Hotel Housekeepers and Occupational Health: Experiences and Perceived Risks

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Abstract

Background: Hotel housekeepers are the second most important occupational group within tourism hotel sector; various health problems related to their job have been described, above all musculoskeletal disorders. The objective of this study is to understand the experiences and perceptions of hotel housekeepers and key informants from the Balearic Islands (Spain) regarding occupational health conditions, the strategies employed to mitigate them and the social context in which they occur.

Methods: A qualitative study with a phenomenological approach was carried out. Six focus groups with hotel housekeepers and 10 semi-structured interviews with key informants were conducted. Next, we carried out a content analysis.

Results: Hotel housekeepers reported musculoskeletal disorders, anxiety and stress as main occupational health problems; health professionals underscored the physical problems. Hotel housekeepers perceived that their work (characterized by being physically demanding and with repetitive movements) caused their health conditions. To solve health issues, they used medication, mostly anti-inflammatory agents and painkillers and, to a lesser extent, sedatives and anxiolytics, which allowed them to continue working; health public services, which they generally rated as satisfactory; personal protective equipment; ergonomics (with difficulties due to high work pace and hotel facilities) and physical activity. Two contrasting attitudes were identified regarding sick leave: HHs who refused to accept a doctor-prescribed sick leave (due to fear of being fired, sense of responsibility, downplaying their pain...), and those who accepted it (because they could not continue working, they prioritised health before work).

Conclusion: Our results might contribute to plan improvement strategies to address health problems among hotel housekeepers, to improve the attention received in primary care settings as well as their working condition.

Background

Tourism-related jobs occupied 13.4% of the active population in Spain and 25.6% in the Balearic Islands in 2019, just before the onset of the COVID-19 pandemic. Within the tourism hotel sector, hotel housekeepers (HHs) are the second most important occupational group [1]. Data estimates from the Balearic Islands Employment Service indicate that the Balearic hotel industry employs around 13,000 HHs, an exclusively female sector in Spain [2].

Hotel housekeeping is considered physically demanding. It consists of cleaning and tidying rooms, bathrooms and common areas of hotels. Most HHs in the Balearic Islands have recurring fixed-term contracts, i.e., they are employed between 6 and 9 months every year, more intensively during the summer months. Occupational exposure of HHs include physical [3, 4], chemical [5–7], biological [8] and psychosocial hazards [9, 10]. These exposures translate into frequent visits to the family doctor mainly due to musculoskeletal conditions [1, 11–14], anxiety and stress.

Interestingly, despite the wide media and social coverage achieved thanks to HHs associations known as “kellys”, few studies focus on the health problems of HHs. Similarly, little evidence is found on the HHs’ perception and experiences related to health problems.

Occupational health risks associated with hotel housekeeping are dominated by musculoskeletal disorders (MSD) such as low back [15–19] and cervical, shoulder, hands, wrists and knee pain [6, 14, 17, 19, 20].

Risk factors associated with MSD include: repetitive work [14, 17, 19, 21]; use of excessive force for lifting and moving weights; unhealthy postures [14, 16, 17, 19, 22, 23]; manual loading of objects [21, 24]; standing during long periods; tasks that involve elevation of the limbs; and insufficient breaks [9, 14, 24–26].

It has been suggested that HHs are at high risk for MSD. Several studies have reported that the higher incidence of MSD in women is caused by social rather than biological differences. The horizontal and vertical segregation of the marketplace concentrates women in jobs with high time pressure and heavy workload [6, 9, 27, 28]. These jobs also involve repetitive

tasks that can generate musculoskeletal disorders in the upper extremities [29]. Exposure to psychosocial risks such as stress has also been associated with neck and shoulder MSD [30]. Importantly, tourism has been identified as a very stressful working sector [31].

These imbalances associated with MSD and a worse perception of health are particularly significative for HHs [32, 33], who have a demanding job with a low decision margin and few rewards [10, 34, 35]. Additionally, the workplace and equipment are usually inadequate, since the design is based on male anthropometric characteristics and is often heavy and difficult to move [6, 29, 36].

Other risks faced by HHs are chemical (contact with cleaning products) [6, 37], biological (contact with broken windows, needles or human waste) [8] and psychosocial (imbalance between demands, resources and control, mistreatment, unfair assignment of tasks by executive housekeeper) hazards [10].

