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Original article

Are hospital workers' healthy habits adequeate? Influence of social determinants on health

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ABSTRACT

Introduction/objectives: With regard to people who work in hospitals: Do they have better health habits than the general population? Or, do they have worse, despite most of them have the appropriate knowledge to follow a healthy lifestyle? This is a study to explore the habits of people working in a hospital, to compare them with the general population and to identify higher risk profiles on which to prioritize preventive interventions.
Methods: Cross-sectional study on health habits with workers from a hospital in Madrid ($n = 399$) using a questionnaire based on the National Health Survey. Descriptive and cluster analysis to classify homogeneous individuals according to health habits and identify risk patterns. Logistic regression was used to identify the independent risk factors that determine the unhealthy profile.
Results: The health habits of workers in a hospital are similar to those of the general population. Determinants of health influenced its distribution: The higher the spending capacity, the better the health habits; the older their age, more chronic disease is seen; women suffer worse mental health.
Conclusions: The results are superimposed onto those of the general population, where they would have been expected to be healthier. There are risk profiles in which to prioritize preventive interventions to promote health.
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¿Son adecuados los hábitos de salud de los trabajadores de un hospital? Influencia de los determinantes sociales de la salud

RESUMEN

Introducción/Objetivo: Quienes trabajan en un centro sanitario podrían no tener mejores hábitos de salud que la población general, aunque tengan los conocimientos adecuados para realizar hábitos de vida saludables. Éste es un estudio para conocer los hábitos de salud de trabajadores de un centro sanitario para, compararlos con los de la población general y diseñar una intervención para mejorarlos.
Metodología: Estudio transversal sobre hábitos de salud con trabajadores de un centro sanitario ($n = 399$) mediante un cuestionario basado en la Encuesta Nacional de Salud (ENSE_2017). Análisis descriptivo y de clúster para clasificar individuos homogéneos según hábitos de salud e identificar patrones de riesgo. Regresión logística para relacionar el perfil insalubre y los determinantes sociales de la salud.
Resultados: Los hábitos de salud son similares a los de la población general y no hay importantes diferencias entre personal sanitario y no sanitario. Los determinantes de la salud influyen en su distribución: a mayor poder adquisitivo mejores hábitos, a mayor edad más enfermedad crónica; las mujeres padecen peor salud mental. Existen grupos expuestos a peores hábitos de salud con mayor oportunidad de mejora.

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Conclusiones: Los resultados son superponibles a los de la población general, donde se hubiera esperado que fueran mejores. Existen perfiles de riesgo en los que realizar intervenciones preventivas para promocionar la salud.

Introduction

According to the World Health Organization (WHO), non-communicable diseases are responsible for the majority of deaths worldwide.[1] Excess weight, unhealthy eating habits, smoking, and physical inactivity are some of the main risk factors.[1] According to the results obtained by the 2017 National Health Survey (NHS) in Spain,[2] it is essential to establish strategies to help to improve health habits.[3]

WHO[4] defines a healthy work environment as one that aims to promote the health and wellbeing of its workers. Workplaces that promote healthy lifestyle habits for their workers not only improve their health but also their self-esteem and mood, helping them to combat stress and generates a good working environment.

With regard to people who work in hospitals: Do they have better health habits than the general population? Or, do they have worse habits, despite the fact that most of them have the appropriate training and knowledge to follow a healthy lifestyle?[5] They might also be influenced by the impact of the social determinants of health that they have witnessed.[6,7] Those workers who have more disadvantaged social conditions would be expected to have worse health than those with more advantaged positions.[8]

This study is part of a health promotion project focused on improving healthy lifestyle habits for workers in a medical centre. It aims to explore the habits of people working in a hospital and analysing their distribution according to the determinants of health[9] and to compare them with the general population. In addition, the final aim is to identify any higher risk profiles on which to prioritize preventive interventions at a later stage.

Methodology

Study design

A quality improvement cycle on the health habits of people working in a hospital. A cross-sectional study with mixed methodology: quantitative and qualitative research. This article presents the results of the quantitative segment of the research.

Population and scope of the study

Workers at the University Hospital of the Red Cross of Madrid (HUCR).

