

UC Berkeley

UC Berkeley Previously Published Works

Title

Therapist training in treating sleep problems: A survey study of clinical practice.

Permalink

<https://escholarship.org/uc/item/9wd759p2>

Journal

In Session: Psychotherapy in Practice, 79(9)

Authors

Gumport, Nicole

Gasperetti, Caitlin

Zieve, Garret

et al.

Publication Date

2023-09-01

DOI

10.1002/jclp.23511

Peer reviewed



HHS Public Access

Author manuscript

J Clin Psychol. Author manuscript; available in PMC 2024 September 01.

Published in final edited form as:

J Clin Psychol. 2023 September ; 79(9): 1943–1956. doi:10.1002/jclp.23511.

Therapist Training in Treating Sleep Problems: A Survey Study of Clinical Practice

Nicole B. Gumport, PhD^{1,2}, Caitlin E. Gasperetti, MA¹, Garret G. Zieve, MA¹, Allison G. Harvey, PhD¹

¹University of California, Berkeley

²NBG is now at Stanford University

Abstract

Objectives: Mental health care clinicians' training in treating sleep problems was investigated. We examined clinicians' (1) prior training in providing treatment for sleep problems, (2) interest in receiving training in treatment for sleep problems, and (3) perceptions of the importance of treating sleep problems and interest in incorporating sleep treatments into their practices.

Methods: An online survey was completed by 137 clinicians.

Results: The majority of clinicians (61.31%) reported receiving prior training in treating sleep problems, most commonly in the form of a workshop and after receiving a graduate degree. Most clinicians reported interest in receiving further training in treating sleep problems. Clinicians reported that the majority (66.67%) of their clients experience sleep problems, yet reported that they address sleep with fewer than half of clients. Addressing sleep in treatment was rated as “somewhat” to “very” important and most clinicians indicated further interest in receiving training in treating sleep.

Conclusions: Mental health care clinicians receive limited training in treating sleep problems. As clinicians are interested in gaining further training to address sleep concerns within their clinical practice, training programs and continuing education programs should consider increasing the amount of programming in sleep treatment and assessment.

Keywords

training; clinical practice; sleep disorders

Introduction

Sleep problems are highly prevalent in the United States. Approximately one third of adults do not get enough sleep (Liu et al., 2016). The numbers are even worse for youth. Indeed, approximately three quarters of adolescents receive insufficient sleep each night (Owens, 2014). Unfortunately, sleep problems such as insomnia and obstructive sleep apnea impact millions of adults and adolescents annually (Institute of Medicine Committee on Sleep

Medicine and Research, 2006; Ram et al., 2010). Sleep problems frequently co-occur with, predict, and predate mental health problems (Baglioni et al., 2016; Hertenstein et al., 2019; Roth et al., 2006), and often persist following treatment of the mental health problem (J. Gruber et al., 2009; Nierenberg et al., 2010). Many patients who enter treatment for a mental health problem report sleep difficulties (Seow et al., 2018) and treating sleep can improve mental health symptoms (Harvey et al., 2015; Manber et al., 2008; Ulmer et al., 2011). Hence, training mental health providers to address sleep problems is essential.

Despite the availability of evidence-based sleep interventions (Parthasarathy et al., 2016), prior research has demonstrated that mental health care providers receive little formal training in treating sleep disorders. These findings have persisted across decades of research. One study of clinical psychology doctoral training programs, including both graduate programs and clinical internships, found that only 6% of programs surveyed offered a formal didactic course in sleep, and 83% of these were internship programs (Meltzer et al., 2009). Additionally, 41% of programs reported that they offered no training—no courses, lectures, or clinic patients—in treating sleep problems (Meltzer et al., 2009). More recently, a study of clinical psychologists in the United States found that psychologists received an average of 10 hours of didactic training in sleep, but 95% received no formal clinical training in behavioral sleep medicine (Zhou et al., 2020). Unfortunately, this is an international problem. In Canada, only 3% of health care providers, including psychologists and social workers, receive training about sleep during residency (R. Gruber et al., 2017). Similarly, providers in Australia received on average 0.5-3.5 hours of total graduate training in sleep (Richardson et al., 2021), two hours of postgraduate training in sleep (Meaklim et al., 2021), and have limited sleep education and knowledge (Meaklim et al., 2020). Given these findings, it is perhaps unsurprising that there is a dearth of behavioral sleep medicine providers (Thomas et al., 2016). For example, as of June 2022, there are 192 providers registered as diplomates of behavioral sleep medicine (Board of Behavioral Sleep Medicine, 2022). This lack of training across mental health professionals in the treatment of sleep problems is concerning for several reasons. First, there is a pressing need for mental health professionals who have sleep expertise given the high prevalence of sleep disorders and the comorbidity of sleep problems with other mental health conditions. Second, mental health professionals are first line providers for sleep problems as the frontline treatments for many sleep disorders include psychotherapy (Auger et al., 2015; Edinger et al., 2021) and prior research has demonstrated that even physician-administered interventions, such as C-PAP adherence for obstructive sleep apnea, benefit from the support of a mental health care clinician (Crawford et al., 2014). Third, this lack of training may limit the efficacy of mental health treatment given that many patients with mental health problems experience comorbid sleep problems and treating sleep can also improve mental health symptoms (Seow et al., 2018; Ulmer et al., 2011).

