

# Women working as cleaners in Spain: working conditions and use of psychotropic drugs

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## ABSTRACT

**Goals** To describe the exposure to psychosocial risks at work and the consumption of psychotropic drugs and opioids among women working as cleaners; and to analyse the association between their exposure to psychosocial risks and drug use.

**Methods** Observational cross-sectional study based on an online survey (collected during April and May 2021) from the wage-earning population in Spain. In this study, only women working in manual occupations were included (n=3430). Working conditions and drug consumption of cleaning workers were compared with those of other manual workers through bivariate analysis. The adjusted prevalence ratios and the corresponding 95% CIs were estimated using Poisson regression models with robust variance.

**Results** Cleaning workers were older and had more problems making ends meet than other manual workers and were significantly more exposed to low possibilities for development (85.2 (95% CI 81.8 to 88.0)), high strain (51.9 (95% CI 47.3 to 55.9)) and low social support from colleagues (72.0 (95% CI 68.1 to 75.7)) and supervisors (61.7 (95% CI 57.3 to 65.6)). They also scored higher prevalence rates for the use of tranquillisers (37.7 (95% CI 32.0 to 43.3)) and opioids (33.3 (95% CI 27.9 to 38.6)) consumption indicators. This consumption was associated significantly with high strain exposure and high insecurity over working conditions.

**Discussion** Under the umbrella of the 2012 labour reform, cleaning companies shift the pressure and burden they have on ordinary cleaning staff in the form of low wages and precarious working conditions. Our results imply that addressing adverse working conditions, mainly high strain and insecurity over working conditions, may significantly contribute to reducing the gender and social inequalities among cleaning workers.

## INTRODUCTION

The world of work in Western countries has changed beyond recognition since the 1970s. The deregulation of the labour market, less restrictive labour management policies and substantial changes in power relations between capital and labour,<sup>1</sup> together with a declining impact of trade unions, have contributed to the fast growth of new (and old) precarious forms of employment.<sup>2</sup>

In Spain, these changes cannot be completely understood without considering gender relations. During the 80s there was a massive entry of women into the paid labour market, marked by a strong

## WHAT IS ALREADY KNOWN ON THIS TOPIC

- ⇒ Despite the importance of the subject from an equity-focused public health perspective, cleaning jobs have been traditionally scarcely studied.
- ⇒ Exposure to adverse psychosocial work environment has been related to psychotropic drug, such as antidepressant and opioid use. Working women older than 45 years have been identified as having a clear risk profile with respect to hypnotic use.
- ⇒ Thus, the occupational vulnerability of female cleaning workers may imply an excess of drug use, as has been reported among similarly precarious collectives such as chambermaids.

## WHAT THIS STUDY ADDS

- ⇒ Women in cleaning jobs have worse exposure to psychosocial risks than women working in other manual jobs regarding high strain, low possibilities for development and low social support from colleagues and supervisors, while are less exposed to emotional demands.
- ⇒ Regarding drug use, women in cleaning jobs show a non-significantly higher prevalence than other manual workers.
- ⇒ The tranquiliser and opioid use of women in cleaning jobs were mainly associated with exposure to high strain.

## HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

- ⇒ Our results imply that addressing adverse working conditions, mainly high strain and insecurity over working conditions, may significantly contribute to reducing social inequalities and preventing the use of psychotropics and opioids among cleaning workers.
- ⇒ Changing labour management practices to achieve a healthier work organisation could be a first step as the legal framework and labour and health institutions propose.

polarisation of female employment according to socioeconomic status and a remarkably high level of structural unemployment among women.<sup>3</sup> Furthermore, women in the Spanish labour market faced, and still do, a strong sexual division of labour featured by horizontal and vertical segmentation,



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which led many women to be employed at the lowest stratum of the labour market, in occupations particularly affected by insecurity and precariousness.<sup>4</sup>