Inclusion criteria

≥18 years old currently working long-term at the HUCR.

Exclusion criteria

Workers with contracts <1 year.

Sample selection

The questionnaire was sent to all workers of HUCR in June 2022. The sample size was not calculated because we had access to the total number of active workers.[10]

Study variables

See Annex I.

Sources of information

Questionnaire (Annex I) based on the NHS (ENSE 2017) and the Madrid City Health Study (2018).[11]

Data analysis

A descriptive analysis (categorical variables: frequencies and percentages and quantitative variables: measures of centralization and dispersion) and cluster analysis was performed to classify homogeneous individuals according to their health habits and to identify risk patterns among the workers.

A bivariate analysis was performed to evaluate the relationship between the quantitative and qualitative variables. A multivariate logistic regression analysis was also performed with the dependent variable being the unhealthy profile cluster and the independent variable, those included in the bivariate analysis presented association. The strength of the association between the variables was measured with the odds ratio (OR). Data analysis was performed using Excel and SPSS-ce:sup]® 26.0.

Results

Descriptive analysis

In June 2022, 850 questionnaires were sent to HUCR workers with a response rate of 47.2%. The main results of global health characteristics of HUCR employees are described in Table 1.

The characteristics of those with chronic disease, their health habits, the capabilities to perform certain functions, and the characterization of workers with hazardous alcohol consumption are described in Annex II.

Bivariate analysis

Differences were found according to the age group (Table 2): The older the individual, the greater the probability of suffering from a chronic disease. Differences were found in tobacco and alcohol consumption: In those aged ≥50 years, there were more ex-smokers and daily alcohol consumers. Younger people when they did drink consumed at least 3–5 drinks. Older workers consumed 6 or more alcoholic drinks a day, 90% fewer times than younger. Regarding the habitual consumption of hypnotics/analgesics, a slightly association was found: the consumption of hypnotics or analgesics was almost 5 times more in the older group. (Fig. 1). Younger workers reported doing regular physical training almost 3 times more often. In cancer screening tests, the majority of older women had had a mammogram in the last 2 years and a small percentage of the younger women had never had a cervical cytology study.

When compared by sex (Table 2), differences were found in mood: women reported almost 3 times more feelings of sadness or irritability. No differences were observed in tobacco consumption, but with regard to daily alcohol consumption: men consumed 5 times more alcohol

Table 1
Global health characteristics of HUCR employees.

Characteristics N, (%)		Total
		(n = 402)
Women		301 (75)
Age group		
18–30 years		36 (9.0)
31–50 years		150 (37.3)
>50 years		158 (39.3)
Unknown		58 (14.4)
BMI. Mean (±SD)		24.4 (±3.9)
Marital status		
Single		130 (32.3)
Married		194 (48.3)
Children		230 (57.2)
Number of children. Mean (±SD)		1 (±1)
Category		
Physician		67 (17)
Nurse		127 (32)
Auxiliary nurse care technician		84 (21)
Other		124 (55)
Level of education		
Professional specialized training		105 (26.1)
University studies		240 (59.7)
Years practicing in that profession. Media (±SD)		17.2 (±11.7)
Work shift		
Morning		249 (62)
Afternoon		36 (9.0)
Time traveling from home to work		
<30 min		134 (33)
30 min–1 h		187 (46.5)
1–2 h		75 (19)
Health status		
Very good		56 (14)
Good		221 (55.)
Regular		106 (26.4)
Bad or very bad		19 (4.7)
Perception of wellbeing	Fairly well	225 (56)
Pain	Mild/moderate	150 (37)
Chronic illness or health problems		171 (42.5)
Low mood (from a little to a lot)		273 (68)
Use of tranquilizers, anxiolytics, antidepressants or painkillers		75 (18.7)
Sleeping hours. Media (±SD)		6.6 (SD: 1.1)
Feeling of discrimination at the hospital		41 (10.2)

SD: Standart Desviation.

daily and more frequently consumed 6 or more alcoholic beverages in a single day (Fig. 1). Men habitually worked-out twice as often as women and had a 90% greater capacity to do what they had set out to do. Slightly differences were found in the overall stress levels, being higher in women (4.25 SD:1.5 vs 4.62 SD:1.5).