The goal of the present study was to conduct an updated evaluation of mental health care clinicians' training in treating sleep problems. This update is important as it has been more than a decade since the Meltzer et al. (2009) study of training programs in the United States. Furthermore, this study extends the Meltzer et al. (2009) study, which surveyed training programs, by directly surveying providers about their past training experiences. The first aim was to examine clinicians' prior training in providing treatment for sleep problems.

Specifically, we examined if the participants had received training, the stage of their career they received the training and the format of their training. The second aim was to examine clinicians' interest in receiving training in treatment for sleep problems. The third aim examined (a) clinicians' perceptions of the importance of treating sleep problems and (b) clinicians' interest in incorporating sleep treatments into their practices.

Participants and Methods

Participants and Procedure

Participants were 137 individuals whose current professional activities included providing therapy services for mental health concerns. Although a total of 152 individuals attempted the survey and completed the consent process, 12 were ineligible because they did not endorse currently providing mental health services as part of their professional activities. Another three respondents did not respond to any items beyond the demographics, so were excluded from analyses. Hence, a total of 137 participants were included in the analyses. Across survey items, five participants elected not to respond to a few specific items.

Requests for participation were posted to the mailing lists of the following professional organizations: the American Psychological Association, the Association for Behavioral and Cognitive Therapies, the Northern California Cognitive Behavioral Therapy Network, and the Northern California Society for Psychoanalytic Psychology. Requests for participation were also sent to clinic directors at graduate training programs, who were asked to forward the email to their current students. Finally, a minority of requests were made by word of mouth by the authors to individuals and group practices in the San Francisco Bay Area. This outreach has the potential to have reached 135,000 clinicians given the number of members in each organization. However, it is reasonable to assume that many people do not read emails from listservs regularly and that some members of organizations are not on the listservs. Given the anonymous nature of this study, we are unable to determine how many people received the request to participate." This convenience sampling method resulted in the overall sample. All surveys were completed via Qualtrics (Qualtrics, 2005). Data were collected from June-October 2018. All procedures were approved by the University of California, Berkeley, Committee for the Protection of Human Subjects.

Participant characteristics are presented in Table 1. Most participants had earned a doctoral degree (62.77%) and most identified with a cognitive-behavioral theoretical orientation (69.34%).

Instrument

The survey was developed for this study by the authors. The development process consisted of several rounds of item generation, revision, and pruning within discussion among the authors and colleagues in a sleep clinical and research clinic. The goal was to balance brevity and clarity to maximize the survey completion rate. The final survey consisted of up to 20 items and required less than 5 minutes to complete.

The first 5 items assessed respondent characteristics. These characteristics were education, age of clinical population treated, clinical setting, types of clinical populations treated, and theoretical orientation. The rationale for selecting these characteristics were (a) to describe the study sample and (b) to demarcate groups of therapists from different backgrounds and settings to differentiate between their prior training in treating sleep problems.

The next six items assessed clinicians' prior training in sleep problems. This training was assessed by asking: (1) "Have you received prior training in treating sleep problems?" If yes, (2) "What format was the training?" Participants had the option to select between: "academic course," "workshop," "reading a treatment manual," "ongoing supervision," and "other," and could select all items that applied. Follow-up questions were asked to specify (3) the length of the course, (4) the length of the workshop, and/or (5) the length of ongoing supervision. The last item in this section assessed (6) "When in your career did you receive training in sleep problems?"

The next three items assessed clinicians' interest in receiving training for sleep problems: (1) "How interested are you in receiving training in sleep problems?", (2) "What type of information would you be interested in learning?", and (3) "Why are you interested in receiving training in sleep problems?" Item 1 was rated on a 5-point scale: 1=not at all interested, 2=a little interested, 3=somewhat interested, 4=very interested, and 5=extremely interested. Item 2 offered the following options and allowed for the selection of multiple responses: "sleep facts (e.g., basic information to share with all clients)," "assessment of sleep problems," "manualized sleep treatment (e.g., CBT-I)," "sleep treatment strategies (e.g., components of sleep treatments, but not the full manualized treatment)," and "other." Item 3 was a free response question.

The next four items assessed clinicians' perceptions of the importance of sleep treatment: (1) "What percentage of your clients do you think experience sleep problems?" (2) "What percentage of your clients would benefit from sleep treatment?" (3) "With what percentage of your clients do you spend time addressing sleep problems?" and (4) "How important do you think addressing sleep problems in treatment will be for your clients?" Items 1-3 were rated on a scale ranging from 0% to 100%, divided into intervals of 10%. Item 4 was rated on a 5-point scale: 1=not at all important, 2=a little important, 3=somewhat important, 4=very important, and 5=extremely important.

The final two items assessed clinicians' perceptions of the importance of incorporating sleep treatment into their clinical practice. The first item assessed "How interested would you be in incorporating treatment for sleep into your clinical practice?" and was rated on a 6 point scale: 1=not at all interested, 2=a little interested, 3=somewhat interested, 4=very interested, 5=extremely interested, and 6=I already incorporate sleep treatment. If the participant responded "not at all," a follow-up question assessed "Why not?" with a free response answer.