Cleaning is a fundamental part of the capitalist system and the world of work, but invisible and socially under-recognised. It is carried out by millions of people all over the world in a way that impinges as little as possible on other staff.<sup>5</sup> Both in Spain and in the European Union the cleaning sector in offices, hotels and similar establishments has grown steadily over the past decades, in terms of both the number of companies and the number of people employed.<sup>6</sup> It is an activity that firms and institutions tend to outsource to intermediaries,<sup>7</sup> in a neoliberal dynamic to minimise costs, which entails a deterioration of employment and working conditions among cleaning jobs<sup>8</sup> and often compromising workers' health.<sup>9</sup> Moreover, cleaning is framed as 'feminine work', an extension of housework,<sup>5</sup> which does not require any training as it is learnt through the differential socialisation of gender roles. Consistent with gender mandates, the mere fact of being a woman is usually a sufficient qualification. Indeed, cleaning workers' working and living conditions must be understood under the intersectional perspective, so that different social categories and axes of inequality and powerlessness, such as gender, class and ethnicity, intersect and combine to create specific exposure groups.<sup>10</sup>

Despite the importance of the subject from an equity-focused public health perspective, cleaning jobs have been traditionally scarcely studied. Previous work has focused on dermatological, respiratory and musculoskeletal problems.<sup>11</sup> Even though exposure to psychosocial risks has been identified as one of the main challenges in occupational safety and health, with a proved association with mental disorders and cardiovascular diseases,<sup>12</sup> the research on exposure to psychosocial risks among cleaners is limited. It has been shown that female office cleaners are exposed to poor quality leadership and little support from colleagues, which increases the risk of poor mental health<sup>13</sup> and that they have little control over their working conditions, as well as time pressure and monotony.<sup>14</sup>

Exposure to an adverse psychosocial work environment has been related to psychotropic drug,<sup>15</sup> such as antidepressant<sup>16</sup> and opioid<sup>17</sup> use. Working women older than 45 years have been identified as having a clear risk profile with respect to hypnotic use.<sup>18</sup> Thus, the occupational vulnerability of female cleaning workers may imply an excess of consumption of drugs, as has been reported among similarly precarious collectives such as chambermaids.<sup>19</sup> This situation may be exacerbated by the degradation of working conditions resulting from the pandemic, especially for vulnerable groups such as women.<sup>20</sup>

In view of this lack of information and given the continued growth of employment in the cleaning sector in Europe and Spain, we present a timely overview of the working conditions among cleaners to identify potential occupational health inequalities. This study has two main objectives: to describe the exposure to psychosocial risks at work and the use of psychotropic drugs and opioids among women working as cleaners, comparing with other female workers employed in manual jobs; and to analyse the association between their exposure to psychosocial risks and drug use, in Spain during the year 2021.

## METHODS

### Design, population and sample

The present observational cross-sectional study is based on data from an online survey (COTS2)<sup>21</sup> carried out from 26 April to 24 May 2021, which was distributed by email to individuals

affiliated with the greater trade union in Spain, Comisiones Obreras (CCOO), via the trade union. Inclusion criteria were: (1) wage-earners residing in Spain who had a job on 14 March 2020 (the day the state of alarm began), (2) working as an employee at the time of answering the survey. The sample size was  $n=22\,522$  individuals, which corresponded to the total number of completed questionnaires (removing those corresponding to worker resident outside Spain and those registers in which the number of valid responses was less than 20%). The sampling design applied is reported elsewhere.<sup>22</sup> Due to the high level of feminisation in the cleaning sector, we selected only women with manual occupations, resulting in a sample comprised  $n=3\,430$  women in manual occupations.

### Measures and variables

Job category was assessed by asking participants 'What type of work or activity do you do at work?' The answers were classified using the third-level categories from the 2011 Spanish National Classification of Occupations (CNO-11), which is based on the International Standard Classification of Occupations (CIUO-08). As we were interested in workers in cleaning services in buildings, companies or institutions, we recoded the answers according to a two-categories variable entitled job category, which comprised: cleaning workers and other workers in manual jobs (see the distribution of occupations in online supplemental table s1).

