




Treating insomnia in Swiss primary care practices: A survey study based on case vignettes

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Abstract

Guidelines recommend cognitive behavioural therapy for insomnia (CBT-I) as first-line treatment for chronic insomnia, but it is not clear how many primary care physicians (PCPs) in Switzerland prescribe this treatment. We created a survey that asked PCPs how they would treat chronic insomnia and how much they knew about CBT-I. The survey included two case vignettes that described patients with chronic insomnia, one with and one without comorbid depression. PCPs also answered general questions about treating chronic insomnia and about CBT-I and CBT-I providers. Of the 820 Swiss PCPs we invited, 395 (48%) completed the survey (mean age 54 years; 70% male); 87% of PCPs prescribed sleep hygiene and 65% phytopharmaceuticals for the patient who had only chronic insomnia; 95% prescribed antidepressants for the patient who had comorbid depression. In each case, 20% of PCPs prescribed benzodiazepines or benzodiazepine receptor agonists, 8% prescribed CBT-I, 68% said they knew little about CBT-I, and 78% did not know a CBT-I provider. In the clinical case vignettes, most PCPs treated chronic insomnia with phytopharmaceuticals and sleep hygiene despite their lack of efficacy, but PCPs rarely prescribed CBT-I, felt they knew little about it, and usually knew no CBT-I providers. PCPs need more information about the benefits of CBT-I and local CBT-I providers and dedicated initiatives to implement CBT-I in order to reduce the number of patients who are prescribed ineffective or potentially harmful medications.

KEYWORDS

chronic insomnia, cognitive behavioural therapy for chronic insomnia, primary care, treatment

1 | INTRODUCTION

Chronic insomnia is common in industrialised countries; prevalence averages ~10%, although the number of affected people ranges from 6% to 19% in European countries (Calem et al., 2012; Leger, Guilleminault, Dreyfus, Delahaye, & Paillard, 2000; Marschall, Hildebrandt, Sydow, & Nolting, 2017). The Diagnostic and Statistical

Manual of Mental Disorders, Fifth Edition (DSM-5) defines chronic insomnia as subjective sleep disturbance at least 3 nights/week for ≥3 months, with concomitant daytime impairment (American Psychiatric Association, 2013).

Chronic insomnia lowers patient quality of life and poses a significant burden on healthcare systems (Delini-Stula, Bischof, & Holsboer-Trachsler, 2007; Novak, Mucsi, Shapiro, Rethelyi, & Kopp, 2004). It

is also associated with medical and psychiatric conditions like cardiovascular disease and depression (Baglioni, Spiegelhalter, Nissen, & Riemann, 2011; Li, Zhang, Hou, & Tang, 2014). Chronic insomnia and depression are closely linked: depressed patients usually have altered sleep and patients with chronic insomnia have twice the risk of developing depression (Baglioni et al., 2011; Riemann, Krone, Wulff, & Nissen, 2020). The conditions share characteristics like hyperarousal, but each can arise and persist independently (Baglioni et al., 2011). Researchers once considered insomnia a symptom or consequence of depression, but more recent studies suggest it be treated separately (Baglioni et al., 2011). The DSM-5 now defines chronic insomnia independently from associated conditions and no longer distinguishes primary and secondary insomnia (Association, 2013). However, primary care physicians' (PCPs) practice has been slower to change (Sivertsen, Nordhus, Bjorvatn, & Pallesen, 2010).

The European Sleep Research Society (ESRS) guidelines for treating chronic insomnia recommend first-line treatment with cognitive behavioural therapy for insomnia (CBT-I) (Riemann et al., 2017), which usually combines psychoeducation/sleep hygiene, relaxation training, stimulus control, sleep restriction, and cognitive therapy (Riemann & Perlis, 2009). Sleep restriction has been found effective also when used alone (Krieger et al., 2019; Miller et al., 2014). If patients cannot access CBT-I, or if they have tried it and it has not worked, they can be offered short term (≤ 4 weeks) pharmacotherapy treatment with fast-acting benzodiazepines (BZD; e.g. triazolam), benzodiazepine receptor agonists (BZRA; e.g. zolpidem), and certain sedative antidepressants (e.g. trazodone) (Riemann et al., 2017). Guidelines do not recommend phytopharmaceuticals (e.g. valerian), complementary or alternative treatments (e.g. homeopathy) (Riemann et al., 2017). When patients have insomnia and depression, the American Academy of Sleep Medicine (AASM) recommends treating insomnia as stated above and separately prescribing antidepressants or psychotherapy for depression (Schutte-Rodin, Broch, Buysse, Dorsey, & Sateia, 2008).