Data Analysis

Survey responses were pooled across participants using descriptive statistics. One item—"Why are you interested in receiving training in sleep problems?"—required the coding of

free response text. Based on an initial review of the data, eight themes were extracted. A subset of data (25.98%) was coded independently by two of the authors (NBG and CEG) and compared to establish inter-rater reliability. Cohen's kappa (Cohen, 1960) indicated good inter-rater reliability ($\kappa = 0.85$). The remaining qualitative coding was conducted independently.

Results

Prior training in providing treatment for sleep problems

See Table 2. A total of 84 participants (61.31%) indicated that they had prior training in treating sleep problems. The training format was a workshop (63.10%), reading a treatment manual (46.43%), ongoing supervision (42.86%), an academic course (29.76%), or other (13.10%). Master's providers were less likely than doctoral providers to have received prior training in treating sleep problems (35% vs. 75.58%).

Interest in receiving training in treating sleep problems

See Table 3. On average, participants rated that they were "somewhat interested" to "very interested" in receiving training in treating sleep problems. Participants were interested in learning about sleep treatment strategies (69.92%), manualized sleep treatment (e.g., CBT-I) (69.17%), assessment of sleep problems (68.42%), and sleep facts (58.65%). The types of training were consistent across both doctoral and master's level providers.

Participant responses to the free response item asking for an explanation for why they are interested in receiving training in treating sleep problems were coded and categorized by theme. Responses could be categorized under multiple codes. In order of frequency of endorsement, the themes identified for why participants were interested in learning about sleep were to better address comorbidity with mental health problems (39.37%), to ensure correct, evidence-based knowledge (23.62%), to add to one's clinical repertoire (22.83%), because sleep is a prevalent problem (21.26%), because addressing sleep is valuable and important (18.11%), because sleep problems worsen mental health problems (13.39%), to better address comorbidity with physical health problems (9.45%), and for the sake of learning itself (6.30%). For doctoral level providers, the most commonly cited reason for wanting training was "to ensure correct, evidence-based knowledge." For master's level providers, the most commonly cited reason for wanting training was "to better address comorbidity with mental health problems."

Perceptions of the importance of treating sleep problems and interest in incorporating sleep treatment into clinical practice

See Table 3. On average, clinicians endorsed that 66.67% of their clients experience sleep problems, that 65.10% of their clients would benefit from sleep treatment, and that they spend time addressing sleep problems with 48.56% of their clients. Clinicians rated that addressing sleep problems is "somewhat important" to "very important." No clinician rated addressing sleep problems as "not at all important." These findings were consistent across doctoral level and master's level providers.

While 40.15% of the sample endorsed already providing sleep treatment within their practice, the remaining 79 participants on average stated that they would be “somewhat interested” to “very interested” in incorporating sleep treatment into their clinical practice. No participants responded that they were “not at all interested” in incorporating sleep treatment into their clinical practice.

Discussion

The present study was designed to describe the training that mental health care clinicians have received in treating sleep problems. The first aim examined clinicians’ prior training in providing treatment for sleep problems. Over half of the sample had received prior training in sleep treatment. Encouragingly, more clinicians in the sample had received some form of prior training in sleep compared to a survey of clinical psychology programs in which only 6% of programs offered didactics in sleep (Meltzer et al., 2009). This suggests clinicians are pursuing training in behavioral sleep medicine on their own, perhaps due to the limited training opportunities available during their graduate training. This may also reflect the increase in the availability of training and the establishment of the Society for Behavioral Sleep Medicine (Taylor et al., 2010). These results highlight the need to increase behavioral sleep medicine training during graduate school across disciplines.

The second aim was to examine mental health clinicians’ interest in receiving training in treating sleep problems. The majority of clinicians were interested in receiving some form of training in treating sleep problems, including both doctoral and master’s level clinicians. This finding is consistent with a recent survey of clinical psychologists that found that 99% of psychologists were interested in receiving more training in sleep (Zhou et al., 2020), and expands these findings to other fields that provide mental health care (e.g., master’s level providers). Over half of the surveyed clinicians, regardless of having received master’s or doctoral level training, were open to learning about elements of sleep treatments, manualized sleep treatments, the assessment of sleep problems, and basic facts about sleep. It is encouraging that a majority of clinicians are open to receiving training in a full treatment (e.g., CBT for insomnia), as CBT for insomnia is the front line recommendation for insomnia (Qaseem et al., 2016; Riemann et al., 2017). The most cited reasons for wanting to learn more about sleep focused on its comorbidity with mental health disorders and wanting training in evidence-based approaches. To our knowledge, these qualitative responses have not been gathered in prior survey studies and they highlight areas that individuals offering training in sleep can capitalize on in order to increase interest from mental health care clinicians. Of note, given the level of comorbidity across sleep and circadian disorders (Sarfan et al., 2021, 2022), there is likely to be value in offering training in multi-problem transdiagnostic treatments (Harvey et al., 2021).

