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Research article

Impact of insomnia: Cultural and societal aspects from a European survey

Le retentissement de l'insomnie : Aspects culturels et sociétaux au travers d'une enquête européenne Sylvie Royant-Parola ^{a, *}, Isabelle Poirot ^b, Pierre A. Geoffroy ^{c, d, e}

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ABSTRACT

Objectives: This European study explored the cultural and societal aspects of chronic insomnia by means of a survey undertaken in France, Germany, Italy, Spain, and the United Kingdom. The primary objectives were to understand the impact of insomnia on the daily lives of patients, both personally and professionally, and to evaluate the patients' perceptions and coping strategies thus identifying cultural differences in the management of this disorder.

Methods: Based on online panels targeting insomnia sufferers, the survey included 755 patients aged 35 to 65 years with moderate to severe insomnia for at least three months, occurring at least three times per week (DSM-5 criteria for insomnia disorder, ISI score 15–28). Topics covered included the impact of insomnia on daily life, strategies for coping and managing insomnia, and patients' perceptions and views of insomnia.

Results: A total of 755 patients completed the questionnaire. Most respondents were women (70%) and between 35 and 49 years of age (50%). About half of the patients (49%) had severe insomnia, with 49% experiencing it for over three years. Nearly 70% did not initially consider their insomnia serious, and 73% believed their condition would improve over time. Stress (39%), difficulty relaxing in the evening (37%), and a rapid flow of thoughts (37%) were identified as the main causes of insomnia. Insomnia was shown to significantly affect daily life, particularly work performance, relationships, and maintaining healthy habits. British patients were the most affected, with 85% reporting decreased work performance. In France, only 51% reported difficulties maintaining relationships. There were 77% of Britons who felt exposed to dangerous situations, such as drowsiness while driving (47%). Coping strategies varied by country but, overall, breathing exercises (43%), meditation (32%), and reducing caffeine intake (44%) were the most popular. Healthcare consultation approaches also varied. French patients consulted general practitioners (89%) but rarely specialists, while Germans consulted sleep specialists (20%) and psychiatrists (19%). Overall, 61% reported that doctors recommended lifestyle changes. Conclusions: The survey highlights cultural differences in insomnia perception and management in Europe. Insomnia is often trivialized, thus delaying management. The results underline the need to raise awareness among patients and healthcare professionals of the importance of insomnia and its consequences on mental and physical health. Addressing chronic insomnia requires a multifaceted approach that includes cultural sensitivity, patient education, and proactive healthcare engagement. By understanding and integrating these elements, healthcare providers can better support patients to manage their condition, ultimately improving their quality of life.

RÉSUMÉ

Objectifs: Cette étude explore les aspects culturels et sociétaux de l'insomnie chronique au travers d'une enquête menée en Europe (France, Allemagne, Italie, Espagne, Royaume-Uni). Les principaux objectifs sont d'analyser l'impact de l'insomnie sur la vie quotidienne des patients et d'identifier les différences culturelles dans sa prise en charge.

Méthodes: L'enquête a inclus 755 patients âgés de 35 à 65 ans, souffrant d'insomnie modérée à sévère depuis au moins trois mois, survenant au moins trois fois par semaine (avec un score ISI compris entre 15 et 28). Les thèmes abordés comprenaient l'impact de l'insomnie sur la vie quotidienne, les stratégies d'adaptation et de gestion, ainsi que les perceptions des patients.

Résultats: Près de 70 % des patients ne considéraient pas initialement leur insomnie comme grave et 73 % pensaient qu'elle s'améliorerait avec le temps. L'insomnie affectait significativement la vie quotidienne (les perfor-

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mances professionnelles, les relations et le maintien d'habitudes saines). Les patients anglais étaient les plus touchés, 85 % déclarant une diminution de leurs performances professionnelles. Les stratégies d'adaptation varient selon les pays, mais les exercices de respiration (43 %) et la réduction de la consommation de caféine (44 %) demeurent les plus courants. Les patients français ont consulté des médecins généralistes (89 %), rarement des spécialistes, tandis que les Allemands ont consulté des spécialistes du sommeil (20 %) et des psychiatres (19 %).

Conclusions: L'enquête révèle les différences culturelles dans la perception et la gestion de l'insomnie en Europe. L'insomnie est souvent banalisée, retardant la recherche de solutions de prise en charge.

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Introduction

Sleep is a fundamental pillar of physical and mental health, essential for optimal daily functioning [1]. Without adequate and quality sleep, individuals can experience various consequences that can have a deleterious impact on their daily lives [2,3].

Insomnia is a disease, the most common sleep disorder, ranking second among neuropsychiatric disorders in terms of prevalence [4–6]. It involves difficulty falling asleep or staying asleep despite appropriate opportunities and circumstances, waking up at night or too early in the morning and being unable to return to sleep, and is accompanied by daytime repercussions. For insomnia to be classified as "chronic" according to the DSM-5, these symptoms must persist for at least three months – a critical period after which insomnia is more likely to persist [7] and its morbidity become more notable [8] – and occur on at least three nights a week [4]. In addition to night-time sleep difficulties, daytime symptoms are an integral part of chronic insomnia, affecting a person's ability to function at their best. These symptoms include fatigue or a drop in energy, cognitive, attention, concentration and memory issues, as well as mood disorders, such as irritability and dysphoria [9–13].

