HEALTH CARE MANAGEMENT

Involving medical students in re-orienting health services: a photovoice study

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Keywords

Reorienting health services • Health promotion • Photovoice • Qualitative research • Medical education.

Summary

Introduction. *Healthcare reorientation aims for health services focused not exclusively on diseases but also on prevention and health promotion. The implementation depends strongly on professionals' willingness to actively participate in the reorientation. An effective strategy to boost reorientation is to reorient education and role definition of future professionals. This paper examines whether photovoice can be a suitable method to i) increase future health professionals' awareness of users' needs and expectations; and ii) enable a process of critical reflection on role definition and health services organisation.*

Methods. *One hundred and seventy-two medical students participated in the photovoice project. Participants were asked to produce one photo combined with a caption, responding to a pre-identified question: "What is, in your opinion, the main aspect affecting users' satisfaction/dissatisfaction in a healthcare facility?". Participants discussed their photos in group discussions (n = 16) and participated in data analysis sessions (n = 4).*

Results. *Participants' contributions revolved around how services were delivered (e.g., kindness, accessibility, attention to additional needs) rather than the service provided. The students showed their empathic side and proposed smart and inclusive solutions to improve overall users' experience.*

Conclusions. *This study demonstrated the value of using photovoice to reach medical students and to integrate health promotion into their professional identities. The photovoice process, teamwork, and discussions opened a breach into traditional thinking regarding aspects of healthcare services that are taken for granted or are overlooked. Furthermore, participants' proposals often implied a change in the behaviour of professionals – their future selves – towards patients and low-cost improvements of organisational practices.*

Introduction

The Ottawa Charter for health promotion [1] stated the urgency to reorient health services. This call for action is still pressing due to the numerous challenges of the health system, such as changes in health care needs relating to demographics (*e.g.*, chronic diseases, malnutrition, *etc*.), migrations, decreases in resources, pandemics, changing social values, and medicine and technology evolution [2]. The reorientation aims for health services focused not exclusively on illness and diseases but also disease prevention and health promotion. In response to these needs, the World Health Organisation (WHO) created the Health Promoting Hospitals (HPH) project and established the HPHs network, relying on the central role of hospitals in advocating for health promotion [1]. Although the need for change in the health services approach to users is recognized, the transition still needs to be broadly implemented [1].

The Charter identifies the responsibility for health promotion in health services as shared among individuals, community groups, health professionals, health service institutions and governments. It also acknowledges the importance of paying attention to health research and changes in professional education and training for a refocus on the needs of the individual seen as a whole person [1]. Evelyne De Leeuw (2009) affirms that hospitals are like other professional bureaucracies, with operating procedures that maintain the organisation's integrity – "but based on tradition, historical fact, belief system and some degree of cultural bias (and not on any salutogenic principle), the health care institution works towards a continuity of work, not continuity of care" [3]. Wieczorek et al. (2015) highlighted how health promotion, aiming for more client-oriented healthcare services, has used organisational change strategies primarily applied in business organisations [4]. This approach, however, fails to recognize the nature of hospitals as 'professional organisations'. This is described by Wieczorek et al. (2015) as expert-driven, skill-oriented, and based on the delicate interaction between professionals and users/patients, difficult to monitor and supervise by healthcare management [4]. Unfortunately, a significant impediment to health promotion implementation is identified in the unwillingness of professionals to make the approach their own in standard routines with patients [4-6]. It is clear that any top-down decision or attempt to guide and control the application of health promotion approaches is hardly effective due to professional autonomy to decide how and when to engage with reorientation

attempts [4]. The implementation is therefore proven to be strongly influenced by the autonomy of professionals and by their willingness to actively participate in the reorientation, which is an important step towards a sustainable change [8].