The third aim was to examine clinicians’ perceptions of the importance of treating sleep problems and their interest in incorporating sleep treatments into their clinical practice. Clinicians endorsed treating sleep problems as important. Specifically, and consistent with prior research in pediatric populations (Richardson et al., 2021), clinicians estimated that approximately two thirds of their caseloads experience sleep problems, yet they reported addressing sleep problems with less than 50% of their clients. Perhaps increasing clinician

knowledge in the treatment of sleep problems and increasing awareness that improving sleep can alleviate other mental health symptoms (e.g., Manber et al., 2008) will close this gap between identifying sleep as a problem and addressing it during treatment. All participants who did not report already providing some form of sleep treatment responded that they would be interested in receiving further training. This finding is encouraging given the possible benefit to the large group of clients who likely experience sleep difficulties alongside another mental illness (Baglioni et al., 2016; Hertenstein et al., 2019). However, addressing possible barriers to participating in behavioral sleep medicine training will be important. Potential barriers include limited time available for clinical training (Manber et al., 2012), competing training demands (e.g., how to choose which training to attend with limited time and so many interventions to learn (Weisz et al., 2014)), and the belief that interventions such as cognitive behavior therapy for insomnia are too structured (Harvey & Gumport, 2015). Offering training to organizations that clinicians can complete as a part of their workday and packaging training to be completed as efficiently as possible (Manber et al., 2012) will be an important first step to mitigating these barriers. It is likely that students in graduate programs with a sleep researcher may be more likely to receive training in behavioral sleep medicine. Therefore, graduate programs may consider hiring faculty that represent all areas of psychopathology, including sleep problems, or to invite faculty with expertise in sleep faculty to present in their class offerings. Moreover, clinicians may also consider requesting training in sleep from their workplace, graduate training programs, and professional organizations.

Several limitations should be noted. First, mental health clinician participants were recruited via professional organization listservs and word of mouth. We are therefore unable to determine our survey response rate because we do not know how many people received our study advertisement email nor who actually read the email. We are unable to measure how selection bias may have contributed to the results, and cannot rule out the possibility that only individuals interested in sleep completed the survey. Given that the authors are located in California and we sampled professional organizations within our networks and we did not assess the location of study participants, we cannot rule out that the results are biased towards California mental health care provider training. It is also possible that individuals who have stronger opinions about sleep interventions may have been more likely to complete the survey. Second, the survey asked participants to reflect back on their training experiences. It is possible that clinicians may not accurately recall their past training. Third, to maximize survey completion, we assessed little demographic information. The sample could have been described in more detail if we had assessed information such as age, gender, race, ethnicity, profession, and years in clinical practice. Fourth, we did not investigate what type of treatments that the group of participants who reported that they already integrate sleep treatment into their clinical practice offer. Therefore, we are unable to report on what types of strategies may be commonly used by mental health clinicians.

Overall, mental health care clinicians receive limited training in the treatment of sleep problems and this has been consistent across the past decade (Meltzer et al., 2009). Promisingly, clinicians are interested in gaining further training to effectively address sleep concerns within their clinical practice. Training programs across disciplines and continuing education programs should consider increasing the amount of programming and training in

sleep treatments. Increasing training in treating sleep problems has the possibility to have a large public health impact given the comorbidity between psychiatric disorders and sleep as well as the widespread prevalence of sleep problems (Baglioni et al., 2016; Institute of Medicine Committee on Sleep Medicine and Research, 2006; Liu et al., 2016).

Acknowledgments:

This research was supported by the National Institute of Mental Health under grant T32MH019938 awarded to NBG.

Disclosure of Interests:

AGH has received research support from the National Institutes of Health and book royalties from American Psychological Association, Guilford Press, and Oxford University Press. NBG has received research support from the National Institutes of Health. The views expressed in this article do not represent those of any public entity. The other authors do not have interests to declare.

Data sharing:

The data that support the findings of this study are available from the corresponding author upon reasonable request.