Recent studies revealed that PCPs commonly treat insomnia with sleep hygiene alone, pharmacotherapy alone, or both (Bjorvatn, Meland, Flo, & Mildestvedt, 2017; Conroy & Ebben, 2015; Everitt et al., 2014; Sivertsen et al., 2010). Sleep hygiene is often the first treatment (Bjorvatn, Fiske, & Pallesen, 2011; Everitt et al., 2014; Sivertsen et al., 2010), although it is less effective than CBT-I (Pigeon, Funderburk, Bishop, & Crean, 2017). When patients do not respond to sleep hygiene measures, many PCPs prescribe medication (Everitt et al., 2014), most commonly benzodiazepines, antidepressants (Bjorvatn et al., 2017; Everitt et al., 2014; Maire et al., 2020; Marschall et al., 2017; Sivertsen et al., 2010), and phytopharmaceuticals (Everitt et al., 2014; Lai, Tan, & Lai, 2011; Sanchez-Ortuno, Belanger, Ivers, LeBlanc, & Morin, 2009).

The gap between insomnia treatment guidelines and PCPs' practice in Europe is troubling and we aimed to investigate whether the trend was similar in Switzerland. We hypothesised that Swiss PCPs would often treat chronic insomnia with medication, that

most know little about CBT-I, and that they rarely know specialists who provide CBT-I. We thus created a survey featuring two case vignettes (chronic insomnia and chronic insomnia with comorbid depression) to explore PCPs' usual treatment approach and included questions about their knowledge of CBT-I and CBT-I providers.

2 | METHODS

2.1 | Participants

We invited all Swiss PCPs working as medical student preceptors for the Institute of Primary Care at the University of Bern (BIHAM) and all PCPs who report for the Sentinella practice-based research network (PBRN)¹ led by the Federal Office of Public Health (FOPH) to participate in a survey. The PCPs who belonged to both groups were asked to complete only one survey. The participation was voluntary and the data were collected anonymously. The PCPs were excluded from the survey if they worked only as PCP paediatricians.

2.2 | Survey development and structure

Our survey comprised three parts. Part 1 collected demographic data about the PCPs: sex; age; years of work experience (divided into age groups, e.g. 5–10, 11–15 years); practice site (urban, intermediate, rural); and, medical qualifications related to sleep medicine (pulmonology, psychiatry, neurology, psychosomatic, and psychosocial medicine). Part 2 consisted of two case vignettes, one presenting a case of chronic insomnia without any comorbidity, the other a case of co-occurring chronic insomnia and major depression. The PCPs were asked to decide on the treatment approach they would take in each case. Options were divided in pharmacological, non-pharmacological, and complementary alternative treatment. Each answer block contained a selection of common treatment approaches (see Table S1) and a free text field to capture methods not listed. The PCPs could choose more than one answer. Part 3 requested the PCPs to rate on 5-point Likert scales their knowledge of CBT-I, their interest in learning more about pharmacological and non-pharmacological treatments for chronic insomnia, and asked to indicate if they knew of a nearby professional who offered CBT-I. The PCPs were also asked how often they feel their patients with chronic insomnia expect them to prescribe a hypnotic. Several professionals in sleep medicine, psychiatry and general medicine reviewed the survey before we distributed it. We developed the online survey with Ilias, a content development tool for educators provided by the University of Bern, Switzerland. We provided the survey in either German or French and piloted it with five PCPs, whose feedback we used to improve it. Anonymised surveys fall outside the Swiss

¹A network initially designed to collect data on communicable diseases such as influenza.

Human Research Act, so our study did not need to be approved by an ethics committee.