Various studies indicate that hotel workers, including HHs, perceive that the organization of their work (i.e., time pressure, work overload, inadequate work equipment) has a negative impact on their physical and mental health [6, 10, 38].

Some strategies undertaken by HHs when they feel unwell are the use of individual protection equipment, self-medicating and consulting public health services or mutual health organisations, where they do not always obtain satisfactory responses [2, 6, 27].

The objective of this study is to explore the perception and experiences of HHs regarding health conditions and their causes, the strategies used to solve them, and the social context in which they occur. For this, we also provide the perspective of key informants on these issues. Our study will provide a foundation for improved occupational health care for these professionals.

Methods

We conducted a qualitative study with a phenomenological approach with the objective of understanding HHs' experiences and perceptions of their health problems and their relationship with their job, as well as their strategies to solve them. Semi-structured interviews were carried out with HHs and with an executive housekeeper. The interviews with other key informants provided additional perspectives to the explanations of the HHs. The focus groups (FG) with HHs generated direct information about the association of their health experiences with their occupation, and identified shared experiences and perceptions.

The study setting was primary care (PC) centres of the Balearic Islands. The HHs attend PC centres like the rest of the population. In addition, they might attend mutual health organisations, which manage occupational diseases and accidents.

Intentional sampling was used to select HHs for the FG. Family doctors from different PC centres (four on different tourist hubs of the island of Mallorca, one in Menorca and one in Ibiza) identified potential participants taking into account sociodemographic and work variables, informed them about the study and invited them to participate. Next, the research team offered them to participate and indicated the date for the FG. Inclusion criteria were as follows: being over 18 years of age and having worked as a HHs during the previous season (2017). In order to generate rich information, we included different participant profiles based on age, years worked as HHs, hotel star rating, and type of contract (fixed, recurring fixed-term, or temporary). The FG were conducted by the first author in PC centres and lasted between 60 and 90 minutes.

Intentional sampling was also used to select key informants, in order to obtain different perspectives and information richness. The interviews lasted between 25 and 80 minutes.

Participants were given the information sheet and signed the informed consent form before the start of the interview and the FG. The interviews were audio recorded and the FG was video recorded as well to facilitate their transcription. Data collection continued until saturation was achieved [39].

Based on the literature review and the objectives of the project, the dimensions explored in the interviews and the FG were: (1) Characteristics, organization and perception of the HHs' job; (2) Description and perception of health issues; (3) Strategies used to solve health issues. The questions to explore each dimension were adapted according to the interviewee. Thus, different scripts were developed for interviewing HHs (see additional file 1), the executive housekeeper (see additional file 2), the general practitioner (see additional file 3), the occupational health specialist (see additional file 4), the human resources director (see additional file 5), the director of prevention of occupational risk services of a hotel (see additional file 6) and the occupational health manager of a hotel chain (see additional file 7). Also, a specific script was developed to guide focus groups (see additional file 8).

The content of the FG and the interviews was transcribed verbatim. An alphanumeric code was assigned to each HHs to ensure anonymity. Each contribution was identified with "HH" and with two numbers separated by a period (the first indicates the FG, and the second, the participant). Key informants were also assigned a code (see Table 2).

Content analysis was carried out. The contents of the FG and the interviews were analysed together in order to detect similarities and differences in the narratives. After reading the transcripts of selected FG, the researcher produced a code tree according to the objectives of the study. A second researcher evaluated this code tree. The two researchers coded and analysed the transcripts separately to ensure internal validity. Finally, the analysis of each code was shared and a consensus was reached regarding the conclusions. NVivo11 software was used for the analysis.

Results

Six FG and 10 interviews with key informant were conducted. A total of 34 HHs participated in FG (between four and eight in each one). A total of 64 HHs were contacted and invited to participate: 20 refused to participate due to incompatibility of schedules, being abroad, etc.; 10 had agreed to participate but did finally not come to the FG.

Table 1 shows the sociodemographic characteristics of the HHs participating in the FG. Table 2 shows the profile of interviewed key informants.