References

- Auger RR, Burgess HJ, Emens JS, Deriy LV, Thomas SM, & Sharkey KM (2015). Clinical Practice Guideline for the Treatment of Intrinsic Circadian Rhythm Sleep-Wake Disorders: Advanced Sleep-Wake Phase Disorder (ASWPD), Delayed Sleep-Wake Phase Disorder (DSWPD), Non-24-Hour Sleep-Wake Rhythm Disorder (N24SWD), and Irregular Sleep-Wake. *Journal of Clinical Sleep Medicine*, 11(10).
- Baglioni C, Nanovska S, Regen W, Spiegelhalder K, Feige B, Nissen C, Reynolds CF, & Riemann D (2016). Sleep and Mental Disorders: A Meta-Analysis of Polysomnographic Research. *Psychological Bulletin*, 142, 969–990. 10.1037/bul0000053 [PubMed: 27416139]
- Board of Behavioral Sleep Medicine. (2022). Behavioral Sleep Medicine Diplomates. <https://www.bsmcredential.org/index.php/bsm-diplomates>
- Cohen J (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement*, XX(1), 37–46.
- Crawford MR, Espie CA, Bartlett DJ, & Grunstein RR (2014). Integrating psychology and medicine in CPAP adherence: New concepts? *Sleep Medicine Reviews*, 18(2), 123–139. 10.1016/j.smrv.2013.03.002 [PubMed: 23725820]
- Edinger JD, Arnedt JT, Bertisch SM, Carney CE, Harrington JJ, Lichstein KL, Sateia MJ, Troxel WM, Zhou ES, Kazmi U, & Heald JL (2021). Behavioral and psychological treatments for chronic insomnia disorder in adults: an American Academy of Sleep Medicine clinical practice guideline. *Journal of Clinical Sleep Medicine*, 17(2), 255–262. [PubMed: 33164742]
- Gruber J, Harvey AG, Wang PW, Brooks JO, Thase ME, Sachs GS, & Ketter TA (2009). Sleep functioning in relation to mood, function, and quality of life at entry to the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD). *Journal of Affective Disorders*, 114(1–3), 41–49. 10.1016/j.jad.2008.06.028 [PubMed: 18707765]
- Gruber R, Constantin E, Frappier JY, T. BR, & Wise MS (2017). Training, knowledge, attitudes and practices of Canadian health care providers regarding sleep and sleep disorders in children. *Pediatrics and Child Health*, June, 322–327. 10.1093/pch/pxx069 [PubMed: 29479245]
- Harvey AG, Dong L, Hein K, Yu SH, Martinez AJ, Gumport NB, Smith FL, Chapman A, Lisman M, Mirzadegan IA, Mullin AC, Fine E, Dolsen MR, Gasperetti CE, Bukosky J, Alvarado-Martinez CG, Kilbourne AM, Rabe-Hesketh S, & Buysse DJ (2021). A randomized controlled trial of the Transdiagnostic Intervention for Sleep and Circadian Dysfunction (TransS-C) to improve serious

- mental illness outcomes in a community setting. *Journal of Consulting and Clinical Psychology*, 89, 537–550. 10.1037/ccp0000650 [PubMed: 34264701]
- Harvey AG, & Gumport NB (2015). Evidence-based psychological treatments for mental disorders: Modifiable barriers to access and possible solutions. *Behaviour Research and Therapy*, 68, 1–12. 10.1016/j.brat.2015.02.004 [PubMed: 25768982]
- Harvey AG, Soehner AM, Kaplan KA, Hein K, Lee J, Kanady J, Li D, Rabe-Hesketh S, Ketter TA, Neylan TC, & Buysse DJ (2015). Treating insomnia improves mood state, sleep, and functioning in bipolar disorder: A pilot randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 83(3), 564–577. 10.1037/a0038655 [PubMed: 25622197]
- Hertenstein E, Feige B, Gmeiner T, Kienzler C, Spiegelhalder K, Johann A, Jansson-Fröjmark M, Palagini L, Rücker G, Riemann D, & Baglioni C (2019). Insomnia as a predictor of mental disorders: A systematic review and meta-analysis. *Sleep Medicine Reviews*, 43, 96–105. 10.1016/j.smrv.2018.10.006 [PubMed: 30537570]
- Institute of Medicine Committee on Sleep Medicine and Research. (2006). *Sleep Disorders and Sleep Deprivation: An Unmet Public Health Problem* (Colton HR & Altevogt BM (eds.)). National Academies Press.
- Liu Y, Wheaton AG, Chapman DP, Cunningham TJ, Lu H, & Croft JB (2016). Prevalence of healthy sleep duration among adults — United states, 2014. *Morbidity and Mortality Weekly Report*, 65(6), 137–141. 10.15585/mmwr.mm6506a1 [PubMed: 26890214]
- Manber R, Carney C, Edinger J, Epstein D, Friedman L, Haynes PL, Karlin BE, Pigeon W, Siebern AT, & Trockel M (2012). Dissemination of CBTI to the non-sleep specialist: Protocol development and training issues. *Journal of Clinical Sleep Medicine*, 8(2), 209–218. 10.5664/jcsm.1786 [PubMed: 22505869]
- Manber R, Edinger JD, Gress JL, San Pedro-Salcedo MG, Kuo TF, & Kalista T (2008). Cognitive behavioral therapy for insomnia enhances depression outcome in patients with comorbid major depressive disorder and insomnia. *Sleep*, 31(4), 489–495. 10.1093/sleep/31.4.489 [PubMed: 18457236]
- Meaklim H, Jackson ML, Bartlett D, Saini B, Falloon K, Junge M, Slater J, Rehm IC, & Meltzer LJ (2020). Sleep education for healthcare providers: Addressing deficient sleep in Australia and New Zealand. *Sleep Health*, 6(5), 636–650. 10.1016/j.sleh.2020.01.012 [PubMed: 32423774]
- Meaklim H, Rehm IC, Monfries M, Junge M, Meltzer LJ, & Jackson ML (2021). Wake up psychology! Postgraduate psychology students need more sleep and insomnia education. *Australian Psychologist*, 56(6), 485–498. 10.1080/00050067.2021.1955614
- Meltzer LJ, Phillips C, & Mindell JA (2009). Clinical psychology training in sleep and sleep disorders. *Journal of Clinical Psychology*, 65(3), 305–318. 10.1002/jclp.20545 [PubMed: 19132641]
- Nierenberg AA, Husain MM, Trivedi MH, Fava M, Warden D, Wisniewski SR, Miyahara S, & Rush AJ (2010). Residual symptoms after remission of major depressive disorder with citalopram and risk of relapse: a STAR*D report. *Psychological Medicine*, 40(1), 41–50. 10.1017/S0033291709006011 [PubMed: 19460188]
- Owens J (2014). Insufficient Sleep in Adolescents and Young Adults: An Update on Causes and Consequences. *Pediatrics*, 134(3), e921–e932. 10.1542/peds.2014-1696 [PubMed: 25157012]
- Parthasarathy S, Carskadon MA, Jean-louis G, Owens J, Bramoweth A, Combs D, Hale L, Harrison E, Hart CN, Hasler BP, Honaker SM, Hertenstein E, Kuna S, Kushida C, Levenson JC, Murray C, Pack AI, Pillai V, Pruiksma K, ... Buysse D (2016). Implementation of Sleep and Circadian Science: Recommendations from the Sleep Research Society and National Institutes of Health Workshop. *SLEEP*, 39, 2061–2075. [PubMed: 27748248]
- Qaseem A, Kansagara D, Forcica MA, Cooke M, Denberg TD, Barry MJ, Boyd C, Chow RD, Fitterman N, Harris RP, Humphrey LL, Manaker S, McLean R, Mir TP, Schünemann HJ, Vijan S, & Wilt T (2016). Management of chronic insomnia disorder in adults: A clinical practice guideline from the American college of physicians. *Annals of Internal Medicine*, 165(2), 125–133. 10.7326/M15-2175 [PubMed: 27136449]
- Qualtrics. (2005). Qualtrics (No. 2019). <https://www.qualtrics.com>

