded percentages that differed little from each other, again depending on the number of users interviewed per territorial unit. 69%, 67%, 63% and 61% of the above-mentioned geographical areas stated that they were “very satisfied” with the professionalism of the personnel in charge, lower percentages emerged from Messina and Porto Empedocle, which recorded the same percentage of 55%. In

absolute terms, the highest score on the metric scale used in the questionnaire was obtained in the offices of Messina and Porto Empedocle with values of 41 and 39 respectively.

**Figure 2** – Asked regarding satisfaction with the professionalism of the employees.



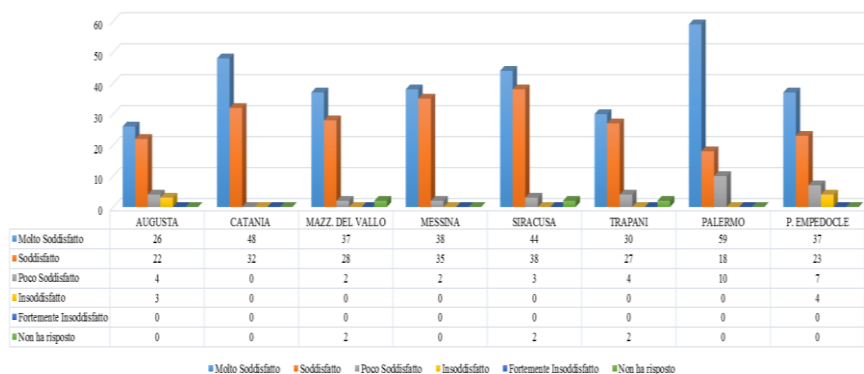
Source: own elaboration.

Respondents were asked to indicate their level of satisfaction in relation to different aspects of the quality of the information obtained. Specifically, they were asked to rate the ease with which they obtained the information, their degree of clarity and the accuracy of the information received. The respondents who were “very satisfied” with this requirement, out of a total of 585 valid questionnaires, amounted to 54.52%, or 319 users; while 38.11% gave a rating of 4 out of 5.

Figure 3 shows a percentage of users equal to 1.19% out of the overall total, who complained of a low level of satisfaction with the quality of the information received; but we also note a higher percentage of individuals who chose not to answer this question. The district that showed a higher number of users who declared to be “very satisfied” with the quality of the information received was mainly Palermo followed by Catania and Mazara del Vallo, with percentage values of 67%, 59% and 53% respectively. This was followed by Porto Empedocle, Messina; Syracuse and Trapani with 52%, 51% and 47%. It was noted that Palermo was the territorial unit that also recorded the highest number of “dissatisfied” users, totalling 10 out of 71, while Porto Empedocle and Augusta showed users who declared to be “dissatisfied”, in detail 3 out of 55 for Augusta and 4 out of 71 for Porto Empedocle.



**Figure 3** – Ask about satisfaction with the quality of the information obtained.



Source: own elaboration.

The fourth item of the questionnaire was aimed at surveying the courtesy of the staff in charge. In detail, users were asked to rate the helpfulness of the staff members. By helpfulness, we mean the ways and manners in which the staff members related to users, their ability and attitude to understand the needs of citizens and empathy. To this question, the answers of the interviewees registered fairly high percentages both on the overall total and also at the level of the various territorial articulations. It is possible to observe how the different judgements attributed to this feature of the service were predominantly positive in all the territorial districts. The evaluations of this dimension were observed individually and it was found that the judgements on it did not deviate much from the overall percentage distribution. The variations, in turn minimal, relate to the weighting of the answers corresponding to the different grades of the metric scale used, i.e. from “very satisfied” to “satisfied”.

**Figure 4** – Level of satisfaction depending on the degree of courtesy of the staff.



Source: own elaboration.

## **5. Conclusion**

After careful analysis of the data, it was found that the issue of waiting times is generally considered by citizens to be the main problem in the public health service. It is evident that this has emerged as one of the most salient aspects in the process of assessing user satisfaction, the interpretation of which will make it possible to define possible corrective actions and improvement interventions, which can be implemented by healthcare institutions and managers in order to refine and enhance their respective relationship with the user from a satisfaction perspective derived from the healthcare service. Specifically, being able to identify and address the emotions of the users of health services related to the characteristic of waiting time, for the USMAF-SASN department is configured as an important opportunity to create added value to the service experience, thus increasing satisfaction and perception of quality, with a view to safeguarding the rights to health, solidarity, equal access and adequacy of the services rendered. The results that emerged from the survey can be translated into meaningful and useful information for managers in a continuous improvement perspective. The results of this survey offered different and new research perspectives on several fronts. In fact, in order for the survey of service quality and the relative satisfaction of the citizen-user to give rise to a truly useful and effective flow of information, it is appropriate to repeat this type of survey over time within the same public health organisation. In this way, it will be possible to monitor the evolution of the level of quality and perceived satisfaction or its variations resulting from changes in the services offered.

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### SUMMARY

The analysis of Customer Satisfaction as permitted to determine and monitor the perceptions of users, to identify the quality of service and health care provided by the Offices of USMAF-SASN of the Sicily region and finally to determine the strengths and weaknesses of the department under study. The paper sets out the survey carried out at the different territorial districts present within the said region. This research was conducted from July 2020 to July 2021 through the administration of a special questionnaire through the face-to-face to a random sample of 1500 users. The aspects analysed were: waiting times, the professionalism of the staff, the quality of the information received and the courtesy of the operators. The survey recorded a generally high level of user satisfaction, noting in more detail that the professionalism and courtesy of staff were indicated as the drivers of the level of quality of services rendered by this department, while waiting times and quality of information had lower averages than those related to the above dimensions.

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