Drug use was assessed with two questions coming from the EDADES survey on alcohol and other drugs in Spain, part of the National Drug Plan:<sup>23</sup> 'In the past thirty days, have you taken any tranquilisers/sedatives or sleeping pills?' and 'In the past thirty days, have you taken painkillers (opioids)?'. Both questions were dichotomised (no/yes).

Data on exposure to psychosocial risk factors were obtained using the third version of the work-related psychosocial risk assessment instrument COPSOQ-ISTAS21.<sup>24</sup> We selected the 10 psychosocial dimensions with the strongest theoretical background, those that better approximate the reality of the Spanish current labour market, and those pertinent for the purposes of this study regarding a feminised activity. Specifically, quantitative demands, work pace, influence at work and possibilities for development, were used and categorised as a good approach to characterise job strain as defined by Karasek.<sup>25</sup> Furthermore, the dimensions of job insecurity, which were measured based on the insecurity over working conditions (ie, changes affecting working hours, tasks and salary) and job loss insecurity, social support from colleagues and supervisors, emotional demands and work-life conflict were considered. Each dimension was constructed as a sum of between 2 and 5 Likert-type items with five response options and standardised to lie between 0 and 100. The self-reported scores obtained for the six scales were dichotomised using cut-off points corresponding to medians.

Finally, we included other socio-demographic and occupational variables such as age, country of birth, living with someone younger than 12 years or older than 70 years, type of contract and whether the current salary covers the basic needs of the household.

### Statistical analysis

Each variable of interest was described in terms of sample counts and percentages. Differences between job categories (cleaning vs other manual workers) were calculated according to socio-demographic characteristics, exposure to psychosocial risks and drug use indicators. The differences were compared using the

**Table 1** Socio-demographic and occupational characteristics. Waged women by job category, n (%)

		Cleaning workers (n=543)	Other manual workers (n=2887)
Age*	Lower than 35 years	27 (5.1)	427 (14.9)
	35–49 years	200 (37.7)	1420 (49.7)
	More than 50 years	303 (57.2)	1012 (35.4)
Country of birth	Spain	489 (96.8)	2652 (97.5)
	Other	16 (3.2)	68 (2.5)
Living with someone <12 years or >70 years*	No	358 (72.6)	1619 (62.6)
	Yes	135 (27.4)	968 (37.4)
Type of contract	Permanent	413 (76.2)	2219 (76.9)
	Temporary	129 (23.8)	666 (23.1)
Salary covers basic needs*	Always/usually	207 (38.2)	1264 (43.9)
	Never/only some/sometimes	335 (61.8)	1615 (56.1)

Total cell counts may vary due to missing data.

\*Statistically significant differences <0.05.

Pearson  $\chi^2$  statistic for categorical variables (the level for statistical significance was set at <0.05). Age-adjusted prevalences and 95% CIs of drug use indicators were calculated stratified by job category. Adjusted prevalence ratios and the corresponding 95% CIs were estimated using Poisson regression with robust variance, only among the cleaning workers. Two approaches have been used, one fitting age-adjusted models for each one of the psychosocial exposure (Model 0) and another including all other psychosocial exposures, wage, nationality and living with dependant (Model 1). Respondents with missing values for any of the variables used in the regression analysis were excluded. All analyses were conducted with Stata V.11.0 (StataCorp, College Station, Texas, USA).

## Ethics

This study was performed in accordance with the standards of Good Clinical Practice and the principles of the Declaration of Helsinki, guaranteeing the fulfilment of regulation (European Union) 2016/679 of the European Parliament and the Council of 27 April 2016 on the protection of natural persons regarding the processing of personal data and the free movement of such data. The COTS2 study was approved by the Ethics Committee of the Universitat Autònoma de Barcelona (CEEAH-5470). Participants signed an online consent form.

## RESULTS

We analysed n=3430 women working in manual occupations, of whom n=543 (15.8%) were cleaning workers in companies or institutions. Table 1 displays their socio-demographic and employment characteristics. More than half of the cleaning workers were aged 50 or older, a significantly higher proportion compared with women in other manual jobs and around 30% of cleaners lived with someone younger than 12 or older than 70 years old, less than among the other women working in manual jobs. Around 3% of cleaners were born outside Spain—a similar proportion than the other manual workers. As for employment conditions, about 23% of the whole sample had a temporary contract. Finally, 61.8% of cleaners had a salary that never or almost never enabled them to meet their basic needs, compared with 56.1% of the other female workers in manual jobs.