- Ram S, Seirawan H, Kumar SKS, & Clark GT (2010). Prevalence and impact of sleep disorders and sleep habits in the United States. *Sleep and Breathing*, 14, 63–70. 10.1007/s11325-009-0281-3 [PubMed: 19629554]
- Richardson C, Ree M, Bucks RS, & Gradisar M (2021). Paediatric sleep literacy in Australian health professionals. *Sleep Medicine*, 81, 327–335. 10.1016/j.sleep.2021.02.035 [PubMed: 33761413]
- Riemann D, Baglioni C, Bassetti C, Bjorvatn B, Dolenc Groseelj L, Ellis JG, Espie CA, Garcia-Borreguero D, Gjerstad M, Gonçalves M, Hertenstein E, Jansson-Fröjmark M, Jennum PJ, Leger D, Nissen C, Parrino L, Paunio T, Pevernagie D, Verbraecken J, ... Spiegelhalter K (2017). European guideline for the diagnosis and treatment of insomnia. *Journal of Sleep Research*, 26(6), 675–700. 10.1111/jsr.12594 [PubMed: 28875581]
- Roth T, Jaeger S, Jin R, Kalsekar A, Stang PE, & Kessler RC (2006). Sleep problems, comorbid mental disorders, and role functioning in the national comorbidity survey replication. *Biological Psychiatry*, 60(12), 1364–1371. 10.1016/j.biopsych.2006.05.039 [PubMed: 16952333]
- Sarfan LD, Hilmoe HE, Gumport NB, Gasperetti CE, Zieve GG, & Harvey AG (2021). Outcomes of the Transdiagnostic Intervention for Sleep and Circadian Dysfunction (Trans-C) in a community setting: Unpacking comorbidity. *Behaviour Research and Therapy*, 145(April), 103948. 10.1016/j.brat.2021.103948 [PubMed: 34428642]
- Sarfan LD, Hilmoe HE, Gumport NB, & Harvey AG (2022). The Transdiagnostic Intervention for Sleep and Circadian Dysfunction (Trans-C) in Community Mental Health: Comorbidity and Use of Modules Under the Microscope. *Cognitive and Behavioral Practice*. 10.1016/j.cbpra.2022.03.007
- Seow LSE, Verma SK, Mok YM, Kumar S, Chang S, Satghare P, Hombali A, Vaingankar J, Chong SA, & Subramaniam M (2018). Evaluating DSM-5 Insomnia Disorder and the Treatment of Sleep Problems in a Psychiatric Population. *Journal of Clinical Sleep Medicine*, 14(2), 237–244. 10.5664/jcsm.6942 [PubMed: 29394962]
- Taylor DJ, Perlis ML, McCrae CS, & Smith MT (2010). The Future of Behavioral Sleep Medicine: A Report on Consensus Votes at the Ponte Vedra Behavioral Sleep Medicine Consensus. *Behavioral Sleep Medicine*, 8, 63–73. 10.1080/15402001003622776 [PubMed: 20352543]
- Thomas A, Grandner M, Nowakowski S, Nesom G, Corbitt C, & Perlis ML (2016). Where are the Behavioral Sleep Medicine Providers and Where are they Needed? A Geographic Assessment. *Behavioral Sleep Medicine*, 14(6), 687–698. 10.1080/15402002.2016.1173551.Where [PubMed: 27159249]
- Ulmer CS, Edinger JD, & Calhoun PS (2011). A Multi-Component Cognitive-Behavioral Intervention for Sleep Disturbance in Veterans with PTSD: A Pilot Study. *Journal of Clinical Sleep Medicine*, 7(1), 57–68. [PubMed: 21344046]
- Weisz J, Ng M, & Bearman S (2014). Odd Couple? Reenvisioning the Relation Between Science and Practice in the Dissemination-Implementation Era. *Clinical Psychological Science*, 2(1), 58–74. 10.1177/2167702613501307
- Zhou ES, Mazzenga M, Gordillo ML, Meltzer LJ, & Long KA (2020). Sleep Education and Training among Practicing Clinical Psychologists in the United States and Canada. *Behavioral Sleep Medicine*, 00(00), 1–10. 10.1080/15402002.2020.1860990