The field of health promotion has adopted the concept of salutogenesis by Aaron Antonovsky as a guide theory: the sense of coherence (SOC), shaped by life experiences, determines individuals' movement on the health ease/disease continuum, mobilising resources to cope with life stressors [9]. Salutogenesis and SOC construct can be integrated indirectly into healthcare by health promotion re-orientation [10]. Salutogenesis has been developed in opposition to the pathogenic paradigm, namely, a disease-oriented approach primarily followed by healthcare [10]. Applying salutogenesis to healthcare introduces a positive-oriented approach, which limits the disease-oriented one, complementing it in everyday practice and research and unlocking the potential of health care to be more preventive, protective, and promotive of positive health [10]. However, Bauer et al. (2020) highlighted the need for advancement of the overall salutogenic model of health [11]. In their position paper, they point out how extending the salutogenic model of health, with an additional positive continuum and a path of positive health development, will support health promotion researchers and practitioners in focusing on positive aspects of health experience [11]. Whatever their title, health promotion practitioners should act accountably, share best practices, and uphold the principles of the Ottawa Charter for Health Promotion [1]. The International Union for Health Promotion and Education (IUHPE) aims to promote quality assurance in health promotion practice, education, and training [12]. Promoting partnerships among professionals who agree on the international definition of health promotion could maximise the best use of resources in meeting shared goals [12]. Despite the efforts of the health promotion community, it is important to note that there is still little evidence on specific training paths to form specialised health promotion practitioners in Europe.

How can we face the necessity of integrating health promotion in professionals' identities and values other than in their knowledge? Different strategies could be adopted for health promotion integration in professionals' routines. This includes their direct involvement in the process of creation and implementation of the programs (developing programs that match professionals' practices), the presentation of changes as opportunities for professional improvement (career opportunities or enhancement of professional status), and the harmonization between the program and professionals' role definition (identities, values, knowledge) [4]. An important aspect often overlooked is education and role definition of future professionals. Worldwide, health professionals' education usually consists of advanced university-based lessons and practical training; the latter is crucial for applying abstract knowledge to actual clinical cases [3-11]. This theoretical-practical training approach should also be applied to health promotion concepts, but unfortunately, professional education still needs to catch up with the modern challenges that healthcare services are facing [14]. The reorientation of health services cannot be separated from the reorientation of the university education of future professionals, otherwise graduates will be ill-equipped for the long-term goals of health promotion. Wieczorek et al. (2015) showed that hospitals' reorientation might often be unsuccessful due to organisational change programs that do not reflect professionals' identities, values, and knowledge [4]. A response strategy could be the essential mix of advanced education and practical training addressed to undergraduates. Reaching young professionals during education while they are still developing their professional identities could be an effective and low-cost strategy. It may boost health promotion reorientation and critical reflection "from within," making students familiar with health promotion values, goals, and applications [15].

Following these considerations, we introduced the visual participatory method 'photovoice' to examine users' satisfaction/dissatisfaction in healthcare facilities. Photovoice is a community-based participatory research (CBPR) method originally developed by Wang & Burris in 1997 [16]. It focuses on individual and community assets, co-creation of knowledge, community building, and individual and community empowerment through a specific photographic technique [14-17]. Photovoice is grounded in the approach promulgated by Paulo Freire [13, 19] consisting of education for critical consciousness. It is conceived as an essential tool for people to reflect on their community and its intrinsic contradictions through the visual image [22]. Following Freire's purpose to stimulate individuals to discover and create their own learning through doing, photovoice encourages common discussions on the needs of the community and spurs the participants to intervene to resolve the critical issues identified [16]. The CBPR approach to photography turns the camera into a resource and images into tools for social change [16]. The mean is easy to use, and the language of images is universally understandable and capable of conveying and transmitting new ideas and perspectives that otherwise could stay unheard. Photovoice has proven to be a very flexible method and can be adapted to specific objectives, different groups and communities and distinct public health needs [14, 15, 20-23].

Health professionals' views on what users value the most could be unconsciously biassed by their role. Critical reflection and empathy are two essential attributes enabling professionals to understand the lived reality of healthcare users. Encouraging current and future health professionals to reflect on these attributes by using visual participatory methods might stimulate them to respond to users' needs and participate actively and willingly in reorientation.