Data on exposure to psychosocial risks are presented in table 2. Cleaners were significantly more exposed to low possibilities for

**Table 2** Prevalence and 95% CI of psychosocial exposures. Waged women by job category.

	Cleaning workers	Other manual workers
High quantitative demands	18.9 (15.7 to 22.5)	18.5 (17.1 to 20.0)
High work pace	57.0 (52.7 to 61.2)	59.9 (58.0 to 61.7)
Low influence	37.2 (33.1 to 41.4)	40.2 (38.4 to 42.0)
Low possibilities for development	85.2 (81.8 to 88.0)	60.8 (59.0 to 62.6)
High strain	51.6 (47.3 to 55.9)	43.9 (42.0 to 45.7)
High emotional demands	51.8 (47.4 to 56.0)	74.9 (73.3 to 76.5)
High work-life conflict	56.6 (52.3 to 60.8)	61.6 (59.8 to 63.4)
Low social support from supervisors	72.0 (68.1 to 75.7)	61.3 (59.5 to 63.0)
Low social support from colleagues	61.6 (57.3 to 65.6)	43.9 (42.1 to 45.7)
High insecurity over working conditions	56.8 (52.5 to 61.0)	59.3 (57.5 to 61.1)
High job loss insecurity	41.1 (37.0 to 45.4)	45.1 (43.3 to 47.0)

development (85.2% (95% CI 81.8% to 88.0%)), high strain (51.6% (95% CI 47.3% to 55.9%)) and to low social support from supervisors (72.0% (95% CI 68.1% to 75.7%)) and from colleagues (61.7% (95% CI 57.3% to 65.6%)) than the other manual workers. On the contrary, cleaners were better in terms of emotional demands. Moreover, and similarly to women working in other manual jobs, exposure prevalence is more than half regarding high work pace, high work-life conflict and high insecurity over working conditions.

Table 3 shows the indicators of drug use. Cleaning workers scored a non-significantly higher age-adjusted prevalence than other manual workers in consumption indicators, with a 39.1% (95% CI 35.1% to 43.3%) consuming tranquilisers versus 34.2% (95% CI 32.4% to 35.9%); and 34.3% (95% CI 30.4% to 38.4%) consuming opioids versus 29.6% (95% CI 27.9% to 31.3%).

Table 4 presents the prevalence ratio of consuming tranquilisers and opioids among cleaners by psychosocial dimensions. In the age-adjusted models, almost each of the psychosocial dimensions was significantly associated with tranquillisers and opioids consumption, so that higher psychosocial exposure implied more risk of consumption. In the fully adjusted models by age, all psychosocial risks, wage, country of birth and living with someone younger than 12 or older than 70 years old, the risk of consuming tranquilisers was only higher if they were exposed to high strain (1.41 (95% CI 1.06 to 1.86)) and to high insecurity over working conditions (1.50 (95% CI 1.12 to 1.99)), while the risk of consuming opioids was higher when exposed to high strain (1.44 (95% CI 1.06 to 1.96)).

## DISCUSSION

To our knowledge, this is the first study to explore the work-related psychosocial risk exposure and its possible association with drug use among female cleaning workers in Spain. The main results show that women in cleaning jobs have worse exposure to psychosocial risks than women working in other manual jobs regarding high strain, low possibilities for development and

**Table 3** Age-adjusted prevalence and 95% CI of tranquilisers and opioids use

	Cleaning workers	Other manual workers
Use of tranquilisers	37.7 (32.0 to 43.3)	34.2 (32.1 to 36.4)
Use of opioids (painkillers)	33.3 (27.9 to 38.6)	29.7 (27.7 to 31.7)



**Table 4** Prevalence ratios and 95% CIs of tranquillisers and opioids use among cleaners by psychosocial dimensions, age-adjusted and adjusted by socio-demographic factors