2.3 | Procedures

The PCPs who worked as medical student preceptors received the link to the survey in an electronic newsletter, via email. We sent two email reminders to non-responders in this group and mailed them a paper-pencil version of the survey if they failed to respond. The PCPs involved in the Sentinella project took part in a parallel data collection on chronic insomnia prevalence and were mailed the paper-pencil version by post. The Sentinella non-responders were mailed one written reminder. Data were collected from May to September 2018.

2.4 | Statistical analysis

To describe baseline characteristics, we reported continuous variable data in means and standard errors (*SEs*), and categorical variable data in percentages. To assess the treatment the PCPs initiated in the case vignettes, we calculated the proportions of PCPs who chose each treatment option. To compare the treatment chosen in the two case vignettes, we used Fisher's exact test. After Bonferroni-correction for multiple comparisons, we considered a *p* value of .0024 to be statistically significant. To investigate the association between PCPs' demographics and knowledge about CBT-I, we fitted multivariate logistic regression models with CBT-I knowledge and CBT-I provider knowledge as outcomes, and the PCPs' sex, age, practice site, years of experience, and further qualification as covariates. To investigate the association between PCPs' characteristics and their treatment approach in the case vignettes, we fitted a multivariate logistic regression model with treatment as outcome and the PCPs' sex, age, practice site, years of experience, further qualification, CBT-I knowledge, and CBT-I provider knowledge as covariates. A *p* < .05 was considered statistically significant. We analysed available data and did not use statistical procedures to impute missing data because there were few missing values in the final data set (see Table S2). When the PCPs did not answer the treatment question at all, we marked the answer as missing. STATA 15.1 was used for all analyses (StataCorp).

3 | RESULTS

3.1 | Demographics

A total of 820 PCPs were invited: 693 worked as medical student preceptors and 132 were PCPs in the Sentinella research network. Five PCPs belonged to both groups. The survey response rate was 48% (*n* = 395/820) for all groups: 70% (*n* = 93/132) in the Sentinella group and 44% (*n* = 302/688) in the student preceptor group (41% online, 59% per post). We excluded 34 surveys; 18 PCPs were only working as

TABLE 1 Demographic and occupational characteristics of respondents

Characteristic (N = 361) ^a	Value
Sex, <i>n</i> (%)	
Female	106 (29.4)
Male	252 (69.8)
Age, years, mean (<i>SE</i>)	54.3 (0.5)
Language, <i>n</i> (%)	
German	323 (89.5)
French	38 (10.5)
Experience as PCP, <i>n</i> (%)	
<5 years	31 (8.6)
5–10 years	58 (16.1)
11–15 years	65 (18.0)
16–20 years	52 (14.4)
>20 years	154 (42.7)
Practice location, <i>n</i> (%)	
Urban	119 (33.0)
Intermediate	99 (27.4)
Rural	143 (39.6)
Further qualification, <i>n</i> (%)	
Pulmonology	2 (0.6)
PPM	33 (9.1)
None	326 (90.3)

Abbreviations: PCP, primary care physician; PPM, psychosomatic and psychosocial medicine; *SE*, standard error.

^aIncomplete demographic data in four participants.

paediatricians and 16 PCPs did not finish the survey. Finally, we analysed 361 surveys; 70% (*n* = 252/358) of the respondents were men, 89% (*n* = 323/361) were German speaking; the mean age was 54 years. Nearly half of the PCPs (43%, *n* = 154/360) had been practicing for >20 years. Practice locations were evenly distributed across urban, intermediate, and rural sites (see Table 1 for a detailed description of participants).

3.2 | Case Vignettes

Almost all the PCPs initiated both pharmacological and non-pharmacological treatment in both cases. Figures 1–3 provide an overview of the pharmacological, non-pharmacological and complementary alternative treatments the PCPs initiated in the case vignettes.