Study aims

By adopting a CBPR approach, we actively engaged a group of sixth-year medical school students to: (i) self-

reflect on their practice as future health professionals, (ii) communicate their views on what makes a user satisfied with a healthcare service, and (iii) identify community recommendations to actively improve the users' experience. This paper examines whether photovoice i) increased awareness of future health professionals about users' needs, expectations, and perceptions and ii) enabled a process of critical reflection on role definition and health services organisation.

Methods

Study context

The study took place from November 2021 in the context of a practice learning activity addressed to the sixth-year medical students of the University of Cagliari, Italy. The project was carried out in synchronous distance learning using the Zoom Meeting platform. The activity consisted of a mix of lessons, team-work, and comparison among students, with the engagement of teachers and tutors.

Participants and Recruitment

All students in the sixth year of medicine (academic year 2021-2022) participated in the project, for a total of 172 contributors. Participants were divided into 16 teams composed of 10 to 12 participants: 8 teams started their photovoice activity in November 2021 and ended it in February 2022; the other 8 started in March and ended in May 2022.

Procedures

In our study, we slightly modified the photovoice methodology by Wang & Burris (1997) to adapt our project to sixth-year medical students [16]. We also adapted the methodology to the SARS-CoV 2 emergency and the need for social distancing. We developed the project online and tried to maximise the experience for participants revealing one contribution at a time, slowly unravelling each share as in a physical exposition. This approach also helped us to elicit discussions among participants.

Phases of the project

- PHASE 1: each participant received by email a photovoice pack containing a summary of the study aims and photo-task. If needed, the research team (ADL, AL, SMP, PC) was available to answer questions about the project. The training (which lasted two hours) focused on (i) an introduction about users' satisfaction in health services and (ii) an overview of photovoice. Participants were asked to produce one photo combined with an accompanying caption, responding to a pre-identified question (photo-task): "What is, in your opinion, the main aspect/some of the most important aspects affecting users' satisfaction/ dissatisfaction in a healthcare facility?".
- PHASE 2: participants took photographs over a period of a week using their smartphones.
- PHASE 3: photos and accompanying captions were submitted by participants through the free Google Forms service, and successively analysed by four researchers (ADL, AL, SMP, PC). We examined participants' contributions following a pre-existent analytical framework about users' satisfaction in healthcare facilities, which emerged from a pilot-edition of this practice learning activity and based on the review of the literature [24-26]. See Table I for: i) details about performance areas, services, and related specific issues raised by participants; ii) preliminary distribution of the photovoice contributions to the pre-identified themes.
- PHASE 4: participatory data analysis.
- PHASE 5: within four weeks, each team submitted a report on their experience of taking part in the photovoice project and a summary of the emerging concepts discussed during the focus group discussions.
- PHASE 6: at the end of the activities, we held two final online meetings (lasting 3 hours) using the world café [27, 28] to create a cooperative and meaningful dialogue on the key themes that emerged through the photovoice. 168 out of 172 participants took part in the world café, split in two groups (81; 87 participants). We tried to catalyse dynamic conversations about 1) staff, 2) instrumental and hotel services, 3) organisational matters, 4) additional services, by creating four virtual rooms. Each virtual room was occupied by 10-12 participants at a time for about 20 minutes. The discussion was moderated by one researcher for each room (ADL, AL, SMP, PC). At the end of the 20 minutes, we asked the participants to switch rooms, and briefly recapped the main emerging points for the new entering participants.

Ethical considerations

The present study adopting a community-based participatory research approach did not require ethics committee approval as per direct consultation with the institutional ethical committee of Cagliari University. All participants were provided with detailed written and oral information about the activities and expressed their consent to participate by signing up through an online registration system.

Photovoice presents some ethical considerations related to the use of photographs such as individuals appearing in the photographs. We followed ethics guidance by Wang & Redwood-Jones (2001) and Evans-Agnew & Rosemberg (2016) [20, 29]. Participants were left free to take any object/person/place, ensuring to: i) ask for written consent if people other than the participants were portrayed; ii) anonymise sensitive information. To promote authenticity, we guaranteed anonymity of photos and accompanying captions. Each participant was let free to unveil their authorship and comment on the photo and caption.