Table 1
Socio-demographic characteristics of FG participants (%)

Age *(n=34)* (x=50 years)	Under 30	30 to 49	50 to 60	Over 61
	5.9	29.4	52.9	11.8
Years in the industry *(n=34)* **(x=19.47)**	**Under 10**	**10 to 14**	**15 to 24**	**25 years and over**
	17.6	20.6	32.4	29.4
Type of contract *(n=34)*	**Permanent**	**Recurring fixed-term**	**Temporary**	
	2.94	88.24	8.82	
Hotel star rating *(n=33)*	**2***(i)	**3***	**4***	**5***
	6.1	45.5	42.4	6.1
Note: (i) *=stars				

Table 2
Profiles of key informants

Code	Profile
HHi1	HHs Union Members
HHi2	
HHi3	HHs members of HHs associations
HHi4	
EHK	Executive Housekeeper
GP	General practitioner in a health centre of a touristic area focal group moderator or interviewer
OHS	Occupational Health Specialist
HHRR Dir.	Human Resources Director of a hotel chain
Prev.Dir	Director of Prevention of Occupational Risk services of a hotel chain
OHM	Occupational Health Manager of a hotel chain

3.1 Perceived occupational health problems

The health problems described by the HHs were located in the neck, back, hip, lower back, wrists and hands. The main diseases reported were tendinitis, carpal tunnel syndrome, arthritis, osteoarthritis, allergies, tendon rupture, sciatica, anxiety and stress. HHs underscored stress, anxiety and MSD as occupational health problems, whereas health professionals emphasised only the physical conditions.

HHs attributed these ailments and diseases to repetitive movements (making beds, scrubbing, cleaning windows), to pushing the housekeeping cart and to hitting the hotel furniture with the cart as a result of working under time pressure. In addition, they attributed their respiratory problems, skin burns (mainly in the past, when they mixed products), and allergies to cleaning products. HHs established a clear link between the characteristics of their work and the diseases they suffered. This perception was shared by the director of the prevention service interviewed. Despite the connection between work and pain, some HHs explained that their pain did not improve during the months off work.

HHi4: The diseases in the back, shoulder pain and joint pain result from doing the same movements day in and day out and year after year.

EHK: Because we get this at work, this is not a common disease. (…) Low back pain, it can hit you once, but the second, the third, the fourth, many girls here have the same.

Prev.Dir: The main I see in PC are (…) diseases… spine, upper limb, shoulder, knee,… (…)

M: What do you think causes these MSD?

Prev.Dir: Well, the type of work they do.

HH6.2: The liquids are causing us allergies.

HH4.5: What you don't have [is] fatigue. But the pain is still there, [both] in winter and summer.

In contrast, the occupational health specialist interviewed considered that these diseases were common and not occupational in older HHs, but pointed out that the job challenges caused an early presentation of these conditions.

OHS: For the older women, these are common diseases. I mean, it's degeneration (…). Which is probably accelerated by the intensive work they do during 6 months.

3.2 Strategies used to solve health issues

The main strategies of HHs to solve health issues were: medication, physical activity, personal protective equipment and ergonomics.

Regarding medication, HHs reported mostly using anti-inflammatory agents and painkillers and, to a lesser extent, sedatives and anxiolytics. These medications allowed them to continue working. This was corroborated by health professionals and the director of the prevention service interviewed, who also underscored that medication use increased with age.

HH5.2: And I self-treat (…) with pills, waiting for it to hurt a lot so I don't have so many drugs in my body. I'm fed up of medicines.

M: When you have a health problem, what do you do?

HH2.2: Take pills and go to work .

Prev.Dir: The younger don't take anything yet. But HHs over 40, over 50, who have been working in hospitality for over 20 years, they have to take some medicines.

Regarding personal protective equipment (PPE, i.e., gloves, mask and goggles), some HHs stated that they only used them when suffering from specific health problems or on particular occasions (i.e., cleaning for the opening of the hotel). They also mentioned the difficulties of using PPE due to the fast work pace and the discomfort of wearing mask and goggles. Consequently, HHs looked for different strategies to use them, such as wearing gloves in only one hand. In general, the use of gloves was frequently reported, whereas the use of mask and goggles was scarcely mentioned.