3.3 | Case 1: chronic insomnia without comorbidity

Two-thirds of all the PCPs (65%, *n* = 235/361) prescribed phytopharmaceuticals and half prescribed antidepressants (49%, *n* = 177/361), a fifth prescribed BZRA (18%, *n* = 64/361), and 4% (*n* = 15/361) prescribed BZD. The most commonly initiated non-pharmacological treatments were sleep hygiene (87%, *n* = 314/361)

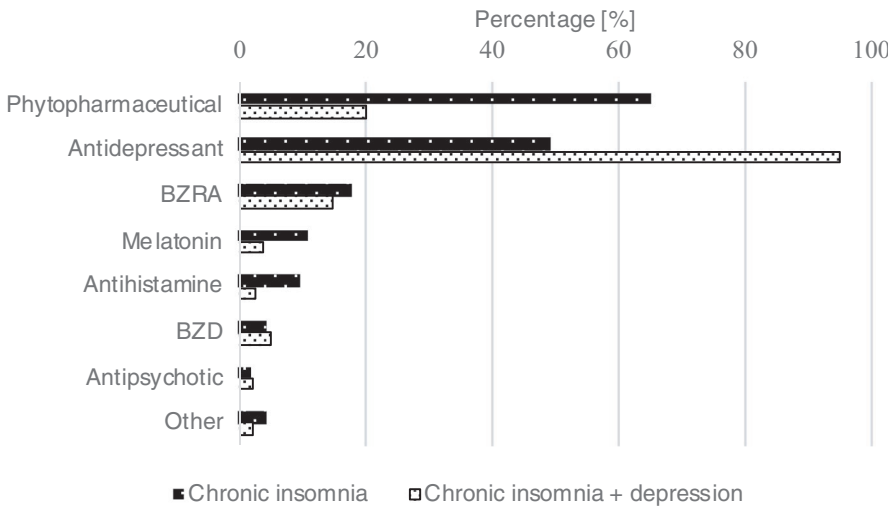


FIGURE 1 Pharmacological treatment initiated by primary care physicians for two cases of insomnia. BZD, benzodiazepine; BZRA, benzodiazepine receptor agonist

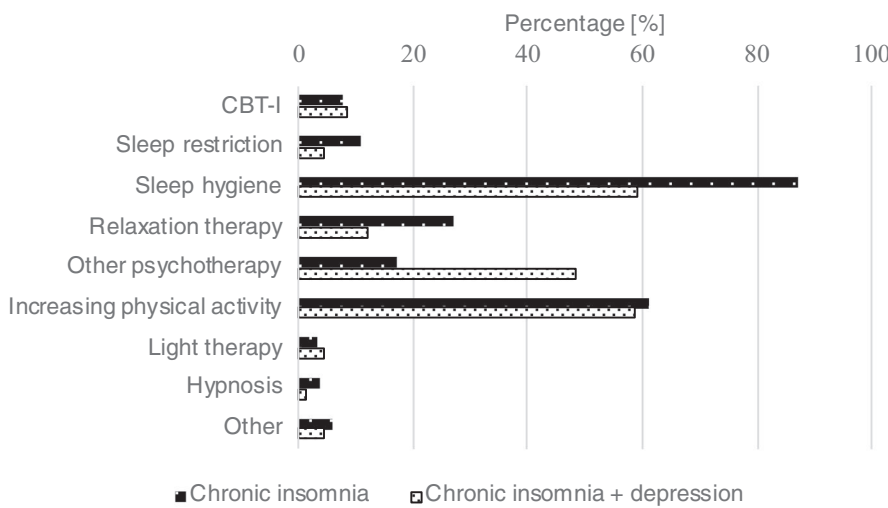


FIGURE 2 Non-pharmacological treatment initiated by primary care physicians for two cases of insomnia. CBT-I, cognitive behavioural therapy for insomnia

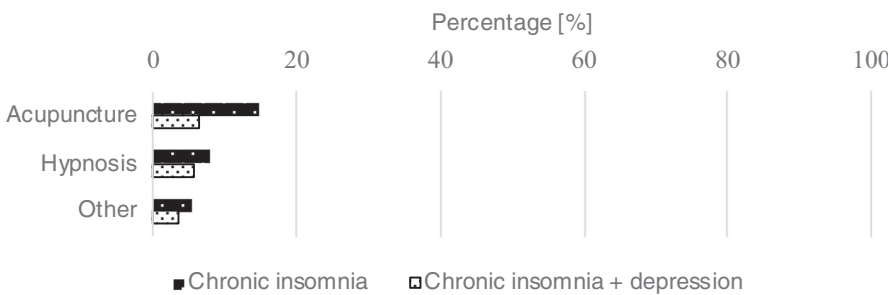


FIGURE 3 Complementary alternative treatment initiated by primary care physicians for two cases of insomnia