Data analysis

We adopted a thematic approach to the analysis, whereby we identified themes and subthemes from the transcripts,

drawing on techniques from thematic analysis [30–32]. Our analysis was informed by a predefined analytical framework (refer to Supplemental Materials 1 and 2). This included the definition of areas and themes of Citizen Satisfaction related to health services provided by the Monserrato teaching hospital – AOU Cagliari (*e.g.*, medical service; organisational aspects, *etc*.) and was informed by earlier work by [24-26]. Further details about how the initial framework was developed are presented in Supplemental Materials 1 and 2.

Our analysis focused on aspects contributing to users' satisfaction. One of the researchers (AL) collected all the photovoice data (n = 172 photos; n = 16 focus groups), anonymized it and organised it in a.pptx file. Transcripts of the focus groups were reviewed one-by-one, individually by each of the four researchers (ADL, AL, SMP, PC), and provisional attributions to themes were applied based on the topic (*e.g.*, medical service). Based on our initial analytical framework, we sorted participants' photos and accompanying captions (identified in PHASE 4) into four main themes: staff, instrumental and hotel services, organisational matters, and additional services.

Each photo was analysed in relation to the meaning that the participant attached to it through the sentence matched [35]. To ensure we captured the intentions of participants in the data analysis accurately, we discussed the emerging themes and sub-themes with each team during focus group discussions (Supplemental Materials Tables I and II), and made changes accordingly (*e.g.*, we clarified some aspects about user satisfaction). Subsequently, the research team (ADL, AL, SMP, PC) discussed together the final set of sub-themes and themes, to ensure agreement among team members.

Results

One hundred and seventy-two students aged between 23 and 35 participated in this study (demographics are in Tab. I) and discussed a total of 172 photos.

In this section we present selected findings on three of the four main themes discussed (staff, instrumental and hotel services, organisational matters, and additional services; see Supplemental Materials 2). The captions accompanying each picture were translated from Italian to English by the researchers involved in the activity, guaranteeing respect of the original meaning.

Staff

Through the photographs, participants identified a shared thought about empathy and human relationships in healthcare services. The relationship between users and professionals is based on mutual respect, trust, and understanding. In the opinion of participants, making users and patients feel understood and treated as individuals in their entirety seems to be a fundamental piece of users' satisfaction puzzle.

An example is shown in Figure 1, a creative contribution where the participant made a step further elaborating on the photo taken to stress the concept: people in a waiting room are depicted as numbers with legs.

"What makes a user satisfied is mostly the feeling of being treated and managed as a person and not as a number." (Participant 159, F, age 26; see Fig. 1).

Healthcare services are often forced to find a middle ground between offering a continuous and fast service and the essential need of people to be approached in a human and sympathetic manner. An empathetic approach is essential and may be taken for granted, however most participants felt the need to point it out as a critical juncture.

Tab. I. Details of participants taking part in the photovoice study.

N. participants	172	
	Age	
Mean	25.5	
Median	25.0	
Minimum	23	
Maximum	35	
Gender	N.	%
F	101	58.7%
M	71	41.3%
Education Level	N.	%
High School Diploma	152	88.4%
Graduate/Post-Graduate	20	11.2%

Instrumental and hotel services

Photographic representation is particularly suited to provide details and context on participants' perceptions of the accessibilities and environments of the healthcare facilities. The images show views and corners taken by participants, evoking spontaneous reactions to colours, shapes, and signs. An example is shown in Figure 2, which depicts a long grey corridor between two rows of windows that ends in a dark space.

"Get lost in the dark: the user who accesses a hospital does not always find the location of the visit due to a lack of linear and precise indications." (Participant 34, F, age 24; see Fig. 2).