According to socioeconomic level which was categorized as strata 3 (Table 2), a linear trend was found between health status and spending capacity: the higher the socioeconomic level, the better the perception of health status. With respect to having habitual pain, the trend was also linear: the higher the socioeconomic level, the less pain reported. The lower the socioeconomic level, the higher the number of smokers, as opposed to alcohol consumption: the higher the spending capacity, the higher the consumption of alcoholic beverages ≥2 days a week. No differences were found in the consumption of fruit and vegetables, but there were differences in physical activity: the higher the socioeconomic level, the greater the number of days spent on sports training. The distance from home to work was shorter with greater spending capacity: a larger population of high-income earners among those who spent less than 30 min travelling to work, less among those who took 30–60 min, and even less so that they took more than 1 h (46%, 35%, 29%; OR 2, 1.6, 1; 95%CI: 1.2–3.7 and 0.9–2.8). In higher income bracket, there was a higher number of people without any risk factors, less among those who had 1 risk factor, and even less so that they had more than 1 risk factor (20%, 18%, 8%; OR 2.9, 1.2, 1; 95%CI: 1.3–6.6 and 0.6–2.4).

When comparing the healthcare and non-healthcare profiles (Table 2), an almost difference was found in the proportion of people suffering from a chronic disease: with 30% fewer chronic patients among the healthcare workers. Also, with regard to the time spent doing moderate physical activity: the non-healthcare workers more frequently did not do any physical activity on any day of the week. However, the healthcare workers spent twice as much time sitting down during their working day. Differences were also found, in favour of the healthcare workers, in their ability to do what they usually set their mind to do, as well as their collaborative abilities with colleagues and to work as part of a team. The overall level of stress was higher in the healthcare workers (4.6 SD:1.4 vs 4.17 SD:1.6).

Those who suffered from a chronic disease (Table 2) reported a worse state of health. They also said that things had not gone well during the previous 2 weeks, reported 5 times more habitual pain and feeling almost 3 times more sadness, as well as consuming 4 times more anxiolytics/analgesics, and sleeping fewer hours (6.5 SD:1 vs 6.7 SD:1.1). This group comprised 70% more ex-smokers and 70% less occasional smokers, and twice as many abstainers; although they reported never having done any moderate physical activity, which was 60% more times than those who did not suffer from chronic disease. The latter engaged in regular physical training 2.6 times more often and reported a 40% greater capacity to complete tasks and twice as much capacity to achieve goals in order to take care of themselves. The chronically ill workers reported rarely having the capacity to consider a regular self-care routine (15.5% vs 9.5%; OR: 1.9; 95%CI: 1.2–3) and felt 90% more discriminated against at work.

Cluster analysis

The possibility of there being worker profiles reflecting unhealthy habits or people who did not take care of themselves was analysed. These different profiles were sought according to the questions, differentiating them into 2 possible clusters (Table 3).

Cluster 1 made it possible to identify the unhealthy risk profile (questions 17, 18, 19, 20, 21, 22, 23, and 24; Annex I). Cluster 2 to detect the profile of people with greater difficulty in taking care of themselves (questions 7 and risk variables created; Annex I).

According to cluster 1, the unhealthiest profile would be that related to being female (35% vs 24%; OR: 1.6; 95%CIOR: 0.9–2.9), older in age and having up to 3 times more risk of bad habits (40%, 33%, 17%; OR: 1, 1.3, 3.2; CI95%OR: 0.6–3.1 and 1.3–8), and with those without chronic disease: a 70% higher risk of having bad habits than the chronically ill workers (34% vs 23%; OR: 1.7; CI95% OR: 1–2.9).

When analysing, Cluster 2 differences were found in those with chronic disease, who showed a lower capacity for self-care (31% vs 21%; OR: 1.6; 95% CI: 1–2.6). In addition, those who took care of themselves more often exhibited 4 times more a good health status (78% vs 45%; OR 4.4; 95% CIOR: 2.7–7.2) and state that things had been going well lately (65% vs 32%; OR 3.9; 95% CIOR: 2.4–6.4). As well as more frequently stating that they never had pain (50% vs 25%; OR 3; 95% CIOR: 1.8–5.1), nor sadness (31% vs 12%; OR 2.5; 95% CIOR: 1.3–4.8) and consuming 70% less drugs (13% vs 33%; OR 0.3; 95% CIOR: 0.2–0.5). When linking the 2 clusters, we found that those with an unhealthy profile were more able to take care of themselves (39% vs 23%; OR: 2.1; 95% CIOR: 1.2–3.8).