and physical activity advice (61%, $n = 221/361$). A third of the PCPs prescribed relaxation therapy (27%, $n = 98/361$). Few PCPs prescribed psychotherapy (17%, $n = 61/361$). Even fewer prescribed sleep restriction (11%, $n = 39/361$), or CBT-I (8%, $n = 28/361$); 2% ($n = 9/361$) prescribed all three components of CBT-I (i.e. sleep hygiene, relaxation therapy, sleep restriction), but did not explicitly prescribe CBT-I. Almost a quarter (23%, $n = 82/361$) of the PCPs initiated a complementary alternative treatment, usually acupuncture (15%, $n = 53/361$) or homeopathy (8%, $n = 29/361$). In multivariate adjusted models, male PCPs were less likely to prescribe phytopharmaceuticals (odds ratio [OR] 0.36, 95% confidence interval [CI]

0.20–0.64; $p < .001$), sleep hygiene (OR 0.4, $p = .045$; 95% CI 0.16–0.98), and relaxation therapy (OR 0.42, 95% CI 0.25–0.72; $p < .001$). French-speaking PCPs prescribed significantly fewer antidepressants (OR 0.11, 95% CI 0.04–0.32; $p < .001$).

3.4 | Case 2: chronic insomnia and depression

Most PCPs prescribed antidepressants (95%, $n = 343/361$). About one-fifth prescribed phytopharmaceuticals (20%, $n = 72/361$) and BZRA (15%, $n = 53/361$). BZD were prescribed by 5% ($n = 18/361$)

of the PCPs. The most commonly initiated non-pharmacological treatments were sleep hygiene (59%, $n = 213/361$), physical activity advice (59%, $n = 212/361$), and psychotherapy (48%, $n = 174/361$). Relaxation therapy was prescribed by 12% ($n = 43/361$). Few prescribed CBT-I (9%, $n = 31/361$) and sleep restriction (4%, $n = 16/360$). One in 10 PCPs prescribed complementary alternative treatments (12%, $n = 43/361$), usually acupuncture (6%, $n = 23/361$) and homeopathy (6%, $n = 20/361$).

French-speaking PCPs (OR 0.18, 95% CI 0.06–0.56; $p = .003$) prescribed significantly less antidepressants and were more likely to give sleep hygiene advice (OR 3.13, 95% CI 1.31–7.52; $p = .01$) (Table 2).

3.5 | Comparing treatment modalities of PCPs between case 1 and 2

When both insomnia and depression were present, the PCPs were significantly more likely to prescribe antidepressants (95% versus 49%) and psychotherapy (48% versus 17%). Phytopharmaceuticals

TABLE 2 Covariates associated with the initiated treatment by primary care physicians in a case of insomnia and a case of insomnia comorbid with depression^a

	OR (95% CI)	<i>p</i>
A) Case 1: Insomnia - Treatment		
Antidepressants		
French-speaking PCP	0.11 (0.04–0.32)	<.001
Phytopharmaceuticals		
Male PCP	0.36 (0.20–0.64)	<.001
Sleep hygiene		
Male PCP	0.4 (0.16–0.98)	.045
Relaxation therapy		
Male PCP	0.42 (0.25–0.72)	.001
CBT-I		
CBT-I knowledge	2.59 (1.61–4.15)	<.001
CBT-I provider knowledge	6.55 (2.92–14.67)	<.001
B) Case 2: Insomnia + Depression - Treatment		
Antidepressants		
French-speaking PCP	0.18 (0.06–0.56)	.003
Sleep hygiene		
French-speaking PCP	3.13 (1.31–7.52)	.01
CBT-I		
CBT-I knowledge	2.69 (1.7–4.24)	<.001
CBT-I provider knowledge	6.44 (2.95–14.05)	<.001

Note: A complete list of treatment options is available online (Table S1). Abbreviations: CBT-I, cognitive behavioural therapy for insomnia; CI, confidence interval; OR, odds ratio; PCP, primary care physician.