The snapshot could be interpreted as a mix between a sense of physical disorientation, which can occur in any new place without clear indications, and bewilderment linked to health concerns. Signs that make clear where we are and how to reach our target (waiting rooms, consulting rooms, surgery rooms, wards, laboratories *etc*.) are essential to improve the user's overall experience and decrease the sense of abandonment. The user/patient should be guided and supported during the time spent in the healthcare facility to value their time and independence, by giving them a better and more inclusive service, and addressing their need to feel secure and oriented.

Additional services

During the project, participants reported a multitude of views about the importance, feasibility, and appropriateness of providing additional services. These services comprehend all those amenities designed to meet

Fig. 1. Example of what is perceived as unsatisfying about human relationships in healthcare services (Participant 159, F, age 26).

personal needs. User's needs may depend on physical, social, religious, ideological, ethical, and personal reasons, as well as on age and gender. In this category we comprehend tangible goods and services (meals, space to profess faith, suitable environments for kids/elders, *etc*.) and intangible services. Intangible services depend on organisational imprint and professionals' approach to users' needs, which in turn is strongly influenced by other inviolable services: instruction and training.

Most participants agreed that healthcare organisations should meet individuals' needs where possible and promote discussions and initiatives about creating dedicated services. They also pointed out that professionals should be the first allies to patients/users and show an open and caring approach to their needs. The discussions about additional services were perceived as authentic self-reflection moments in which each participant abandoned the static role of professionals and embraced users' condition as human beings, reflecting on what makes us who we are and how we could improve users/patients' experience. Several suggestions emerged: barbering service and additional hygiene services on request, library service, safe social spaces dedicated to patients and visitors, improvement of privacy in multiple rooms, services dedicated to families and kids, and others.

An example of what was considered a successful additional service during the SARS-CoV-2 pandemic is depicted in Figure 3.

"The big step forward that hospitals are making during the pandemic: put in safety a hug like this" (Participant 92, M, age 25; see Fig. 3).

Figure 3 shows a parent holding their newborn son. Usually, this is not considered an additional service. However, during the SARS-CoV-2 pandemic, several essential services, usually taken for granted, were abolished in the name of security. Sometimes, even if it seemed possible to guarantee these services, through testing and the use of protective equipment, the lack of personnel, scarce resources, and overworked staff prevented it.

Impact of photovoice methods on future professionals' awareness

The process of photo-production offered participants an opportunity for critical thinking about several aspects of healthcare, spurring the students to observe healthcare from a different point of view: the one of the user. Most participants stated that photovoice engaged them in a new way, completely different from the traditional learning they were used to.

The following quotes are extracted from participants' final reports:

- "We had the opportunity to learn a new, powerful, immediate, and effective communication strategy. The power and effectiveness of communication result from an initial curiosity: associating a photo with an idea summed up in a few words captures the observer's gaze and attention immediately, leaving open the possibility of analysis and alternative interpretations of the concept itself. We appreciated the chosen modalities for the project, configuring a new and interactive experience." (Team 3).
- "During Photovoice, it was possible to notice how

Fig. 2. Example of a perceived lack of accessibility in healthcare facilities (Participant 34, F, age 24).