Multivariate analysis

This was carried out using the risk factors associated with the unhealthy profile, differences were found by sex, age, and chronic disease. In the overall adjusted analysis, those without chronic disease had twice the risk of having bad habits than those with chronic illness; women had a more unhealthy profile, and the elderly had 5 times more risk of having bad habits (Table 4).

Table 2
Health habits according to social determinants of health.

(%)	Age	<30 R N = 36	31–50 N = 150	>50 N = 158		OR		IC95%OR	
Chronic disease		19	36	56	1	2.2	5.2	0.7–2.3	1–20.5
Consumption of hypnotics		6	17	22	1	1.3	4.7	0.7–2.3	1–20.5
Former smokers		14	23	39	1	2	3.7	1–21.2	4.8–317.6
Alcohol consumption ≥3 drinks/times		36	11	7	7.3	4.6	1	2.7–19.4	1.9–11.3
No alcohol consumption ≥6 drinks/day		56	85	93	1	2.3	10	1–4.9	4.1–25
Regular physical training		50	26	29	2.5	2.9	1	1.2–5.2	1.4–6.2
(%)	**Sex**	**Women N = 301**		**Men N = 101**		**OR**		**IC95%OR**	
Feelings of sadness		34		25		2.8		1.1–7.2	
Daily alcohol consumption		2		8		5.2		1.7–16.4	
No alcohol consumption ≥6 drinks/day		87		74		2.3		1.3–4.1	
Regular training		23		43		2.6		1.6–4.1	
Ability to do what they set out to do		32		47		1.9		1.2–3	
(%)	**Socioeconomic status**	**High R N = 69**	**Average N = 140**	**Low N = 162**		**OR**		**IC95%OR**	
Good health perception[a]		26	11.4	11.7	2.65	2.73	1	1.3–5.4	1.3–5.8
Perception that things are going well[b]		69	55.4	47.5	2.5	1.8	1	1.3–4.5	1–3.3
Absence of pain		56	49	34	2.5	1.3	1	1.4–4.4	0.7–2.4
Usual moderate pain		10	15	27	1	2	3.2	1.1–3.7	1.4–7.6
Smokers		7.4	17.1	26	1	1.7	4.4	1–3	1.6–11.7
Alcohol consumption ≥2 days/week		34	31	20	2	1.1	1	1.1–3.8	0.6–2
Regular physical training		39	32	21	2.4	1.3	1	1.3–4.5	0.7–2.5
(%)	**Professional profile**	**Healthcare N = 303**		**Non-healthcare N = 94**		**OR**		**IC95%OR**	
Chronic disease		41		50		0.7		0.4–1	
Physical inactivity		27		36		1.5		1–2.5	
Sitting during the working day		52		25		3.3		2–5.2	
Ability to do what they set out to do		56		38		2		1.3–3.3	
Ability to collaborate with colleagues		23		13		2		1–3.8	
Ability to work in a team		27		13		2.5		1.3–4.8	
Visit to the dentist >2 years ago		22.6		12.2		2.2		12–3.9	
(%)	**Chronic disease**	**Yes N = 173**		**NO N = 230**		**OR**		**IC95%OR**	
Perception of poor health[a]		11		0		28.2		3.7–212.8	
Perception than things are going badly[b]		10		4		2.8		1.2–6.4	
Usual moderate pain		39		7		8.1		4.5–14.5	
Moderate–intense sadness		42		24		3		1.7–5.4	
Anxiolytic/analgesic/hypnotic consumption		32.6		8.7		5		2.9–8.8	
Former smokers		34		23.5		1.7		1–2.6	
Occasional smokers		1.7		5.2		0.3		0–1.1	
No alcohol consumption		28.2		16.1		2		1.3–3.3	
Physical inactivity		37		24		1.6		1.1–2.5	
Regular physical training		17		35		2.6		1.6–4.2	
Ability to complete tasks		71		78		1.4		0.9–2.3	
Ability to achieve goals care		30		36		2.2		1.3–3.7	
Feelings of discrimination		14.2		8		1.9		1–3.7	
Control of AT in the last year		80		71		1.6		1–26	
Analytical in the last year		80		56		3		1.9–48	