These symptoms contribute to significant impairment in daily activities and social functioning [14], which are often the main concern of sufferers, prompting them to seek professional treatment [15]. However, only 50% of those suffering from chronic insomnia actively seek a healthcare professional's help [16].

Approximately 10% of the adult population suffers from chronic insomnia while 30% experience occasional insomnia symptoms, i.e. symptoms that arise following distress, bereavement, a short-term physical illness or a noisy environment [17–19]. However, prevalence rates vary greatly from one country to another [17]. German, British, Spanish and Italian data indicate a prevalence of 5.7%, 5.8%, 6.4% and 7.0% respectively, while French surveys indicate figures of up to 20%. Nevertheless, insomnia definitions in these studies do not always include the same criteria. Women, the elderly and individuals with socioeconomic difficulties appear to be more vulnerable [17,20–22].

Chronic insomnia has long been considered a symptom of other underlying disorders, most often psychiatric, such as depression for which 85% of patients report insomnia symptoms [23] – treatment for which would also improve sleep. In fact, chronic insomnia has often been neglected and insufficiently treated, underlining the unmet need for effective treatment [24]. There is now ample evidence that chronic insomnia is a prevalent residual symptom even after successful treatment of depression [25] and that its persistence increases the risk of psychiatric relapse [26].

Insomnia is also an early sign and risk factor for psychiatric disorders such as anxiety and depression [27–29] mania or addiction [30]. Recently, its links with cardiovascular disease, ischemic heart attacks and stroke, as well as hypertension, have been highlighted [31]. A short duration of sleep over a long period is associated with the development of arterial hypertension [32,33]. Strategies to improve sleep can benefit both the mental [34] and cardiovascular health of insomnia sufferers [35–37]. Despite the evidence of these consequences and complications on both mental and physical health, there are few data on the impact of insomnia on patients' daily lives and differences between cultures. Ad-

dressing these under-investigated fields is of major interest to improve prevention, screening and treatment for these patients, the vast majority of whom are under-diagnosed and under-treated [38].

People with chronic insomnia often feel abandoned on a difficult journey in search of solutions, highlighting the need for medical intervention rather than approaches focused solely on well-being. This survey of European patients with chronic insomnia aims to report the day-time impact of insomnia on personal, social, and professional lives. Understanding sufferers' experiences is an essential step towards grasping the subtlety and complexity of this often-neglected pathology to ultimately help improve patient care.

Methods

This survey of chronic insomnia sufferers from five European countries (Germany, Italy, the UK, Spain and France) was conducted as part of a wider market research analysis to gather relevant information on insomnia. It was conducted by the UK-based independent market research agency, IPSOS, and funded by Idorsia Pharmaceuticals Ltd.

To better analyze the impact of insomnia on everyday life, the sample was adjusted to best fit to the population (age range in line with the frequency of insomnia, but also with an age compatible with professional activity), with a predominance of women [17,20–22]. Therefore, the survey involved patients aged 35 to 65 years with moderate to severe insomnia (scoring 15–28 on the Insomnia Severity Index [39]) occurring at least three times a week for at least three months, according to DSM-5 criteria and ICSD [40]. Eligible patients must not have been diagnosed or treated for sleep apnea syndrome, chronic pain, or severe mental disorders (schizophrenia, bipolar disorder, post-traumatic stress disorder). They had to have consulted a healthcare professional for their insomnia within the six months prior to taking part in the survey.

Patients were recruited from online panels targeting people suffering from insomnia based on the above-stated criteria. Email invitations were sent in the local language of the selected patients.

Two online questionnaires were developed to allow for adaptation to the cultural context and healthcare system of the country: the first – aimed at German, Italian and Spanish patients – consisted of 35 single/multiple choice questions (excluding screening questions) answered over 20 minutes. The second questionnaire – for British and French patients – consisted of 20 single/multiple choice questions (excluding screening questions) answered over 10 minutes. Both questionnaires included questions common to all five countries surveyed. French patients received a second survey to complete the first wave.

The questions focused on the sufferers' feelings, with the following themes:

- · patients' perceptions and views of insomnia;
- the impact of insomnia on daily life;
- strategies for coping and managing insomnia.

Results were described in terms of numbers and percentages. Statistical analysis was performed using comparison of means tests for quantitative variables and proportion tests for qualitative variables, all at a significant test level of 95%.

Results

Profile of respondents

Between 26 July and 19 August 2022, 755 patients with chronic insomnia completed the questionnaire (150 patients each in Germany, Italy, Spain, and France respectively, and 155 patients in the UK). Respondents' characteristics are detailed for each country in Table 1.

The average age of the patients surveyed was 49.5 (\pm 8.9) years, with 50% aged between 35 and 49 years, and the majority were women (70%). The respondents were active: 58% of patients reported having a full-time job and 12% had a part-time job. In terms of family life, 71% of patients were in a relationship, and 83% had children.

Nearly half of the patients surveyed had severe insomnia (49%), with 49% lasting more than three years. The three main comorbidities

of insomnia reported by patients were migraines (27%), depression (24%) and anxiety (19%).

Patients' perceptions and views of insomnia

When they started having sleep problems, almost seven out of ten people surveyed (68%) did not think their insomnia was a serious problem (Table 2). In addition, 73% of patients felt that their insomnia would improve over time, with this being the case in a significantly higher proportion of British patients (UK 85%, France and Italy 71%, Spain 70%, Germany 69%).