HH5.4: I have not used a mask ... now I'm trying to use it for this cough in the throat.

HHi2: The gloves are another problem, you don't find the time to put them on (…). I only put them on my right hand, the hand I use the most for scrubbing.

Ergonomics is essential to mitigate MSD, a major health problem in HHs. HHs explained that they had received training in ergonomics and that they were willing to follow the recommendations. However, the following barriers to ergonomics were identified:

- Characteristics of the rooms' furniture, furniture arrangement, and customers' belongings. Extra beds added difficulties.

HH3.1: The double bed, the bed of another child, the bed of another child, of the baby, and the extra crib. All this in only one room. How do you do that? We start from the inside out, with all the bad postures you can imagine.

HHi1: Because they say that more than this we should not raise our hands. But what do you do with large windows? You have to do it whether you want it or not. Otherwise, you leave half uncleaned.

- Work rhythm.

HHi4: cleaning fifteen apartments a day with four, five or six beds each, where do you get the time to make an ergonomic move? (…) We know how you have to bend down to tuck in the bed to avoid back pain. But when you have so much work it's impossible.

- Characteristics or condition of the housekeeping carts combined with facilities often inadequate for the mobility needs of HHs.

HHi1: The housekeeping cart… is heavy. (…) Pushing the cart full of linens, products, brush, mop, and everything…. (…) Our wrists and shoulders are in very bad condition. In fact, our whole body.
HHi3: In some hotels the housekeeping carts are in very bad condition. (...)

The occupational health specialist pointed out that postural hygiene, physical activity and medication were three strategies to improve MSD.

OHS: Postural hygiene is the most important. And some exercises that they have to learn and do as if they were the morning pill (…). Even though I'm tired, I have to go swimming for half an hour (…). And help them with pills.

The hotels' occupational health services were also aware that MSD were a major health issue and some had even organised guided stretching sessions before starting the working day, or were planning redesigning the furniture to improve ergonomics.

HHRR Dir: Last year (…) before starting work, we asked workers to come and attend a 15 minute stretching session with a coach that shows them how to stretch.

OHM: Bedside tables are practically disappearing in some hotels, it is now a folding table (…). This facilitates (…) cleaning; we try to influence the design.

Finally, a few HHs perceived physical activity as a strategy to improve their health. They reported doing more exercise during the winter months when they were not working, mainly walking and, less frequently, going to aqua gym, Pilates or yoga sessions.

HH1.3: In winter I go to aqua gym, which is very good for my back. But in summer (…) with so much work, I don't have the strength.

3.3 Use and assessment of health services

Another strategy regarding health problems was to use the health services. The most commonly reported practice was to attend PC services during the summer months for acute diseases, either musculoskeletal or psychological. During the winter months, HHs went for gynaecology, trauma and ophthalmology check-ups. The health professionals interviewed corroborated these reports.

The majority of HHs stated that they made little use of the mutual health organisations, since they perceived that unless they were in serious pain or illness they would not be adequately cared for or prescribed sick leave. A minority of HHs attended physiotherapy sessions, either from the public health system through doctor referral, or to a private service which they had to pay.

HH6.5: [I go to the doctor] When I find the time.

HH6.1: I just went to get injections [at the health centre].

HH1.2: To the doctor; we're not going to the mutual, huh? Because to get sick leave you need a broken arm or lots of blood.

GP: (HHs) come a lot when they close the hotel. I have to catch up on everything; a consultation with gynaecology, a consultation with ophthalmology…. And during the working season they only come for acute conditions, generally musculoskeletal or psychological.

The assessment of the medical care received by their family doctor at the PC centre was positive. However, when they were visited by a different doctor, some HHs expressed complaints: they perceived that, because they were HHs, doctors did not pay enough attention to their symptoms and did not feel understood. HHs perceived a lack of individualized care, believing that all HHs were prescribed the same treatment.

HH3.1: My doctor treats me very well, but when he refers me to a specialist, if I tell them that I never had that problem before doing that job, they should not tell me: «it's not related to your job. You possibly have arthritis, or possibly... ». I don't have any of that. "It's not caused by your job." They always tell you that it's your thing.

HH4.4: They treat all HHs equally.