^aCovariates used for multivariate adjustment: sex, mean age, language, experience as PCP, practice location, further qualification, knowledge about CBT-I and CBT-I providers. Only treatment options with significantly associated covariates are presented.

were prescribed three-times less in this case (20% versus 65%; all Fisher's exact $p = 0.000$).

CBT-I was prescribed at the same low rate in both case vignettes (9% and 8%); CBT-I components like sleep hygiene (59% versus 87%; Fisher's exact $p < .0001$), relaxation therapy (12% versus 27%; Fisher's exact $p < .0001$) and sleep restriction (4% versus 11%; Fisher's exact $p = .001$), were prescribed less often when both insomnia and depression were present. Half as many PCPs initiated a complementary alternative treatment (12% versus 23%; Fisher's exact $p < 0.0001$) when both conditions were present. The prescription rate of physical activity advice (59% and 61%) and hypnotics (20% and 22%) were similar in each case.

3.6 | Perception of chronic insomnia treatment

About two-thirds of the PCPs answered that they knew nothing (19%, $n = 68/360$) or very little (46%, $n = 166/360$) about CBT-I (Figure 4). About a fifth of the PCPs (22%, $n = 80/358$) did know of a local specialist who provided CBT-I (Figure 5). None of the characteristics we

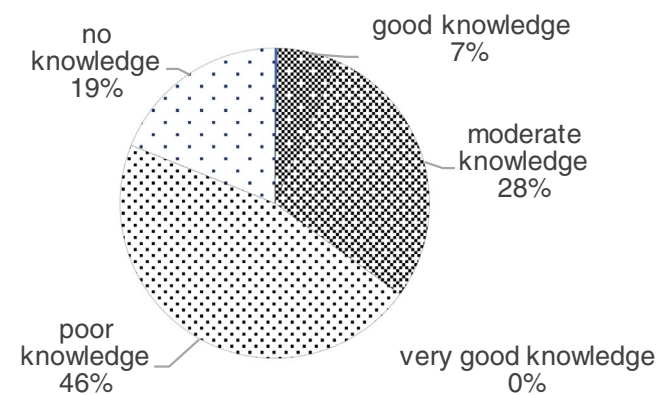


FIGURE 4 Primary care physicians' self-assessed knowledge about cognitive behavioural therapy for insomnia

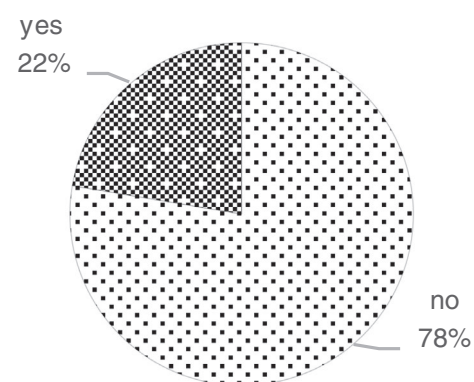


FIGURE 5 Primary care physicians' knowledge of a specialist in their surroundings offering cognitive behavioural therapy for insomnia

evaluated predicted the level of knowledge that the PCPs had about either CBT-I or CBT-I providers. We found that about two-thirds of the PCPs prescribing CBT-I had at least moderate knowledge about CBT-I (case 1: $n = 18/28$, case 2: $n = 22/31$); roughly 60% of the PCPs who prescribed CBT-I in the case vignettes knew a provider (case 1: $n = 17/28$, case 2: $n = 18/31$).

Over three-quarters of the PCPs said they had great or very great interest in learning more about pharmacological (76%, $n = 274/360$) and non-pharmacological (78%, $n = 281/361$) treatments for chronic insomnia. About half of the PCPs (54%, $n = 195/361$) reported they frequently felt patients with chronic insomnia expected them to prescribe a hypnotic.

