Is it time to get some SHUT-i?

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Provenance: This is a Guest Editorial commissioned by Section Editor Yun Li, MD (Clinical Medicine, Psychiatry, Sleep Medicine Center, Translational Neuroscience Center, West China Hospital, Sichuan University, Chengdu, China).

Comment on: Ritterband LM, Thorndike FP, Ingersoll KS, *et al.* Effect of a Web-Based Cognitive Behavior Therapy for Insomnia Intervention With 1-Year Follow-up: A Randomized Clinical Trial. JAMA Psychiatry 2017;74:68-75.

Submitted Mar 30, 2017. Accepted for publication Apr 14, 2017.
doi: 10.21037/atm.2017.04.28
View this article at: http://dx.doi.org/10.21037/atm.2017.04.28

There are four central things that are well known about insomnia which together highlight it as a serious public health concern: (I) it is a significant issue—over a third of the population will experience an acute episode (less than three months in duration) of insomnia every year (1) and between 10–20% of the population will report chronic insomnia (Insomnia Disorder) at any point in time (2); (II) once chronic, it is a persistent disorder with low natural remission rates and high recurrence rates (3,4); (III) it is costly both directly (in terms of healthcare costs) and indirectly (e.g., lost productivity and performance, accidents) (5); and (IV) it is a significant risk factor for the development and/or worsening of many physical or psychiatric disorders (6). Fortunately, as our understanding of insomnia has increased so has our armoury of management strategies. Most notably, at least from a non-pharmacological perspective, has been the introduction of a series of techniques aimed to increase the biological drive to sleep, stabilise the circadian rhythm and break negative, whilst reinforcing positive, associations between the bed/bedroom and sleep (addressing the behavioural aspects of insomnia) and help manage sleep related preoccupation, worry and anxiety, and address dysfunctional attitudes and beliefs about sleep and unwanted nocturnal ruminations (addressing the cognitive aspects of insomnia). Over time these techniques have been packaged together, under an umbrella term, of what is now considered Cognitive Behavioural Therapy for Insomnia (CBT-I).

Since its inception, the research community has established CBT-I as an efficacious and effective management tool for individuals with insomnia (7). More recently, this knowledge has been translated, through several organisations, to the wider clinical community through various position statements (8,9). Whilst these acknowledgements have gone some way in establishing CBT-I as the first line treatment for insomnia, CBT-I is not without its limitations. Chiefly, the widespread dissemination and implementation of CBT-I has been hampered by a lack of qualified providers. Whilst there have been advances in this arena in terms of establishing national training programmes (10) and broadening the range of delivery modalities to engage more efficiently and widely—through creating briefer and more targeted hybrid versions (11) and delivery in group therapy format (12), probably the most notable advance with respect to the dissemination of CBT-I has been the development of web-based versions. To that end, there are now several versions of online CBT-I available across the globe.

The recent study by Ritterband and colleagues (13) moves this agenda forward by examining the extent to which their web-based version (SHUTi) impacts on insomnia. Whilst the authors have demonstrated this previously (14), in the present study they not only examined the immediate impact (post-treatment) but also the shorter-term (at six months) and longer-term impact (at one year) of their programme, which is rare. Furthermore, the authors recruited a large sample of individuals with insomnia (N=303) with almost half of those (49.8%) reporting at least one medical or psychiatric illness alongside their insomnia. This latter issue is a strength on the basis that current definitions of insomnia (e.g., DSM-5 and ICSD-3)

afford for a diagnosis of Insomnia Disorder even when a concurrent illness exists, as long as it does not better explain the presence of the insomnia, making the sample more representative of what is more likely to be seen in practice. Following, the authors used a single-blind randomised clinical trial design with just over half the participants being randomised to patient education sessions (control group) or to SHUTi over nine weeks, following a ten-day baseline assessment.

The study findings support the use of SHUTi, with significant improvements being observed in terms of reductions in the amount of time taken to fall asleep (sleep latency), the amount of time spent awake during the night (wake after sleep onset) and in the severity of symptoms (as measured using the Insomnia Severity Index) in those who received SHUTi, at each time point, compared to baseline and controls. Moreover, using established treatment outcome criteria, 69.7% were considered treatment responders and 56.6% were considered in remission at the final assessment point (1-year post treatment) in the SHUTi condition compared to 43% and 27.3%, respectively, in the control condition. Interestingly the effect sizes reported broadly match those typically seen in CBT-I studies employing face-to-face methods (15). Of note, however, almost 40% (39.7%) of those enrolled to the SHUTi condition did not complete all the prescribed modules. Whether this speaks to a sampling issue, early treatment success, or failure, or a lack of sustained engagement with the therapy is unknown, but should be a focus of future research. Interestingly whilst drop out impacted on treatment outcome, post-treatment, this difference was no longer evident at the one-year follow-up.

One thing to be mindful of, however, is that whilst the present paper demonstrated the long-term efficacy of the authors own online CBT-I (SHUTi) programme, it should not be presumed that these findings naturally translate to all versions of online CBT-I, or indeed CBT-I delivered in any other format. Presently there is limited standardisation in both what components 'make-up' CBT-I or what guidelines, rules and instructions are provided within the individual components (16). For example, whilst the term 'sleep restriction' is used widely in the literature, and sleep restriction is considered one of the most powerful techniques for managing insomnia under a CBT-I framework, the rules on how to determine the optimal amount of sleep restriction to initially 'prescribe' to the patient and the level, and timing, of titrating this initial prescription can differ greatly. This issue is further compounded by the fact that it is rare for authors to outline the specific details of their version of CBT-I in their published works. Here the present study offers insight into the specific components that make up their version of CBT-I but the authors do not talk to the order of delivery or specific instructions within the individual components, such as sleep restriction and its titration schedule. Another issue, which again, is not just pertinent to the present study but the majority of studies on CBT-I, in its various delivery formats, is the study sample. This study, whilst employing much more inclusive criteria (i.e. individuals with a co-morbidity were not naturally excluded) recruited through self-referral which typically, unless part of the recruitment criteria, contains a demographic largely comprised of white educated participants. Differences in responses to CBT-I based upon the sample (self-referred *vs.* referred from a clinical setting) have been observed, with higher levels of drop out, associated with referral from a healthcare professional, being a specific issue (17,18). Finally, with respect to the sample, as the age of those treated ranged from 21 to 65, the long-term impact of SHUTi on older adults is currently unknown.

So, is online CBT-I the way forward? Certainly, the data presented by Ritterband and colleagues makes a compelling case, underpinned largely by a very robust study design. That said, if we consider potential issues of patient preference and uptake for online CBT-I, as suggested by others (19), or sampling and adherence issues, as highlighted in the present study, perhaps more research with more diverse populations is warranted before online CBT-I becomes the first line delivery format for all.

Acknowledgements

None.

Footnote

Conflicts of Interest: Dr. Ellis is the author of The One Week 148 Insomnia Cure by Vermillion and is the director of Sleep 149 Research and Consulting Ltd and Dr. Grandner declares having received funds from FitBit and CurAegis Technologies. None of the other authors report a conflict of interest related to this manuscript.

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Cite this article as: Ellis JG, Seed J, Bastien CH, Grandner MA. Is it time to get some SHUT-i? Ann Transl Med 2017;5(16):336. doi: 10.21037/atm.2017.04.28