[a] As opposed to the question: "In the last 12 months, how would you say your state of health has been?" Very good or good responses were used to consider the perception of good health, and bad or very bad to consider the perception of poor health.

[b] As opposed to the question: "How have things been going for you in the last 2 weeks?" Little bad or very bad responses were used to consider the perception than things are going badly, and great or fairly well, used to consider the perception than things are going well.

Discussion

Despite the study being performed in a healthcare centre and having the participation of 70% healthcare workers, the healthy habits obtained can be superimposed onto those of the general population in Spain. According to data from the ENSE 2017: the proportions and distribution by sex, age groups, and socioeconomic level were similar to those of the general population, although it would have been expected that they would be healthier because of their knowledge of the prevention of illness and health promotion. However, this knowledge does not necessarily imply self-care. Nevertheless, we have identified risk profiles in which to prioritize preventive interventions to promote health in a healthcare centre.

The hospital studied is located in the metropolitan area of Madrid and provides care services to other public hospitals. The sample of participants is representative of the hospital's reality according to professional categories.[10]

Since we do not have a random selection process, the statistical measures included and the overall uncertainty are likely to be greater than those derived from random sampling methods: an unpredictable error. In other words, the error could occur in either direction, which makes the uncertainty greater than that of random sampling methods.

The NHS, on which this work is based, is carried out in Spain every 5 years, alternating every 2 years with the European Health Survey. Both allow international comparisons and provide information about the general health status of the Spanish population.
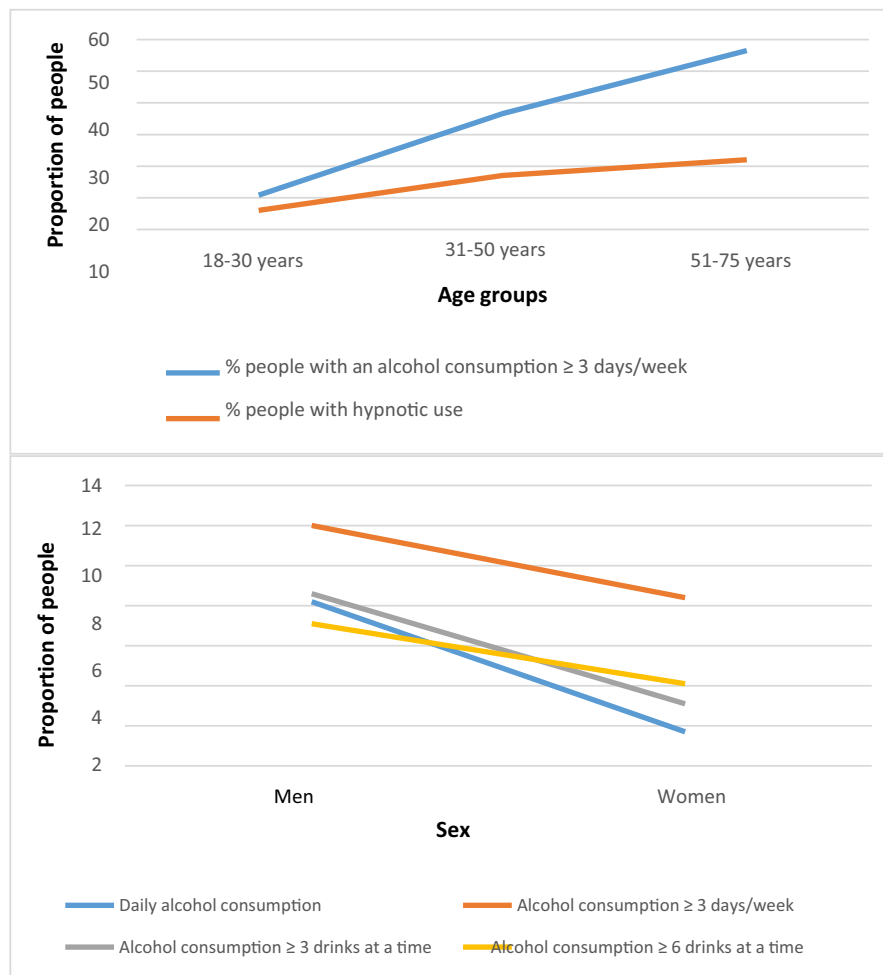
Fig. 1. Alcohol and hypnotic consumption by age groups and sex.