In most cases, insomnia was symptomatic, highlighting the causeand-effect relationship between various factors that can alter sleep. Stress was considered to be one of the main causes of insomnia for 39% of respondents (Table 3), with this being the case in a significantly higher proportion of French patients (50% compared with 45%, 38%,

Table 1 Characteristics of patients with chronic insomnia (n = 755) in five European countries.

| | Total | France (A) | Italy (B) | Germany (C) | Spain (D) | United Kingdom (E) |
|---|-----------|-------------------------|-------------------------|-------------------------|------------------------|---------------------------|
| | (n = 755) | (n = 150) | (n = 150) | (n = 150) | (n=150) | (n = 155) |
| Gender, n (%) | | | | | | |
| Men | 227 (30%) | 45 (30%) | 47 (31%) | 45 (30%) | 45 (30%) | 45 (29%) |
| Women | 528 (70%) | 105 (70%) | 103 (69%) | 105 (70%) | 105 (70%) | 110 (71%) |
| Age, n (%) | | | | , , | | , |
| 35 to 49 years | 377 (50%) | 75 (50%) | 77 (51%) | 75 (50%) | 75 (50%) | 75 (48%) |
| 50 to 65 years | 378 (50%) | 75 (50%) | 73 (49%) | 75 (50%) | 75 (50%) | 80 (52%) |
| WHICH: 60 to 65 years | 134 (18%) | 30 (20%) | 28 (19%) | 30 (20%) | 22 (15%) | 24 (15%) |
| Insomnia severity index, n (%) | | | | | | ` ' |
| Moderate | 30 (4%) | 13 (9%) _{CDE} | 11 (7%) _{CE} | 1 (1%) | 4 (3%) | 1 (%) |
| Moderate to severe | 356 (47%) | 73 (49%) _E | 79 (53%) _E | 69 (46%) _E | 83 (55%) _E | 52 (34%) _E |
| Severe | 369 (49%) | 64 (43%) | 60 (40%) | 80 (53%) _B | 63 (42%) | 102 (66%) _{ABCD} |
| Duration of insomnia, n (%) | | | | | , | C ABCD |
| 3 to 6 months | 54 (7%) | 5 (3%) | 14 (9%) A | 10 (7%) | 11 (7%) | 14 (9%) A |
| 7 months to 2 years | 332 (44%) | 54 (36%) | 75 (50%) _{AE} | 92 (61%) ABDE | 64 (45%) AR | 44 (29%) |
| 3 to 5 years | 145 (19%) | 25 (17%) | 32 (21%) _C | 14 (9%) | 40 (27%) AC | 34 (22%) _C |
| More than 5 years | 224 (30%) | 66 (44%) _{BCD} | 29 (19%) | 34 (23%) | 32 (21%) | 63 (41%) _{BCD} |
| Last time insomnia was discussed with a | - | | | | • • | COLUMN BOD |
| doctor, n (%) | | | | | | |
| < 1 month | 237 (31%) | 46 (31%) | 37 (25%) | 42 (28%) | 38 (25%) | 74 (48%) _{ABCD} |
| 1 to 3 months | 281 (37%) | 53 (35%) | 61 (41%) _E | 68 (45%) _E | 55 (37%) | 44 (28%) |
| 4 to 6 months | 237 (31%) | 51 (34%) | 52 (35%) _E | 40 (27%) | 57 (38%) _{CE} | 37 (24%) |
| Employment status, n (%) | | | | | (·-) (E | J. (= 1.13) |
| Full-time work (30+ hours per week) | 441 (58%) | 79 (53%) | 78 (52%) | 83 (55%) | 88 (59%) | 113 (73%) ABCD |
| Part-time work (8-29 hours a week) | 90 (12%) | 18 (12%) | 21 (14%) | 18 (12%) | 19 (13%) | 14 (9%) |
| Self-employed | 36 (5%) | 3 (2%) | 17 (11%) _{ACE} | 3 (2%) | 10 (7%) ACE | 3 (2%) |
| Housewife | 51 (7%) | 11 (7%) | 17 (11%) _C | 5 (3%) | 10 (7%) | 8 (5%) |
| Full-time parent | 13 (2%) | 1 (1%) | 2 (1%) | 10 (7%) ABDE | 0 (0%) | 0 (0%) |
| Student | 1 (0%) | 0 (0%) | 1 (1%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Unemployed | 56 (7%) | 13 (9%) | 7 (5%) | 11 (7%) | 15 (10%) | 10 (6%) |
| Retired | 50 (7%) | 17 (11%) _{BDE} | 6 (4%) | 18 (12%) _{BDE} | 6 (4%) | 3 (2%) |
| Other | 12 (2%) | 7 (5%) | 0 (0%) | 1 (1%) | 2 (1%) | 2 (1%) |
| None of these elements | 4 (1%) | 1 (1%) | 1 (1%) | 0 (0%) | 0 (0%) | 2 (1%) |
| Do not wish to reply | 1 (0%) | 0 (0%) | 0 (0%) | 1 (1%) | 0 (%) | 0 (0%) |
| Shift pattern (for those working full-time or | | | | | • • | X= :=/ |
| part-time), | | | | | | |
| 1 (%) | (n = 531) | (n = 97) | (n = 99) | (n = 101) | (n = 107) | (n = 127) |
| Yes | 223 (42%) | 34 (35%) _B | 23 (23%) _D | 66 (65%) ABDE | 29 (27%) | 71 (56%) _{ABD} |
| No | 306 (58%) | 63 (65%) _{CE} | 74 (75%) _{CE} | 35 (35%) | 78 (73%) _{CE} | 56 (44%) |
| Do not wish to reply | 2 (0%) | 0 (0%) | 2 (2%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Relationship status, n (%) | | | | | | |
| I'm in a couple with children | 446 (59%) | 76 (51%) | 94 (63%) _A | 92 (61%) | 96 (64%) _A | 88 (57%) |
| I'm in a couple and have no children | 94 (12%) | 22 (15%) _D | 25 (17%) _D | 22 (15%) _D | 9 (6%) | 16 (10%) |
| I'm single with children | 101 (14%) | 22 (15%) _C | 16 (11%) | 11 (7%) | 22 (15%) _C | 33 (21%) _{BC} |
| I'm single and have no children | 109 (14%) | 29 (19%) BE | 15 (11%) | 25 (17%) | 23 (15%) | 17 (12%) |
| State of health, n (%) | | | | | | \/ |
| Migraines | 202 (27%) | 53 (35%) _{CE} | 56 (37%) _{CE} | 12 (8%) | 46 (31%) _c | 35 (23%) _C |
| Mild to moderate depression | 178 (24%) | 35 (23%) | 40 (27%) _E | 31 (21%) | 46 (31%) _{CE} | 26 (17%) |
| Generalized anxiety disorder | 145 (19%) | 25 (17%) _C | 35 (23%) _C | 8 (5%) | 41 (27%) _{AC} | 36 (23%) _C |
| Other | 230 (30%) | 37 (25%) | 131 (13%) | 51 (34%) | 17 (11%) | 58 (37%) |