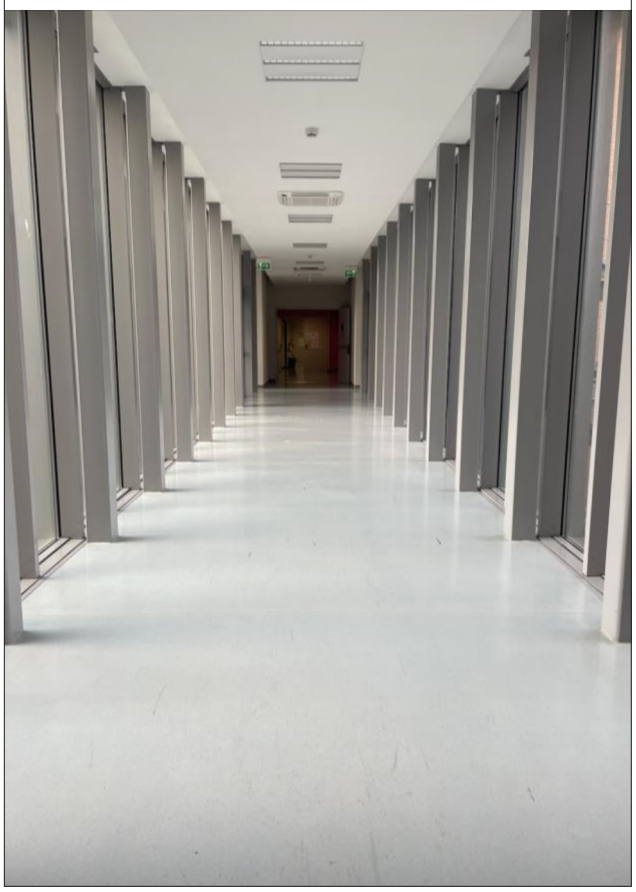

Fig. 3. Example of additional services perceived as satisfactory (Participant 92, M, age 25).

sometimes notably conflicting messages could arise from a single image. Only the addition of the caption, in most cases, clarified the author's intention." (Team 2).

- "Personal experiences and character inclinations sometimes lead to highly different opinions and points of view in the face of the same situations." (Team 5).
- "The photovoice offered moments of reflection, discussion, and comparison. A common thought emerged on the importance of a doctor-patient relationship based on trust, understanding, empathy, and mutual respect." (Team 4).
- "Overall, the photovoice project was very interesting and provided much food for thought, especially about the elements that strongly affect the satisfaction and dissatisfaction of users who access the services guaranteed by the National Health Service." (Team 7).

Discussion

Over the last decades, the necessity of integrating health promotion in professionals' identities and values has become increasingly urgent [2, 3, 12, 35-37]. This study demonstrates the value of using photovoice to reach medical students while still training to integrate health promotion into their professional identities. The photovoice process, teamwork, and discussions opened a breach into traditional thinking about aspects of healthcare services often taken for granted or overlooked. By adopting a CBPR approach, the sixth-year medical school students were actively engaged to self-reflect and identify critical points and community recommendations about users' satisfaction. Through the choice of the subject to represent and the active generation of the image, participants gradually became interpreters of the topic, by stimulating a discussion that promoted respect and social inclusion, community action, and perhaps, in the future, informed advocacy. In this study, participants' reflections revolved more around how services are delivered than the actual service provided. The students showed their empathic human side and made efforts to propose smart and inclusive solutions to improve users' overall experience. These solutions often implied a change in the behaviour of professionals (their future selves) towards patients and simple and low-cost improvements of organisational practices.

The photovoice data and participants' final considerations on the visual participatory approach demonstrated the ways through which this project managed to raise future health professionals' awareness of users' needs, expectations, and perceptions, enabling

a critical reflection on role definition and health services organisation.

As proposed in the present study, future interventions should consider low-cost strategies to boost health promotion reorientation of healthcare. Mixing advanced education with CBPR activities effectively stimulates critical reflection "from within" and familiarises students with theoretical health promotion values and, above all, practical goals, and applications. Moreover, these findings support the use of photovoice as a valuable method for a genuine participation of medical school students. Although our study has shown some promising results regarding the use of photovoice as a method to explore medical students' awareness of users' needs and elicit critical reflection for reorienting health services, further research is needed to assess the long-term effects the photovoice experience has on participants and their professional identities, as well as of advantages and limitations of the process.

An intrinsic limitation of photovoice is linked to participants' personal judgement. Namely, what they choose to photograph or not for various internal and external reasons (*e.g.*, embarrassment, desire to please the researchers, time constraint and many others) [17]. A key strength of our study is represented by the creation of an informal safe space for self-expression. We would empirically define our study participants as highly sensitive to judgement and distressed by the idea of 'being wrong'. In this study, we tried to create a safe space for self-expression, and we guaranteed the anonymity of the material shared and the absence of judgement. Surprisingly, most participants spontaneously explained their photographs to the group, confirming that creating a safe atmosphere may enhance authenticity and participation of all individuals of a group.