Table 1.Participant characteristics ($N = 137$)

Characteristic	N	%
Education		
Master's Student	1	0.73
Master's Received (e.g., M.Ed., MSW, LCSW, M.A., M.S., R.N., N.P)	40	29.20
Doctoral Student	10	7.30
Doctorate Received (e.g., M.D., Ph.D., Psy.D.)	86	62.77
Primary Population Treated		
Children (12 and under)	15	10.95
Adolescents (13-17)	33	24.09
Adults (18-64)	87	63.50
Older Adults (65+)	2	1.46
Clinical problems or disorders treated ^a		
Anxiety disorders	124	90.51
Depression	118	86.13
Bipolar disorder	47	34.31
Schizophrenia and other psychotic disorders	24	17.52
Substance use problems	45	32.85
Developmental disorders	25	18.25
OCD and related disorders	65	47.45
Trauma and stressor-related disorders	92	67.15
Feeding and eating disorders	19	13.87
Personality disorders	55	40.15
Sleep problems ^b	57	41.61
Learning and attention problems	44	32.12
Other ^c	6	4.38
Primary location of clinical work		
Private practice	47	34.31
Group practice	9	6.57
Community mental health clinic	13	9.49
Medical school or hospital	41	29.93
Academic department	11	8.03
Other ^d	16	11.68
Primary theoretical orientation		
Cognitive—Behavioral	95	69.34
Psychodynamic	7	5.11
Family-systems	3	2.19
Eclectic	22	16.06
Other	10	7.30

Note.

^aMultiple responses allowed.

^bOnly one participant lists sleep problems as the sole clinical population they treat.

^cOther includes marital problems, relational problems, infertility, and suicidality.

^dOther includes university counseling centers and primary care settings.

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Table 2.

Clinicians' prior training in sleep problems

	Full Sample				Doctoral Degree				Master's Degree				
	N (%)	Time			N (%)	Time			N (%)	Time			
		Mean (SD)	Median	Range		Mean (SD)	SD	Median		Range	Mean (SD)	Median	Range
Have you received prior training in treating sleep problems?													
Yes	84 (61.31)	-	-	-	65 (75.58) ^d	-	-	-	14 (35.00) ^g	-	-	-	-
No	53 (38.69)	-	-	-	21 (24.42)	-	-	-	26 (65.00)	-	-	-	-
Format of Training ^f													
Academic course (hours)	25 (29.76) ^b	12.84 (14.21)	6	1-50	22 (33.85) ^e	12.27 (13.10)	13.10	6	1-50	3 (21.43) ^h	17.00 (24.33)	5	1-45
Workshop (days)	53 (63.10)	1.57 (1.18)	1	0.25-6	39 (60.00)	1.66 (1.25)	1.25	1	0.25-6	8 (57.14)	1.24 (0.86)	1	0.40-3
Reading a treatment manual	39 (46.43)	-	-	-	32 (49.23)	-	-	-	-	7 (50.00)	-	-	-
Ongoing supervision (months)	36 (42.86)	10.82 (11.08)	6	0-48	28 (43.08)	10.04 (9.31)	9.31	6	1-48	6 (42.86)	14 (19.34)	6	0-48
Other ²	11 (13.10)	-	-	-	8 (12.31)	-	-	-	-	2 (14.29)	-	-	-
When in career													
Undergraduate program training	0 (0) ^c	-	-	-	0 (0) ^f	-	-	-	-	0 (0) ^h	-	-	-
Post-baccalaureate program or experience	0 (0)	-	-	-	0 (0)	-	-	-	-	0 (0)	-	-	-
Graduate program training	38 (46.34)	-	-	-	27 (42.19)	-	-	-	-	7 (50.00)	-	-	-
Post-graduate training	44 (53.66)	-	-	-	37 (57.81)	-	-	-	-	7 (50.00)	-	-	-

Note.

^f multiple responses allowed.

² Responses of "other" included: trained as a therapist for a grant study on the efficacy of CBT-I, post-doc fellowship, behavioral sleep medicine 6-month rotation on internship, consultation group, trained as a study therapist for a sleep disorders study, worked with on a teen sleep study, year-long practicum at a sleep clinic at a major children's hospital, VA CBT-I rollout, field placement during MSW program, talk during practicum, and online studies and professional consultation with psychiatrist and nurses.

^a N = 137.