The index letters (A, France; B, Italy; C, Germany; D, Spain; E, United Kingdom) highlight significant differences between the various countries.

Table 2 Patients' perceptions and views of chronic insomnia when symptoms first appeared (n = 755) in five European countries.

| | Total (n = 755) | France (A) (n = 150) | Italy (B) (n = 150) | Germany (C) (n = 150) | Spain (D) (n = 150) | United Kingdon (E) (n = 155) |
|---|--------------------|----------------------|------------------------|-----------------------------|------------------------|------------------------------------|
| I thought my insomnia would get better on its own with time | 554 (73%) | 107 (71%) | 107 (71%) | 104 (69%) | 105 (70%) | 131 (85%) _{ABCD} |
| I didn't think my insomnia was a serious illness when I started having problems sleeping | 512 (68%) | 91 (61%) | 93 (62%) | 107 (71%) | 101 (67%) | 120 (77%) _{ABD} |
| I thought my insomnia was caused by other external factors | 472 (63%) | 89 (59%) | 99 (66%) | 94 (63%) | 87 (58%) | 103 (66%) |
| I first looked for information online before consulting a healthcare professional for my insomnia | 461 (61%) | 81 (54%) | 92 (61%) | 94 (63%) | 80 (53%) | 114 (74%) ABCD |
| I thought my insomnia was due to my lifestyle | 442 (59%) | 74 (49%) | 89 (59%) | 90 (60%) | 87 (58%) | 102 (66%) A |
| I hesitated to consult a doctor or other healthcare professional for my insomnia | 391 (52%) | 59 (39%) | 77 (51%) _A | 76 (51%) _A | 74 (49%) | 105 (68%) ABCD |
| I thought my insomnia was due to another health problem | 357 (47%) | 49 (33%) | 69 (46%) A | 88 (59%) ABD | 61 (41%) | 90 (58%) ABD |
| I thought my insomnia was due to my diet | 279 (37%) | 40 (27%) | 63 (42%) | 65 (43%) _{AD} | 40 (27%) | 70 (45%) _{AD} |

The index letters (A, France; B, Italy; C, Germany; D, Spain; E, United Kingdom) highlight significant differences between the various countries.

Table 3 Main causes of insomnia according to patients with chronic insomnia (n = 755) in five European countries.