Due to the SARS-CoV-2 emergency and the need for social distancing, we had to adapt the methodology and conduct the study online. To maximise the experience for participants we showed one contribution at a time, as in a physical exposition. This approach helped us to elicit spontaneous discussions between participants and demonstrated photovoice flexibility. We were, in fact, able to carry on the project online, despite the pandemic, offering the participants an opportunity for informal gathering and obtaining positive results. Despite photovoice being a versatile method, the activities suffered from limitations linked to online meetings, such as less face-to-face contact; technical difficulties; "bystander effect" applied to meetings: individuals are less likely to contribute when surrounded by others due to diffusion responsibility and wait for someone else to engage first.

Conclusions

This study highlighted the opportunities in using photovoice to bring medical students closer to a conscious change toward the reorientation of health services. Photovoice revealed to be a valuable method for medical students' genuine participation and critical reflection stimulation. Using photovoice with students is a low-cost strategy that has the potential to produce medical doctors responsive to users' needs and effectively boost health promotion reorientation of healthcare.

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Ethical approval

The present study adopting a community-based participatory research approach did not require ethics committee approval as per direct consultation with the institutional ethical committee of Cagliari University.

Conflict of interest statement

The authors declare no conflict of interest.

Authors' contributions

All the authors made substantial contribution to different aspects of the work: SMP, SR, PC: conceptualization; SMP, SR: writing -original draft; SMP, AL, ADS, PC: investigation, formal analysis, results interpretation; AL: visualization; ADS: project administrator; SR: validation; PC: resources, supervision; SMP, SR, AL, ADL, PC: writing -review and editing.

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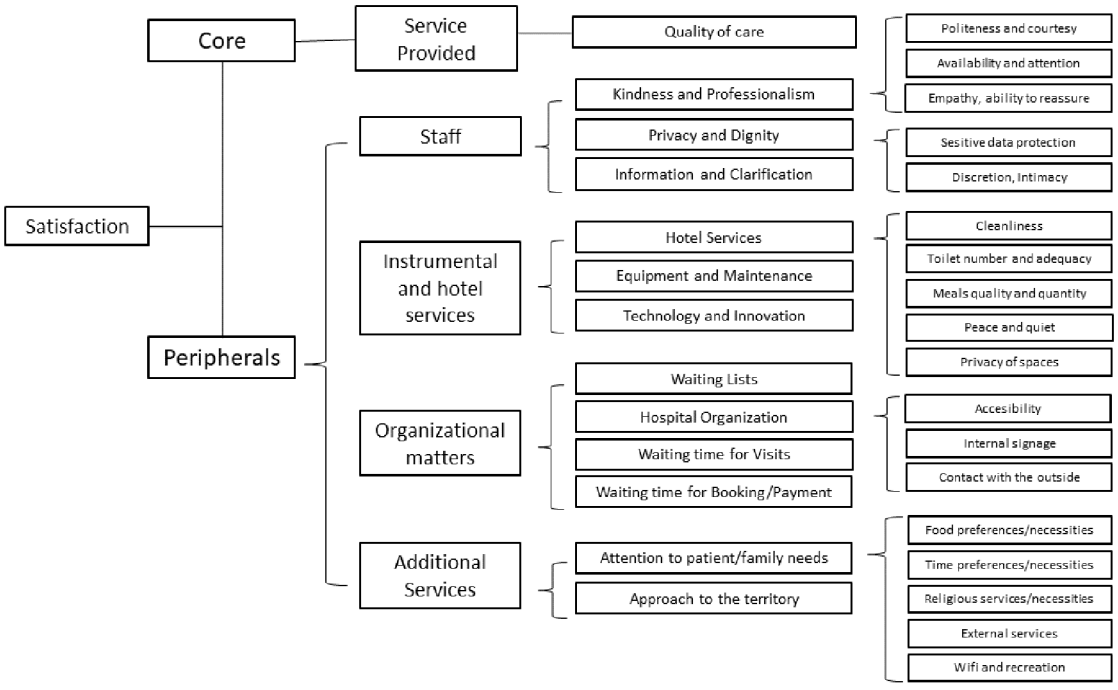
Supplemental Materials