	Model 0	Model 1
<b>Tranquillisers</b>		
High strain	1.77 (1.40 to 2.25)*	1.41 (1.06 to 1.86)*
High emotional demands	1.72 (1.37 to 2.16)*	1.29 (0.99 to 1.68)
Work-family conflict	1.73 (1.36 to 2.21)*	1.19 (0.90 to 1.59)
Low social support from colleagues	1.40 (1.10 to 1.77)*	1.25 (0.96 to 1.64)
Low social support from supervisors	1.43 (1.08 to 1.88)*	1.02 (0.75 to 1.40)
High insecurity over working conditions	1.74 (1.36 to 2.22)*	1.50 (1.12 to 1.99)*
High job loss insecurity	1.24 (1.00 to 1.53)*	0.97 (0.76 to 1.24)
<b>Opioids (painkillers)</b>		
High strain	1.81 (1.39 to 2.35)*	1.44 (1.06 to 1.96)*
High emotional demands	1.63 (1.28 to 2.09)*	1.26 (0.94 to 1.69)
Work-family conflict	1.77 (0.36 to 2.31)	1.27 (0.91 to 1.75)
Low social support from colleagues	1.24 (0.96 to 1.60)	1.08 (0.81 to 1.44)
Low social support from supervisors	1.45 (1.07 to 1.97)*	1.04 (0.74 to 1.47)
High insecurity over working conditions	1.49 (1.16 to 1.92)*	1.28 (0.95 to 1.72)
High job loss insecurity	1.02 (0.80 to 1.29)	0.85 (0.64 to 1.12)
Adjusted for:	age	age+other psychosocial risks+wage+nationality+dependant

\*Significant prevalence ratio <0.05.

low social support from colleagues and supervisors, while are less exposed to emotional demands. Regarding drug use, women in cleaning jobs show a non-significantly higher prevalence than other manual workers. The tranquiliser and opioid use were mainly associated with exposure to high strain.

Female cleaners in our sample were older than other women in manual jobs, as has been reported before.<sup>13</sup> They may be representing working-class women who entered the labour market at an older age, to keep their households afloat at a time of rising male unemployment<sup>26</sup> or after separating from their partner, only finding employment in these low-paid jobs.<sup>3</sup> Furthermore, women in these jobs cannot make ends meet as frequently as women in other manual jobs, almost stating their salary does not allow them to cover their basic needs. This is consistent with the fact that the market value of care activities is lower than other ones and much lower when it comes to reproducing domestic work.<sup>27</sup> The proportion of migrant women among cleaners was similar to other manual occupations. This low presence of the migrant population in a sector with a high female migrant prevalence<sup>28</sup> could be explained by the sampling method and the focus on unionised workers. So, specific research is needed, to avoid invisibilising this fundamental axis of inequality.

As regards exposure to psychosocial risks, cleaning workers are more exposed than other women in manual jobs to low possibilities for development (showing the lack of possibilities to apply their skills and knowledge and learn new ones), high strain and low social support. The high work pace in these feminised cleaning jobs could be related to aspects such as tight staffing levels, workload measured by metres to clean without considering space features, reduction of hours contracted without reducing the workload and working tools not being repaired or

of poor quality. On the other hand, low possibilities to apply professional skills and knowledge could have to do with a job designed with low cognitive content and low variety applying archaic working methods characterised by command and control or radical division of labour which deny worker direct participation in substantive questions such as necessary tools, staffing needed, ergonomics or service quality.<sup>29</sup> Finally, low peer support may have to do with the individual design of most cleaning jobs,<sup>30</sup> so that there are no colleagues who can provide functional help in carrying out the work or, in the rare case team exists, a high workload could not leave time to help. Also, middle managers are not assigned to help workers, but only to supervise them according to command-and-control management style.