| | Total $(n = 755)$ | France (A) $(n = 150)$ | Italy (B) $(n = 150)$ | Germany (C) $(n = 150)$ | Spain (D) $(n = 150)$ | United Kingdom (E) $(n = 155)$ |
|---|-------------------|------------------------|-----------------------|-------------------------|-----------------------|--------------------------------|
| Being stressed | 298 (39%) | 75 (50%) | 68 (45%) | 45 (30%) | 57 (38%) | 53 (34%) |
| Difficulty relaxing in the evening | 278 (37%) | 47 (31%) | 53 (35%) | 58 (39%) | 68 (45%) | 52 (34%) |
| Quick thoughts in the evening | 277 (37%) | 87 (58%) | 63 (42%) | 50 (33%) | 29 (19%) | 48 (31%) |
| Stressful experiences in the past | 199 (26%) | 42 (28%) | 34 (23%) | 45 (30%) | 33 (22%) | 45 (29%) |
| Recent stressful life events | 189 (25%) | 39 (26%) | 48 (32%) | 31 (21%) | 39 (26%) | 32 (21%) |
| Recent stressful life circumstances | 189 (25%) | 35 (23%) | 37 (25%) | 37 (25%) | 46 (31%) | 34 (22%) |
| Very active lifestyle | 176 (23%) | 16 (11%) | 38 (25%) | 43 (29%) | 43 (29%) | 36 (23%) |
| Poor sleep routine | 141 (19%) | 25 (17%) | 18 (12%) | 35 (23%) | 27 (18%) | 36 (23%) |
| Impact of the COVID-19 pandemic | 138 (18%) | 21 (14%) | 42 (28%) | 19 (13%) | 26 (17%) | 30 (19%) |
| Menopause | 127 (17%) | 17 (11%) | 29 (19%) | 25 (17%) | 27 (18%) | 29 (19%) |
| Lack of exercise | 116 (15%) | 22 (15%) | 19 (13%) | 30 (20%) | 22 (15%) | 23 (15%) |
| Other mental health problems | 113 (15%) | 8 (5%) | 6 (4%) | 41 (27%) | 22 (15%) | 36 (23%) |
| It's simply who I am | 112 (15%) | 27 (18%) | 21 (14%) | 14 (9%) | 19 (13%) | 31 (20%) |
| A recent traumatic event, such as bereavement | 99 (13%) | 20 (13%) | 15 (10%) | 22 (15%) | 15 (10%) | 27 (17%) |
| Too much time spent in front of a screen | 88 (12%) | 18 (12%) | 16 (11%) | 17 (11%) | 15 (10%) | 22 (14%) |
| Partner snoring | 78 (10%) | 13 (9%) | 11 (7%) | 15 (10%) | 18 (12%) | 21 (14%) |
| Diet | 73 (10%) | 17 (11%) | 14 (9%) | 13 (9%) | 12 (8%) | 17 (11%) |
| Being a parent | 61 (8%) | 8 (5%) | 9 (6%) | 10 (7%) | 19 (13%) | 15 (10%) |
| Fear of nightmares | 58 (8%) | 7 (5%) | 6 (4%) | 19 (13%) | 8 (5%) | 18 (12%) |
| Other reasons or none at all | 15 (2%) | 5 (4%) | 2 (1%) | 3 (2%) | 4 (2%) | 1 (1%) |
| Don't know | 9 (1%) | 1 (1%) | 1 (1%) | 2 (1%) | 1 (%) | 1 (1%) |

34% and 30% in Italy, Spain, the UK and Germany respectively). Patients also noted difficulties relaxing in the evening (37%) and a heavy flow of thoughts before going to bed (37%).

Impact of insomnia on daily life

Chronic insomnia has an impact on patients' daily lives, particularly on their work performance, the maintenance of personal and professional relationships and healthy lifestyle habits. It was strongly linked to levels of anxiety or depression (Table 4).

British patients were significantly more affected at work than sufferers from other countries. In fact, 85% of them indicated that their insomnia affected their professional performance compared with 60%, 68% and 69% in France, Spain, and Italy respectively. Conversely, the French seemed less troubled, with 51% of patients experiencing difficulties in maintaining relationships with others, compared with 61%, 65%, 71% and 81% of patients in Spain, Italy, Germany, and the UK respectively. Overall, the French are among those who felt the least impact from their insomnia.

Similarly, almost four out of five people surveyed in the UK (77%) felt that their condition exposed them to risky situations (Table 5), particularly due to drowsiness at the wheel (47%) or inattention when

crossing the road (45%). This was the case for only 39% of patients in Spain and France; data for Germany and Italy were unavailable.

Strategies for coping and managing insomnia

This part of the survey was actioned differently in France and the UK, with separate questions addressed to the patients surveyed to adapt to the cultural context and healthcare system of the country.

Respondents generally used different coping strategies to relieve their insomnia (Table 6). Breathing exercises were the most frequently tried strategy across all countries surveyed (43%). German insomniacs were significantly more likely to have tried meditation (46%) and yoga (39%), while 60% of Italians reduced their caffeine intake. In the UK, almost one in five respondents (17%) resorted to alcohol to cope with insomnia, a significantly higher rate compared to Italy and Spain. The British were also the most likely to try apps and connected solutions, pay attention to their bedroom environment, and use weighted blankets.

More than half of those questioned (52%) were reluctant to consult a doctor or other healthcare professional to obtain medical help for their insomnia. Sixty-one per cent of respondents first sought information on the internet before consulting a healthcare professional about their sleep disorder.

Table 4 Impact of insomnia on daily life in patients with chronic insomnia (n = 755) in five European countries.

| | Total $(n = 755)$ | France (A) $(n = 150)$ | Italy (B) $(n = 150)$ | Germany (C) $(n = 150)$ | Spain (D) $(n = 150)$ | United Kingdom (E) $(n = 155)$ |
|--|-------------------|------------------------|-----------------------|-------------------------|------------------------|--------------------------------|
| Ability to concentrate during the day | 585 (77%) | 104 (69%) | 113 (75%) | 123 (82%) _A | 110 (73%) | 135 (87%) _{ABD} |
| Feeling energized throughout the day | 585 (77%) | 107 (71%) | 110 (73%) | 116 (77%) | 120 (80%) | 132 (85%) AB |
| Ability to maintain stress levels | 571 (76%) | 97 (65%) | 115 (77%) A | 117 (78%) A | 115 (77%) _A | 127 (82%) A |
| Ability to maintain a healthy level of physical activity | 567 (75%) | 100 (67%) | 108 (72%) | 121 (81%) A | 109 (73%) | 129 (83%) ABD |
| Feeling good during the day | 164 (75%) | 100 (67%) | 111 (74%) | 116 (77%) A | 107 (71%) | 130 (84%) ABD |
| Performance at work | 418 (74%) | 60 (60%) | 80 (69%) | 89 (86%) ABD | 79 (68%) | 110 (85%) ARD |
| Feeling relaxed during the day | 557 (74%) | 103 (69%) | 109 (73%) | 114 (76%) | 105 (70%) | 126 (81%) AD |
| Carrying out daily tasks | 543 (72%) | 91 (61%) | 104 (69%) | 113 (75%) A | 104 (69%) | 130 (84%) ABD |
| Feeling of calm during the day | 542 (72%) | 96 (64%) | 106 (71%) | 113 (75%) A | 107 (71%) | 120 (77%) A |
| Employee relations | 497 (66%) | 76 (51%) | 98 (65%) A | 106 (71%) A | 92 (61%) | 125 (81%) ABCD |
| Relationships | 344 (64%) | 50 (51%) | 67 (56%) | 80 (70%) AB | 67 (64%) | 80 (77%) _{ABD} |
| Ability to maintain a healthy/regular diet | 478 (63%) | 78 (52%) | 89 (59%) | 99 (66%) A | 91 (61%) | 121 (78%) ABCD |
| Bringing up children | 319 (58%) | 46 (47%) | 59 (54%) | 68 (66%) _{AD} | 57 (48%) | 89 (74%) _{ABD} |
| Friendships | 426 (56%) | 67 (45%) | 82 (55%) | 95 (63%) _{AD} | 74 (49%) | 108 (70%) ABD |
| Ability to drive | 397 (53%) | 68 (45%) | 76 (51%) | 80 (53%) | 67 (45%) | 106 (68%) _{ABC D} |