^b n = 84.

^c n = 82.

$n = 14$
 $n = 40$
 $n = 64$
 $n = 95$
 $n = 98$
 p

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Table 3.

Clinicians interest in receiving training in, perceptions of the importance of treatment sleep problems, and interest in incorporating sleep treatment into their clinical practice

	Full Sample		Doctoral Degree		Master's Degree ⁸	
	Mean or N	SD or %	Mean or N	SD or %	Mean or N	SD or %
How interested are you in receiving training in treating sleep problems? (<i>n</i> = 134)	3.53	0.92	3.55 ⁴	0.94	3.46	0.91
	1	0.75	1	1.18	0	0.00
Not at all (1)	15	11.19	10	11.76	5	12.82
A little (2)	52	38.81	29	34.12	17	43.59
Somewhat (3)	44	32.84	31	36.47	11	28.21
Very (4)	22	16.42	14	16.47	6	15.38
Extremely (5)						
What type of information would you be interested in learning? (check all that apply) ¹ (<i>n</i> = 133)						
Sleep facts (e.g., basic information that can be shared with all clients)	78	58.65	46 ⁵	54.76	25	64.10
Assessment of sleep problems	91	68.42	52 ⁵	61.90	29	44.62
Manualized sleep treatment (e.g., CBT-I)	92	69.17	65 ⁵	77.38	18	46.15
Sleep treatment strategies (e.g., components of sleep treatments but not the full manualized treatment)	93	69.92	51 ⁵	60.71	33	84.62
Other ²	11	8.21	10	11.90	1	2.56
Why are you interested in receiving training in sleep problems? ² (<i>n</i> = 127) ⁷						
To better address comorbidity with mental health problems	50	39.37	23	29.11	21	53.85
To ensure correct, evidence-based knowledge	30	23.62	25	31.65	4	10.26
To add to one's clinical repertoire	29	22.83	22	27.85	7	17.95
Because sleep is a prevalent problem	27	21.26	14	17.72	7	17.95
Because addressing sleep is valuable and important	23	18.11	11	13.92	7	17.95
Because sleep problems worsen mental health problems	17	13.39	10	12.66	6	15.38
To better address comorbidity with physical health problems	12	9.45	6	7.59	5	12.82
For the sake of learning itself	8	6.30	7	8.86	0	0.00
What percentage of your clients do you think experience sleep problems? (<i>n</i> = 132)	66.67	20.00	67.83 ⁵	19.00	65.13	20.76
What percentage of your clients would benefit from sleep treatment? (<i>n</i> = 132)	65.10	26.07	63.73 ⁵	25.88	67.95	26.07
What percentage of your clients do you spend time addressing sleep problems with?	48.56	24.87	51.08 ⁵	24.84	48.97	24.69

	Full Sample			Doctoral Degree			Master's Degree ⁸		
	Mean or N	SD or %	Mean or N	SD or %	Mean or N	SD or %	Mean or N	SD or %	
How important do you think addressing sleep problems in treatment will be for your clients? (<i>n</i> = 132)	3.92	0.79	4.02 ⁶	0.78	3.74	0.79	3.74	0.79	
Not at all important (1)	0	0.00	0	0.00	0	0.00	0	0.00	
A little important (2)	6	4.55	5	6.02	1	2.56	1	2.56	
Somewhat important (3)	28	21.21	9	10.84	15	38.46	15	38.46	
Very important (4)	68	51.52	48	57.83	16	41.03	16	41.03	
Extremely important (5)	30	22.73	21	25.39	7	17.95	7	17.95	
How interested would you be in incorporating treatment for sleep into your clinical practices? (<i>n</i> = 132) (only including 1-5 in this mean, <i>n</i> = 79) ⁹	3.89	0.83	3.90	0.88	3.80	0.81	3.80	0.81	
Not at all (1)	0	0.00	0	0.00	0	0.00	0	0.00	
A little (2)	3	2.27	3	3.61	0	0.00	0	0.00	
Somewhat (3)	23	17.42	9	10.84	13	33.33	13	33.33	
Very (4)	33	25.00	19	22.89	10	25.64	10	25.64	
Extremely (5)	20	15.15	11	13.25	7	17.95	7	17.95	
I already incorporate sleep treatment	53	40.15	41	49.40	9	23.08	9	23.08	

Note.

¹ Multiple responses allowed.

² "Other" responses include: advanced sleep therapy for complex problems, updates to CBT-I or other sleep therapies, advanced strategies for specific target populations (e.g., shift workers, helping with tapering long-term sleep aid use), nightmare disorders, pediatric sleep concerns, CPAP desensitization, ADHD and insomnia, psychopharmacological treatment, information about available treatments, better understanding of adapting treatment for clients with different types of sleep problems, best practices and non-medication interventions, and approaches other than just CBT-focused treatments.

³ Multiple codes allowed.

⁴ *n* = 85.

⁵ *n* = 84.

⁶ *n* = 83.

⁷ *n* = 79 for the doctoral degree group.

⁸ *n* = 39.

⁹ For the doctoral degrees group, the mean includes *n* = 42 and for the master's degree groups the mean includes *n* = 30.