The hypothesis of this study focuses on 2 aspects: the similarities in the health habits of hospital workers with the general population and socioeconomic strata, and the existence of higher risk profiles on which to intervene preferentially.

According to the literature, there is possible evidence that healthcare workers do not have better health habits than the general population, and one might think that after the COVID-19 pandemic occurred they may be worse.[6,12]

Our results show that the health habits of workers in a hospital are very similar to those of the general population, according to the determinants of health and not to their health profile. Their socioeconomic

level, age, and sex influenced the burden of disease and the distribution of habits: the higher the spending capacity, the lower the burden of disease and the better the health habits; the older their age, the greater the probability that they would suffer from chronic disease. Women tended to suffer worse mental health. Smoking and alcohol consumption patterns were distributed in a very similar way to those of the general population and there were no differences between the healthcare and non-healthcare workers, which could mean that the ability to take care of oneself does not depend on any previous health knowledge.

The main axes of health inequality are social position, age, race, territory, and gender.[6] Social class is established by occupation and is one

Table 3
Profiles elaborated according to cluster analysis.

Cluster 1: Unhealthy risk profile Characteristics N (%)		Low-risk group	High-risk group
How often do you drink alcoholic beverages?	Between 4 and 7 days a week	8 (4)	11 (15)
When you drink, how many drinks do you normally consume?	More than 3 at a time	16 (8)	21 (28)
How often do you drink 6 or more alcoholic beverages in a single day?	At least once a month	5 (2.5)	10 (13.3)
Weekly fruit consumption	3 times or less	2 (1)	45 (54.7)
Weekly vegetable consumption	3 times or less	12 (6)	39 (50.6)
Are you sitting most of the time during your work activity?	Yes	58 (28.7)	28 (35.3)
How many days a week do you engage in moderate–intense physical activity?	None	29 (14.4)	35 (47)
Which of these options best describes how often you do some physical activity in your free time?	I do not exercise	12 (6)	13 (17.3)
Achieving goals to take care of yourself	Few times	1 (0.3)	60 (61.2)
Establish a self-care routine	Rarely or never	6 (2.1)	87 (88.8)
Feeling empowered to do what you set out to do	Rarely or never	0 (0)	45 (45.1)
Moderate physical activity	Never or almost never	194 (67)	86 (88)
Tobacco use	Daily, occasional, or ex-smoker	64 (22)	26 (26.5)
Alcohol consumption	Risky consumption	85 (29)	25 (25.5)

Table 4
Risk factors associated with unhealthy profiles.

	N	OR bivariate	CI95% OR bivariate	Multivariate OR	CI 95%-multivariate
Age groups					
18–30 years	30	1		1	
31–50 years	106	1.3	0.6–3.1		
>50 years	100	3.2	1.3–8	5	1.9–13.2
Women	205	1.6	0.9–2.9	2.1	1.1–4.2
No chronic disease	172	1.7	1–2.9	2.4	1.3–4.5

of the most used indicators of socioeconomic position. In our study, the approach to socioeconomic status has been through professional categories, which classify workers into different degrees of spending capacity according to their level of studies and salary tables.

The differences between the Spanish population and the healthcare workers were in the proportion of women with respect to men: in HUCR, the percentage of women (20–65 years old) was much higher (75.12% vs 49.45%), and the proportion of people with university degrees, higher in HUCR (50.7% vs 39.7%).[13,14]

In our study, almost 70% of workers reported good/very good health, 84% in the higher income brackets, which overlaps with national surveys, where 85% of the highest class perceives their health as good or very good.[2]

According to the European Health Survey 2020, in Spain, 49.3% of men and 59.1% of women ≥15 years of age have perceived chronic health problems.[15] In this study, 42% reported having some chronic health problem: most of them complied with their health controls, however, 20% of them did not take care of themselves and are a priority profile to work with.