HH4.7: And we are all prescribed the same. (…) All ibuprofen (…). We all take the same thing.

Reviewing this issue, the occupational health specialist suggested that PC doctors should take into account that psychosocial conditions in the work environment could generate physical symptoms.

OHS: She experiences it, she is in a lot of pain and feels awful. But often it's not the pain, but rather the mood influencing the experience.

During the summer months, HHs went to the health centre on their days off. However, when due to lack of staff the hotel management unexpectedly changed their day off, they had to cancel their appointments.

HH5.1: On Sunday they tell us our days off and sometimes they only tell us one; you, you and you have these days off, I will tell the rest of you later on. Because I went to the director and told him: "I want to know in advance at least one of my days off, because if I need to go to the doctor, these are my personal affairs."

HHi4: You shouldn't be able to change somebody's day (off) from one day to the next. Because that person has plans, they have a life. Because you, in your days off you go to the doctor, or catch up on some paperwork in Palma.

Regarding the assessment of the care received at mutual health organisations, most experiences reported were negative. HHs explained that care had been lacking (e.g. inadequate treatment, ignoring certain complaints, pressure to return to work and other).

HH4.6: In my last visit to the mutual, they told me I was discharged from my finger injury, but my finger is not ok. After two months it still hurts. According to her, I was fit to work after she told me: "Do this. Touch your fingers. You are ready to go back to work. »

However, a minority of HHs were satisfied with the care received, especially because they had been on sick leave for as long as they considered necessary.

3.4 Sick leave

The topic of sick leave (SL) emerged in the FG and interviews, with two contrasting attitudes identified among the HHs: (i) refusal to accept a doctor-prescribed sick leave/ accelerated discharge; and (ii) accepting the doctor-prescribed sick leave. Reasons given by group (i) were: 1. Fear of being fired or of not being offered a contract renewal; 2. Solidarity with their colleagues, since the work of the person on SL is usually divided among the remaining HHs; 3. Putting up with the pain through sense of responsibility; 4. Downplaying their pain; 5. Potential repercussions on the retirement pension.

HH3.3: I don't take it for fear of being fired.

HH2.2: You think the others will have to do (...) my job, and it feels unfair.

HH1.1: [I was never on SL before] because I did not feel well for a few days but I could [keep working].

HH2.1: Because I have heard that later on [if you are on sick leave a lot] they can deduct it from your retirement pension.

The HHs that accepted the prescribed sick leave argued that they considered it necessary for the following reasons: 1. They could not continue working; 2. They prioritised health before work; 3. To ensure a better recovery.

HH2.4: At first I refused to take it [SL], but I said no, I prefer my health.

Discussion

This research describes the experiences, perceptions and opinions of HHs and key informants about the work of HHs, their health problems and their strategies to solve them. HHs reported musculoskeletal problems, stress and anxiety, and attributed them to the tasks they performed daily at high pace. When having health problems, the most commonly reported strategies were use of : *(i)* medication and *(ii)* health services (specialist services in winter and general acute care in summer). Other less commonly reported strategies were use of individual protection equipment, ergonomics and physical activity. HHs positively assessed public health care when treated by their family doctor, but were rather unsatisfied with specialist care.

Regarding health problems, HHs equally emphasized MSD, stress and anxiety. In contrast, some key informants hardly mentioned stress and anxiety. Respiratory and dermatological problems were less reported. A perception shared by most participants was the association between hotel housekeeping and MSD. However, the occupational health specialist believed that work was a trigger for health problems rather than the cause.

Various studies associate working conditions of HHs with health problems [27]. The European Agency for Safety and Health at Work (EU-OSHA) [9] identified occupational physical risks such as carrying heavy loads (i.e., the housekeeping cart), which can cause MSD. Of the 941 HHs interviewed by Krause et al. (2005) in Las Vegas [19], 78% reported having had pain in the last 12 months. HHs perceived that the pain could have been caused or aggravated by their job. The authors concluded that pain was associated with significant physical effort and non-ergonomic work conditions. In a study by Buchanan et al. (2010) conducted in 55,327 hotel workers (21% were HHs) in the United States, estimated injury incidence rates in HHs doubled injury rates of the other hotel workers [11].