The index letters (A, France; B, Italy; C, Germany; D, Spain; E, United Kingdom) highlight significant differences between the various countries.

Table 5 Dangerousness of insomnia on daily life with chronic insomnia (n = 455) in five European countries.

| | Total (<i>n</i> = 455) | France (A) (n = 150) | Spain (D) (n = 150) | United Kingdom (E) (n = 155) |
|--|--------------------------------|----------------------|------------------------|------------------------------------|
| Patient's feeling of being in danger | | | | |
| Yes | 235 (52%) | 58 (38%) | 58 (39%) | 119 (77%) |
| No | 217 (48%) | 92 (62%) E | 89 (60%) E | 36 (24%) |
| Don't know | 3 (1%) | 0 (0%) | 3 (2%) | 0 (0%) |
| Circumstances concerned | | | | |
| Drowsiness at the wheel | 109 (46%) | 28 (48%) | 25 (43%) | 56 (47%) |
| Not paying attention to traffic when crossing the road | 98 (42%) | 20 (34%) | 25 (43%) | 69 (42%) |
| Physical injuries | 82 (35%) | 19 (33%) | 18 (31%) | 45 (38%) |
| Unintentional endangerment | 92 (39%) | 20 (34%) | 27 (47%) | 45 (38%) |
| Accidents in the workplace | 49 (21%) | 10 (17%) | 11 (19%) | 28 (24%) |
| Forgetting to be somewhere important | 74 (31%) | 0 (0%) | 0 (0%) | 74 (62%) _{AD} |
| Other/don't know | 9 (4%) | 5 (6%) | 2 (4%) | 2 (2%) |

The index letters (A, France; D, Spain; E, United Kingdom) highlight significant differences between the various countries.

The type of doctors first consulted varied between the countries surveyed and closely depended on the healthcare system (Table 7). In France, general practitioners (GPs) were most often consulted (89%), while consultations with sleep specialists were infrequent (2%). In Germany, sleep specialists (20%) and psychiatrists (19%) were frequently involved, whereas only 40% of GPs were consulted.

Discussion

The cultural aspects of insomnia are rarely discussed in literature, and this study provides a country-by-country analysis of different repercussions and strategies employed by patients suffering chronic insomnia in five European countries.

Nevertheless, certain analyses and parallels can be drawn from the literature in which the experience and representation of insomnia can be compared with that described in similar pathologies, such as depression, anxiety, and pain [41]. In Nordic countries, such as Sweden and Norway, a more discreet and individual approach to emotions is proposed. Residents of these regions are more likely to deal with their problems privately, often with the help of a mental health professional. Conversely, in Mediterranean countries, such as Italy and Spain, it is

more common to express pain and emotions openly. Family and community networks play a crucial role in supporting people with depression. In parts of Eastern Europe, there is a strong stigma surrounding depression and mental disorders, often leading to under-diagnosis and under-treatment of depressive disorders. The way in which pain is perceived and expressed also varies. For example, in Italy and Spain, it is common to express pain more dramatically and verbally, whereas in Anglo-Saxon, Nordic and German-speaking countries, the tendency is to minimize the expression of pain and maintain a stoic facade [41]. As far as insomnia is concerned, experiences differ from country to country in terms of the next-day impact, individual response, and solutions proposed (medical or otherwise). Perception and tolerance of discomfort and illness differ thereby influencing the response to insomnia. In addition, insomnia alters the intensity and control of emotions, with different expressions if depression is also present [42]. Therefore, it appears that the effects of insomnia on emotional dysregulations may vary depending on the culture.

The belief that insomnia will improve over time may discourage patients from seeking help to improve their sleep or lead them to underestimate the severity of their condition. However, the results of this survey carried out in five European countries (France, Italy, Spain, Germany, the UK) highlight cultural and societal differences, with British patients consistently scoring higher on all questions, i.e., demonstrating that insomnia has a greater impact on their lives. The effects felt during the day (concentration, energy, level of activity, mood, feeling of relaxation or calm) were consistent between countries. However, consequences such as feelings of stress, performance at work, ability to manage daily tasks, romantic relationships, relationships with others (friendship), parenthood, ability to drive and assessment of the impact were linked to cultural dimension. The French population were less affected than those in other countries, while the British population were significantly more affected according to each question asked. The importance of the impact felt by the British was partly explained by the fact that they reported the most severe insomnia, while also having a more optimistic and very phlegmatic view of the situation, with the greatest conviction that their insomnia would improve over time (85%). This was reflected in a response strategy that led them to prefer to look for a solution on their own.