Cleaners show a non-significantly higher consumption of tranquillisers and opioids than other manual workers. The proportions are particularly high (39.3% consuming tranquilisers and 34.2% opioids) compared with the general feminine working population in Spain in 2020 (27.4% and 22.2%, respectively),<sup>22</sup> and to women working in essential employments (29.1% and 25.5%, respectively).<sup>20</sup> The use of tranquillisers is known to increase with age and to be higher among women<sup>31</sup> and it is related to the treatment of mental health problems such as depression or anxiety, while the use of opioids for the treatment of injuries and pain. It has been shown that cleaning workers present a high risk of musculoskeletal, dermatological and respiratory problems<sup>11</sup> and a higher incidence of disability pension.<sup>32</sup> However, the use of psychotropic drugs and opioids has not been addressed, although the results presented here highlight it as a real public health issue.

When seeking for association, all psychosocial factors separately were found to be associated with psychotropic use and almost all with opioids. If analysed together and including other socio-demographic and economic conditions, only high strain exposure (one of the significantly higher psychosocial exposures among female cleaners) was found to be a risk factor for the consumption of both psychotropics and opioids, and high insecurity over working conditions (which in this case is significantly lower among female cleaners) for the use of psychotropics. This result is consistent with the main result of a recent meta-analysis.<sup>33</sup> So, the use of psychotropics and opioids might be partly explained by the exposure to high strain and high insecurity over working conditions, which have been strongly related to cardiovascular disease and poor mental health,<sup>12</sup> as well as to musculoskeletal pain.<sup>34</sup>

The present study has both limitations and strengths. The main limitation is that data was collected through an online survey and, moreover, to unionised workers. So, a selection bias may occur, which could explain the low participation of workers without contract and migrant workers, as well as healthier working population. While the sample size is substantial, and the trade union CCOO encompasses all sectors of economic activity, we must refrain from asserting the representativeness of the sample for the entire Spanish working population. Similarly, we cannot be certain about the response rate, as for data protection reasons, the invitation to participants was carried out by union technicians, without the direct involvement of the researchers. We do not know the exact number of invitations sent out, and although it is known that there were a considerable number of outdated email addresses, indicated by error messages received, the exact figure was not recorded. It is also unclear how many emails did not arrive without notification, let alone how many reached addresses that were never checked. However, sensitivity analysis was carried out and showed that the bias would not have a relevant effect on the estimates.<sup>22</sup> Furthermore, the overall

number of cleaning workers was quite small. The CIs must therefore be interpreted with some caution, and the lack of statistical significance in some of the relationships may be due more to the lack of power than to the absence of real relationships. Moreover, the cross-sectional nature of data does not allow us the identification of the causal chain or its directionality. However, previous evidence from prospective studies, showed that psychosocial exposures are prospectively related to psychotropic drug use.<sup>33</sup> Finally, we only obtained information on formal salaried workers, thus excluding cleaning workers under other contractual regimes, as well as those without a labour contract, so that that the full complexity of this occupational sector could not be reflected. The main strength is that this study is one of the few studies on cleaning workers in offices, hotels and other institutions in Spain (and in Europe as a whole). In addition, this study is based on the theory of intersectionality,<sup>10</sup> specifically, it carries out an intraclass analysis, focusing on a usually invisibilised group in which several axes of inequality intersect.

Under the umbrella of the 2012 labour reform, cleaning companies shift the pressure and burden they have on ordinary cleaning staff in the form of low wages<sup>5</sup> and precarious working conditions, as shown in this study. This situation could have undermined both the development of common identities and the unionisation in the sector.<sup>35</sup> However, the opposite trend has emerged in the last few years. In Spain, chambermaids and cleaners have led important strikes and mobilisations, in a new class feminine political movement demanding the improvement of their labour and social rights.<sup>36</sup> The results of this study can support their claims. Ignoring the working conditions, psychosocial exposure and drug use of these workers not only puts the system itself at risk but also deepens the socioeconomic and gender inequalities that these women face. Our results imply that addressing adverse working conditions, mainly high strain and insecurity over working conditions, may significantly contribute to reducing social inequalities and preventing the use of psychotropics and opioids among cleaning workers. Changing labour management practices to achieve a healthier work organisation could be a first step as the legal framework and labour and health institutions propose.<sup>37</sup>

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