Qualitative studies confirm the HHs' perception of the relationship between their job and their health problems. In the study by Kensbock et al. (2016), HHs reported that the excessive physical demands of their jobs made them work daily with pain [40]. Hunter Powell & Watson (2006) collected the experiences of HHs related to exposure to some risk factors, such as the use of cleaning products and the movement of the housekeeping cart [41]. Hsieh et al. (2016) interviewed HHs, who associated MSD with repetitive movements carried out at work, and dry hands to the use of cleaning products [6]. All these experiences corroborate the information provided by the HHs and key informants participating in this study.

Since most HHs are women, and taking into account that women are usually in charge of domestic and care tasks, they could be doubly exposed to physical and psychological stressors [29]. Additionally, these women lack the time to recover from physical fatigue and to perform beneficial physical activity to prevent or improve MSD [42]. Previous results recently published corroborate that HHs perceived that the high demands of their job caused work-life imbalance [43]. Usually, the demands of the job depleted their personal resources, depriving them of energy to attend to the demands of private life such as caring for dependents and enjoying family life and leisure [44]. This high level of perceived stress and the characteristics of the HHs job (high demands combined with low control) could partly explain the perception of the relationship between MSD and work, as published by Herr et al. (2015) [45].

On the other hand, some key informants interviewed attributed the prevalence of MSD to age. However, the study by Krause et al (2005) contradicts this perception, observing few significant differences in the relationship between age and pain, with only knee pain more common in older women [19].

Our results reveal different strategies undertaken by HHs for health issues, such as taking medication for pain, including anxiolytic agents. Similarly, Krause et al (2005) reported that 85% of HHs had taken some medication during the last four weeks due to pain while working [19].

Another strategy reported was to follow ergonomics recommendations. However, HHs reported difficulties due to time pressure and furniture arrangement, implying the prioritisation of job performance before their health. Bernhardt et al (2006) also reported the difficulty caused by time pressure derived from the number of rooms to be cleaned [23]. In the work of Krause et al (2005) 75% of those surveyed stated that “my job requires working very quickly” [19].

When suffering from a health problem, some HHs considered taking SL, or their doctor suggested this option. However, many carried on with a “sickness presenteeism” resulting from feeling pressured to go to work when sick [46]. HHs refused the prescribed SL for fear of being punished by the company or due to solidarity between workers [47]. Albarracín & Castellanos (2013) [48] state that fear of unemployment has put pressure on workers after the economic crisis that began in 2007. Some of the attitudes towards illness or pain and the choice of taking SL corroborated the experiences of HHs from Las Vegas [1]: among the reasons for not communicating pain and work-related injuries, 44% believed that the pain would subside, and 26% declared that they were afraid of being fired or having "problems".

Regarding the use of health services, during the busier seasons (firstly summer and secondly spring), HHs consulted health services for acute conditions. In contrast, during the months that HHs did not work or when the work burden was lower, they requested appointments for preventive activities and consultations with specialists. Notably, the HHs use of health services was more determined by the labour market than by the health needs of HHs.

Similarly, the use of health services was influenced by the practice of changing days off, which transforms the worker into a subject/object on permanent stand-by to meet the needs of the productive system, without taking into account the needs of the personal and familiar domain. Companies do not assume the costs of having more staff to ensure worker’s rights. Consequently, the employees' working conditions deteriorate. A workforce constituted almost exclusively by women in an “unskilled” job magnifies this conception of the worker. However, when confronted with the practice of changing days off, most HHs claim their rights. On the other hand, many also accepted that in "summer they work and cannot do much else."

HHs showed satisfaction with the care received in the PC centre, corroborating the findings of Arrazola-Vacas et al (2015) [49]. It should be emphasized that when they were not treated by their family doctor, HHs perceived lack of empathy and considered that the encounter should be more personalised. Staff empathy, personalised treatment and communication with the doctor have been described as sources of satisfaction in PC users [50–52]. Besides, variables associated with quality of care are related with the health professional, information received, and trust in the doctor [49].

In addition, HHs felt that of all health professionals, only their family doctor/nurse listened to them, a perception also described in the qualitative study by Arman et al (2020) [53]. According to the occupational health specialist, this feeling might respond to psychosocial aspects underpinning the health conditions of many HHs, which could partly explain why expectations were not met by the health services as a whole; as expressed by Arman et al, (2020; 777): "the combination of physical and mental health issues becomes a challenge in women's encounters with the health system"[53].