From the survey, the benefits of a good night's sleep were clearly linked to improved mental health, which highlights the link between insomnia and the impact on mood, stress, tension, and danger. Chronic insomnia sufferers tried to change their habits to improve their sleeping conditions. For example, they reduced caffeine intake in the afternoon and avoided screens before bed. However, many admitted that these measures were not sufficiently effective in helping them to sleep better.

Table 6 Coping strategies used by patients with chronic insomnia (n = 755) in five European countries.

| | Total (n = 755) | France (A) (n = 150) | Italy (B) (n = 150) | Germany (C) $(n = 150)$ | Spain (D) $(n = 150)$ | United Kingdom (E) (n = 155) |
|---|--------------------|-------------------------|------------------------|-------------------------|-------------------------|---------------------------------|
| Breathing exercises | 326 (43%) | 62 (41%) | 66 (44%) | 55 (37%) | 70 (47%) | 73 (47%) |
| Meditation | 240 (32%) | 33 (22%) | 38 (25%) | 69 (46%) ABD | 49 (33%) | 55 (35%) _A |
| Yoga | 176 (23%) | 29 (19%) | 30 (20%) | 58 (39%) ABDE | 31 (21%) | 28 (18%) |
| Application/sleep tracker | 54 (7%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 54 (35%) ABCD |
| Adjusting the bedroom environment | 52 (7%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 52 (34%) ABCD |
| Reducing caffeine consumption | 332 (44%) | 64 (43%) _C | 90 (60%) ACDE | 41 (27%) | 62 (41%) _C | 75 (48%) _C |
| Reading | 284 (38%) | 61 (41%) _C | 67 (45%) _C | 34 (23%) | 65 (43%) _C | 57 (37%) _C |
| Herbal remedies (e.g. valerian) | 275 (36%) | 42 (28%) | 71 (47%) ACE | 50 (33%) | 71 (47%) ACE | 41 (26%) |
| Exercise more | 268 (35%) | 56 (37%) | 46 (31%) | 46 (31%) | 56 (37%) | 64 (41%) |
| Watching television | 256 (34%) | 55 (37%) | 48 (32%) | 44 (29%) | 49 (33%) | 60 (39%) |
| Hot bath | 194 (26%) | 26 (17%) | 36 (24%) | 45 (30%) | 37 (25%) | 50 (32%) A |
| Don't look at your phone or other screens | 185 (25%) | 42 (28%) _C | 37 (25%) _C | 16 (11%) | 39 (26%) _C | 51 (33%) _C |
| Over-the-counter cannabidiol products you should ask a pharmacist for | 93 (12%) | 25 (17%) _D | 15 (10%) | 19 (13%) | 10 (7%) | 24 (15%) _D |
| Drinking alcoholic beverages | 83 (11%) | 14 (9%) | 11 (7%) | 19 (13%) | 13 (9%) | 26 (17%) _{BD} |
| Do something else | 70 (9%) | 14 (9%) | 12 (8%) | 12 (8%) | 23 (15%) _{BDE} | 9 (6%) |
| Weighted blanket | 53 (7%) | 4 (3%) | 2 (1%) | 13 (9%) ABD | 4 (3%) | 30 (19%) ABCD |
| Other | 67 (9%) | 3 (2%) | 12 (80%) | 12 (8%) | 5 (3%) | 46 (29%) ABCD |

The index letters (A, France; B, Italy; C, Germany; D, Spain; E, United Kingdom) highlight significant differences between the various countries.

Table 7

First medical referral contacted by patients with chronic insomnia (n = 755) in five European countries.

| | Total $(n = 755)$ | France (A) $(n = 150)$ | Italy (B) $(n = 150)$ | Germany (C) $(n = 150)$ | Spain (D) $(n = 150)$ | United Kingdom (E) $(n = 155)$ |
|----------------------|-------------------|---------------------------|-----------------------|-------------------------|-------------------------|--------------------------------|
| General Practitioner | 470 (62%) | 134 (89%) _{BCDE} | 94 (63%) _C | 60 (40%) | 102 (68%) _{AC} | 80 (52%) _C |
| Sleep specialist | 77 (10%) | 3 (2%) | 12 (8%) A | 30 (20%) ABD | 6 (4%) | 26 (17%) ABD |
| Psychiatrist | 65 (9%) | 5 (3%) | 9 (6%) | 28 (19%) ABDE | 14 (9%) _A | 9 (6%) |
| Neurologist | 42 (6%) | 2 (1%) | 10 (7%) | 10 (7%) A | 8 (5%) | 12 (8%) A |
| Herbalist/Naturopath | 38 (5%) | 2 (1%) | 14 (9%) AE | 10 (7%) AE | 10 (7%) AE | 2 (1%) |
| Pharmacist | 17 (2%) | 0 (0%) | 0 (0%) | 0 (0%) | 5 (3%) _{ABC} | 12 (8%) ABC |
| Other | 46 (6%) | 4 (4%) | 11 (7%) | 12 (7%) | 5 (4%) | 14 (8%) |

The index letters (A, France; B, Italy; C, Germany; D, Spain; E, United Kingdom) highlight significant differences between the various countries.