Regarding mental health, the results were in line with the general population: women expressed more feelings of sadness or discouragement during the previous 2 weeks. This could suggest the need to carry out interventions to improve the mental health, which could be especially beneficial to older women and could result in a greater multiplier effect in this subgroup.

According to the European Health Survey 2020, in Spain, physical pain affects 40.3% of the population aged ≥15 years and 56.7% aged ≥65 years.[16] In HUCR, almost 40% reported feeling habitual pain, which reflects an opportunity for improvement.

The consumption of tranquilizers, anxiolytics, or analgesics during the previous 2 weeks was higher than in the general population. Figures above 10% of users of these drugs reflect another area for improvement.

In Spain, more than one-third (38.3%) of the population over ≥15 years of age remain seated for most of the day.[2] This figure overlaps with our results. Men, the youngest members and the more advantaged social classes, reported more frequent regular work-outs. In the HUCR, the percentage of overweight workers (BMI 26–29) and people with obesity (BMI ≥30) are lower than in the general population (24% vs 37% and 8% vs 17%; respectively).[2]

In our study, almost 80% reported the adequate consumption of fruits and vegetables. Tobacco consumption was very similar to that of the general population: Higher in the low socioeconomic levels, which is consistent with the results obtained worldwide.[17]

The pattern of alcohol consumption in the HUCR is similar to that of the general population, where 33% of people ≥15 years of age drink regularly (≥1/week), another third never drink at all, and the remaining third drink occasionally.[2] There were twice the number of men who were habitual drinkers than women, with young people showing a higher level of occasional heavy drinking. Alcohol consumption by groups of healthcare levels did not show differences between professional profiles, which demonstrated that health habits are not related to professional profile, but because of the influence of those

determinants of health and other factors that are most probably associated with social factors.

The impact of socioeconomic level on health can also be measured by the time spent travelling to work from home. According to the consulting firm Michael Page,[1] in Spain, the average travelling time is 36 min. In our study, one-third of the workers took less than 30 min to get to work, who were distributed mainly among the high socioeconomic status workers.[18]

When analysing self-care skills and the ability to perform certain functions, most of them reported having the ability to work in a team and to collaborate with their colleagues, suggesting that they are committed professionals and would welcome actions that promoted a good work environment.

This research work has allowed us to identify the risk profiles on which to prioritize actions to improve healthy habits. Middle-aged women of low socioeconomic status and without chronic disease were the group exposed to the worst health habits and in whom the greatest opportunity for improvement was found, and workers with chronic disease, who had less capacity for self-care would also benefit from intervention.

Conclusions

The health habits of workers in a health centre are similar to those of the general population. These results do not depend on the level of profession but on the social determinants of health; therefore, they could be superimposed onto any scenario in which we want to intervene in the workplace. This work will be the starting point of a health promotion project aimed at workers to improve their health and to make them acknowledge that their health is also a key factor in the functioning of their organization. The results of the study give us the opportunity to focus interventions on those profiles that present a higher risk, allowing us to design specific and effective strategies to address the identified needs.

This work also recognizes the need for the employers to take care of their workers as a strategic line of the humanization of health care, in addition to its multiplying effect on society, if it is adopted as an example by other centres with similar characteristics and by the general population. Likewise, it may represent a first step towards turning the healthcare centre into a Health Promoting Hospital,[19,20] that not only offers quality care, but in addition, develops a culture, organization, and working environment that promotes health, both among its patients and among its workers, as well as to the community of reference.

Funding

Ethical aspects

The study was approved by the ethics committee of Hospital Universitario La Paz. All participants signed the informed consent form.

Declaration of competing interest

The authors declare that they do not have any competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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[1] https://www.michaelpage.es/prensa-estudios/estudios/transport-commute/resultados-de-espa%C3%B1a.

Acknowledgments

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.mcpsp.2024.100487.

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