People with moderate or high work-related stress use more frequently health services [54]. Since the tourism sector has been identified as one of the most stressful working environments [31], HHs frequently consult health services with complex problems beyond musculoskeletal pain, but professionals tend to focus on the symptom without searching for the cause. Furthermore, some doctors attribute a psychosomatic origin to symptoms of musculoskeletal injuries in women, and fail to adequately treat the physical problem [55].

Regarding limitations, we should mention the possible bias that results from family doctors selecting FG participants: *(i)* overrepresentation of the discourses of the HHs with more health problems, because they attend the health centre more regularly and *(ii)* overrepresentation of the discourses of the HHs with more job stability, since the family doctor may not

know the temporary HHs. Recruitment of young HHs and HHs with a temporary contract was difficult, and thus their discourses are underrepresented. On the other hand, recruitment unrelated to the company or trade unions made them feel safer when explaining their health and occupational experiences. Limitations intrinsic to qualitative studies are weak external validity of results and limited capacity to measure stress incidence among HHs. However, qualitative methods plunge deeply into the explanations of the phenomena, obtain rich information and identify shared explanations of events and experiences.

This study is part of a larger project. The information collected and analysed here was used to design a descriptive study on working conditions, perceived health status and occupational risks with a representative sample of more than 1,000 HHs. The larger study should verify whether the perceptions and experiences expressed in the interviews and FG are shared by the larger community of HHs.

In conclusion, the work of HHs is considered physically demanding and is associated with specific health conditions, mainly MSD. Compared with other occupations, few studies address the perception and health problems of HHs. The results of this study underscore that HHs perceive a causal relationship between their occupation and their health issues (mainly MSD, anxiety and stress). When they feel unwell, HHs usually resort to medication and attend health services, which they consider mostly adequate.

Conclusions

HHs established a clear link between the characteristics of their work (physically demanding, working under pressure, using cleaning products) and the diseases they suffered, above all, MSD, stress and anxiety. The main strategies of HHs to solve health issues were medication and physical activity; personal protective equipment and ergonomics could not be always followed due to work rhythm and hotel facilities.

Our results might contribute to plan improvement strategies to address health problems among hotel housekeepers, to improve the attention received in primary care settings as well as their working condition.

Abbreviations

HHs: hotel housekeepers

MSD: musculoskeletal disorders

PC: primary care

FG: focus groups

SL: sick leave

EU-OSHA: European Agency for Safety and Health at Work

Declarations

Ethics approval and consent to participate The study was approved by the Balearic Islands Research Ethics Committee (IB3738/18 PI). Participants were given the information sheet and signed the informed consent form before the start of the interview or the focus group.

Consent for publication Not applicable

Availability of data Data and materials generated and analysed during the current study are available from the corresponding author on reasonable request.

Competing interests The authors declare no conflict of interest.

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Authors’ contributions Conceptualization: XCA and JLL; design of the work: JLL, XCA and EGI; acquisition of data: XCA, OB, MCVT and Arenal Group; data analysis: XCA and EGI; interpretation of data: JLL, OB, MCVT and Arenal Group; writing: XCA, EGI, OB, MCVT and JLL; all authors equally contributed to manuscript revision and accepted the final version of the manuscript. All authors have read and approved the manuscript and have agreed both to be personally accountable for the author's own contributions and to ensure that questions related to the accuracy or integrity of any part of the work, even ones in which the author was not personally involved, are appropriately investigated, resolved, and the resolution documented in the literature.

Acknowledgments The aim of the project “Hotel housekeepers and health” (ITS’17-096) is to make HHs’ health problems public and visible to society and administrations, as well as facilitating their empowerment through an intervention. We expect HHs to be able to prevent the most frequent health problems and improve their quality of life and their psychological and social well-being. The results presented here correspond to a first phase of the project that seeks to explore the perceptions of HHs and contribute to the design of a data collection questionnaire to estimate the frequency of health problems, exposure to occupational risk factors and the quality of life related to health, among others.

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