They also admitted to adopting unhealthy or even dangerous coping strategies, such as drinking alcohol to help them fall asleep. In fact, few respondents felt that their coping strategies were sufficiently effective, and many reported to always be looking for a solution to their insomnia. This aligns with current insomnia treatments, which do not consist of changing a few habits but of rethinking one's overall relationship with sleep through a structured therapeutic approach, such as cognitive behavioral therapy which is the first-line treatment in adults of all ages, regardless of comorbidities according to the new European recommendations for the diagnosis and treatment of insomnia [24].

Only half of all patients sought a dedicated consultation for insomnia, and the approach varied by country. The organization of healthcare systems impacted the type of medical consultation chosen. The French were the least reluctant to consult their GP, even though it is known that such consultations are not exclusively devoted to insomnia [43]. Despite the psychological suffering reported by patients, the number of available psychiatrists unfortunately remains low [44]; France and the UK also have difficulty involving psychiatrists in the care pathway, which has been previously reported [45]. In contrast, the survey suggested the most developed specialist involvement in Germany which is supported by other available information. It is difficult to analyze precisely why the French complained less than the British about their insomnia. For the French, the higher likelihood of consulting their GP (although the solution suggested is unknown) could have been a more protective factor, whereas the British appeared more resigned and isolated when facing their insomnia. Another aspect may influence these cultural differences, particularly the use of medications, which was not considered in the survey. Although we do not have specific data to determine the potential role of hypnotics and the use of benzodiazepines in insomnia, studies show that Spain, France, and Italy still have significant prescription rates compared to the UK and Germany [46]. In France, these prescriptions are primarily carried out by general practitioners [43]. This might be explained by the different perspectives of insomnia among doctors in the different countries.

Although chronic insomnia has been officially recognized as a standalone disease since the 2014 International Classification of Sleep Disorders, it continues to face challenges in being acknowledged as such by healthcare professionals [47]. It is often perceived as not severe enough to warrant concern. While there is no direct fatal risk associated with insomnia – as demonstrated by a meta-analysis conducted by Lovato N. and Lack L. assessing the evidence for a link between mortality risk and insomnia [48] – the condition is nonetheless implicated in fatal accidents [49]. Furthermore, its association with cardiovascular, psychiatric, and neurodegenerative diseases is now well-documented [50–52].

This study has certain limitations. It is based on a self-reported survey, which inherently carries some degree of uncertainty regarding the precision and accuracy of the data collected, as is often the case with qualitative approaches. It is important to note that insomnia is a complex condition that cannot be defined by strictly objective criteria [4]. Indeed, it largely relies on subjective perceptions unique to each individual. In this context, our primary goal was to gain a better understanding of patients' feelings and experiences related to chronic insomnia. To achieve this, we chose to use a self-administered questionnaire, a method that appeared to be the most appropriate for collecting information directly from patients and thus obtaining a comprehensive and nuanced view of their lived experiences.

This perception of insomnia, both from the patient's perspective and within the medical community, contributes to the belief that the condition is not urgent. Unfortunately, psychiatric issues such as anxiety and depression – often the first emergent consequences –can significantly harm patients' health [53]. Despite growing awareness, much remains

to be done in the field of insomnia, as care networks for the condition are still underdeveloped compared to those for other chronic diseases.

Conclusion

This European survey underscores the widespread impact of insomnia while highlighting cultural differences in its perception and management, particularly between Latin and Anglo-Saxon countries.

Often underestimated as a minor or inconsequential issue, insomnia profoundly disrupts both nighttime rest and daytime functioning. It leads to emotional distress, resignation, and reliance on inadequate coping strategies. Its consequences extend beyond poor sleep, affecting work performance, personal life, and long-term health, with increased risks of cardiovascular and psychiatric disorders.

The findings call for greater recognition of insomnia among both patients and healthcare professionals to encourage faster and more effective interventions. While raising awareness through reliable information is a crucial first step, expanding access to behavioral therapies and optimizing medical support remain vital for addressing the diverse needs of those affected by this condition.

Disclosure of interest

Sylvie Royant-Parola:

Participation in conferences: Orkyn, SOS Oxygène, Idorsia, Asten,

Expertise: Philips, Linde, Idorsia, Resmed, GL Pharma.

Speaker honorarium: Bioprojet, Idorsia, Orkyn.

Advisory board: Idorsia.

Isabelle Poirot:

Participation in conferences: France oxygène, SOS Oxygène.

Paid articles: Biocodex, Idorsia.

Pierre A. Geoffrov:

Speaker honorarium: Biocodex, Bioprojet, Ibsa, Idorsia, Janssen-Cilag, Isis Medical, Jazz pharmaceuticals, Lundbeck, MySommeil, Withings

Fees for consulting: Apneal, Biocodex, Dayvia, Di&Care, Idorsia, Janssen-Cilag, Jazz pharmaceuticals, Myndblue, Mysommeil, Posos, ResilEyes, Withings.

Advisory board: Apneal, Di&Care, Idorsia, Janssen-Cilag, Myndblue.

Author's contribution

Sylvie Royant-Parola: Data curation, Formal analysis, Writing of original draft, Writing review & editing, Validation, Supervision.

Isabelle Poirot: Writing review & editing, Validation.

Pierre A. Geoffroy: Writing review & editing, Validation.

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