1. Development of the analytical framework

When evaluating Citizen Satisfaction, the user's overall experience should be decomposed into areas and aspects that can be specifically attributed to offered services. As for Fishbein's attitude model [1] this approach allows a more accurate analysis of single components of the service experienced, allowing to identify the sectors in which to invest to raise the overall level of Citizen Satisfaction. Following the process proposed by Raimondi [2], we constructed a Tree of Satisfaction (see Supplemental Materials 2) through the progressive breakdown of the service into performance areas, services, and user problems. Having detailed analytical information is necessary to focus on the aspects to be modified and to calibrate interventions aimed at solving individual problems. To detect the issues occupying the distal branches of the Tree we should take advantage of all the interaction opportunities between the user and the service provision, as well as of the opinion of staff and experts in the specific sector. Once perfected, the Tree constitutes a rather complete map of the elements users consider to evaluate the specific healthcare service and, therefore, a precious guide for interpreting the results of community-based participatory research tools and surveys. Following the Problem Detection System (PDS), we tried to quantify the importance attributed by users to the various critical aspects of the service and to determine to what extent the solution to a specific problem can influence satisfaction. The first phase, Problem Generation, was divided into three consecutive moments: photo voice, brainstorming, and world café. It involved a sample of professionals from the master's degree courses of Health Professions with various previous work experience, aiming to determine and break down the elements contributing to Monserrato teaching hospital – AOU Cagliari users' satisfaction. As a further element of confirmation that could support the gathered information, we collected the points of view of the medical and nursing staff through short interviews. A total of 15 interviews were carried out, (5 with members of the permanent medical staff, 8 with residents, and 2 with members of the permanent nursing staff). The analysis of the opinions collected led to a substantial confirmation of the elements previously emerged. At the end of the preliminary phase, during Problem List Building, we grouped the categories that emerged into five performance areas: service provided; staff; instrumental and hotel services; organizational matters and additional services. These areas have been divided into core and peripherals performance, as expressed by Serpelloni [3], to create a Satisfaction Tree culminating in the twelve original categories (see Supplemental Materials 2).

2. Tree of Satisfaction and list of Themes and Sub-themes

Supplemental Materials 2 Fig. 1. Initial analytical framework. 'Tree of Satisfaction': areas divided by core and peripherals, themes, and sub-themes.



Supplemental Materials 2 Tab. I. Peripheral aspects of satisfaction in healthcare services: first layer of detail of areas and themes discussed by participants during focus group discussions (refer to Phase 5 of Procedures).

Areas	Themes	
Staff	1	Kindness and Professionalism
	2	Privacy and Dignity
	3	Information and explanation
Instrumental and Hotel services	4	Hotel services
	5	Equipment and maintenance
	6	Technology and innovation
Organizational matters	7	Waiting lists
	8	Waiting time for visits
	9	Waiting time for booking/payment
	10	Hospital organization
Additional Services	11	Attention to patients/family members
	12	Approach to the territory

Supplemental Materials Tab. II. Peripheral aspects of satisfaction in healthcare services: second layer of detail of themes and sub-themes discussed by participants during focus group discussions (refer to Phase 5 of Procedures).

Themes	Sub-themes	
1	Kindness and Professionalism	Politeness and courtesy
		Availability and attention
		Empathy, ability to reassure
2	Privacy and Dignity	Sensitive data protection
		Discretion, Intimacy
4	Hotel Services	Cleanliness
		Toilets number and adequacy
		Meals' quality and quantity
		Peace and quiet
		Privacy of spaces
10	Hospital Organization	Accessibility
		Internal signage
		Contact with the outside
11	Attention to patient/family needs	Food preferences/necessities
		Time preferences/necessities
		Religious services/necessities
		External services
		Wi-Fi and recreation

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