4 | DISCUSSION

The present cohort of PCPs in Switzerland rarely followed evidence-based guidelines when treating chronic insomnia in a clinical vignette. Instead of CBT-I they usually prescribed sleep hygiene (87%), more physical activity (61%), phytopharmaceuticals (65%), and antidepressants (49%) in a clinical vignette presenting a patient with insomnia without depression. A fifth of the PCPs prescribed BZRA (18%) or BZD (4%). Only 8% of the PCPs initiated CBT-I, the first-line recommended treatment according to guidelines. In presence of a comorbid depression, the PCPs were more likely to treat with antidepressants (95%) and psychotherapy (48%), and less likely to prescribe phytopharmaceuticals (20%), sleep hygiene (59%), or other components of CBT-I. Half of all the PCPs reported expectations of patients to prescribe them hypnotics (54%). Most of the PCPs were unfamiliar with CBT-I (65%); only a fifth knew a local CBT-I provider (22%). Most of the PCPs expressed a strong interest in learning more about how to treat chronic insomnia (76%). These findings confirmed our hypothesis that Swiss PCPs, like those in other European countries, rarely followed the guidelines that recommend CBT-I as a first-line treatment for insomnia (Riemann et al., 2017).

Koffel et al. found that, on the system level, PCPs and patients may not have access to CBT-I providers, which are mainly, psychiatrists, clinical psychologists and sleep centres (Koffel, Bramoweth, & Ulmer, 2018). There are effective online versions of CBT-I, which could reduce this bottleneck if PCPs were aware of them (Krieger et al., 2019; Seyffert et al., 2016). At the clinical level, Koffel et al. identified four barriers to CBT-I utilisation: (a) widespread ignorance of CBT-I, which accords with our present findings that only 8% of the PCPs prescribed CBT-I; (b) the tendency of PCPs to regard chronic insomnia as a secondary condition that would resolve if the condition they thought primary was treated (Sake, Wong, Bartlett, & Saini, 2017; Ulmer et al., 2017), which is in line with our present finding that the PCPs tended to treat comorbid insomnia based on depression guidelines (Kupfer, Frank, & Phillips, 2012); (c) PCPs think patients prefer medication (Cheung et al., 2014), and our present findings support this, as half of the PCPs in our present study felt pressure to prescribe hypnotics – Nonetheless, non-pharmacological treatment was prescribed more often than pharmacological

treatment; (d) clinicians may lack of motivation, time and resources to manage insomnia (Koffel et al., 2018). Our inquiries did not cover this aspect, but our present data suggest that most PCPs are very interested in learning more about treating insomnia, and might even be willing to implement CBT-I themselves.

Sleep hygiene was the most common component of CBT-I prescribed, although it is not recommended as a sole treatment for chronic insomnia (Riemann et al., 2017) and may increase drug use (Bjorvatn et al., 2011); 10% of PCPs prescribed sleep restriction (the most effective single component of CBT-I) (Krieger et al., 2019), and a third prescribed relaxation therapy; 2% prescribed all three components of CBT-I, but did not explicitly prescribe CBT-I. Common use of CBT-I components indicates that PCPs were willing to treat patients with non-pharmacological options, indicating they may be receptive to prescribing CBT-I.

Phytopharmaceuticals were the most frequently prescribed medications in the present study, although evidence of beneficial effects is lacking and guidelines do not recommend them (Riemann et al., 2017). Young women and well-educated patients are most likely to take phytopharmaceuticals to improve sleep and may prefer them because they are unaware of the lack of efficacy, drug interactions and side-effects (Sanchez-Ortuno et al., 2009). Both patients and PCPs may be encouraged to prescribe phytopharmaceuticals because direct-to-consumer advertising suggests they are purely beneficial (Brody & Light, 2011). In another study where PCPs reported patient data, we found a lower rate of phytopharmaceutical and high rate of BZD use in Swiss primary care chronic insomnia patients (Maire et al., 2020). One hypothesis might be that PCPs initially prescribed phytopharmaceuticals and then, because patients do not respond to this treatment, felt entitled to switch patients to the more effective hypnotics, even though that meant potential long-term treatment and addiction (Schonmann et al., 2018).

The high prescription rate of antidepressants in our present study supports data on patients with chronic insomnia (Lai et al., 2011; Maire et al., 2020). PCPs may believe antidepressants are the most effective long-term treatment for chronic insomnia (Sivertsen et al., 2010), that they are safer and less addictive than hypnotics (Everitt et al., 2014), or that chronic insomnia is a secondary condition of depression (Sivertsen et al., 2010). They may find antidepressant treatment improves chronic insomnia symptoms when depression is present and conclude it effectively treats chronic insomnia alone (Lai et al., 2011; Sivertsen et al., 2010).

Our present PCPs said they would prescribe hypnotics (BZD and BZRA) at a lower rate than PCPs in other countries (Sivertsen et al., 2010). Parallel data collection in Swiss primary care practices revealed that half of patients with chronic insomnia in Swiss primary care still use BZD or BZRA for sleep problems (Maire et al., 2020), perhaps because patients are already dependent on them or pressure PCPs to prescribe (Everitt et al., 2014).

In cases of chronic insomnia with depression, the PCPs tended to treat patients with antidepressants and psychotherapy rather than CBT-I or its components, suggesting they believe insomnia is a symptom resulting from depression. When PCPs recognise insomnia as an independent condition, patients are less likely to develop chronic

insomnia and depression; chronic insomnia doubles a patient's risk of developing depression (Baglioni et al., 2011; Riemann et al., 2020).

The present study has four limitations. The PCPs self-reported treatment based on fictive case vignettes and not on actual patient data by chart review, for example. The PCPs read a short introductory text to the questionnaire. No further instruction on completing the survey was provided. Second, specifying and categorising treatment options on the survey form may have biased PCPs' responses by presenting them with plausible treatment options they might not otherwise have considered; it is also possible our categorisations could have influenced their treatment choice. Third, PCPs who train students or who take part in the Sentinella project may know more about insomnia treatment than the average PCP or the PCPs may tend to overestimate their knowledge about CBT-I because it is socially desirable to be more informed. As a result, we might have overestimated how much the PCPs knew about CBT-I, but this bias would only strengthen our main finding that CBT-I appears vastly under-prescribed and that physicians reported knowing little about it. Fourth, our present sample size was too small to use a logistic regression model to test if CBT-I knowledge or CBT-I provider knowledge was associated with CBT-I prescription ($n = 28$ prescribing CBT-I in case 1 and $n = 31$ in case 2), so we limited our analyses to descriptive statistics.

The response rate in the Sentinella group (70%) was substantially higher than in the student preceptor group (44%). As the Sentinella PCPs are specifically recruited to participate in data collection and receive a yearly reimbursement for their overall participation, this could explain the much higher response rate in this group. Student preceptor PCPs also seemed to favour the paper-pencil version of the survey over the online version.

The PCPs knew little about CBT-I, were not connected to CBT-I providers, often prescribed medication as a first-line treatment, and may still hold the outdated notion that chronic insomnia is a secondary condition of depression. However, non-pharmacological therapies were frequently chosen to treat both insomnia and insomnia comorbid with depression, showing that these therapy options are generally well accepted by PCPs. As the present PCPs expressed a strong interest in learning more about treatment options for chronic insomnia and may be familiar with some CBT-I components, researchers should identify specific barriers to CBT-I implementation in clinical practice, devise and test interventions that teach PCPs about chronic insomnia treatment, and connect PCPs with specialists who provide CBT-I or familiarise them with online CBT-I (Baglioni et al., 2020).

Our present results suggest that informing PCPs about the benefits of CBT-I and connecting them with local CBT-I providers could increase the proportion of Swiss PCPs who prescribe the first-line treatment recommended by guidelines and also reduce the number of patients treated with medication, especially in the presence of depression.

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CONFLICT OF INTEREST

SL, MM, RA report no conflict of interest. CN has received speaker honoraria from Vanda Pharmaceuticals and has served on an advisory board of Lundbeck. RH is a member of the Medical Advisory Board of Dreem and NightBalance-Philips, received a grant from the Ligue Pulmonaire Vaudoise, and speakers fees from NightBalance-Philips.

AUTHOR CONTRIBUTIONS

MM, RA and SL have contributed to the study concept, developed the survey, and acquired, analysed and interpreted data; they also drafted and revised the manuscript. CN, SD, RH and CB helped develop the case vignettes and revised the manuscript. CDG and LS analysed and interpreted data. CD, CM and SE helped revise the survey and the manuscript. KT helped draft and revise the manuscript.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

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