OPINION

FUTURE ROLE FOR MOTIVATIONAL INTERVIEWING IN THE TREATMENT OF INSOMNIA - AN OPINION

Lucas Lim Jun Hao*, Taranjit Kaur Dhillon**, Ng Beng Yeong**

***Yong Loo Lin School of Medicine, National University of Singapore, 1E Kent Ridge Road, Singapore 119228; **Institute of Mental Health, Woodbridge Hospital, 10 Buangkok View, Singapore 539747; ***Department of Psychiatry, Singapore General Hospital, 4 Outram Road, Singapore 169608.**

Abstract

Objective:* This paper aims to explore the possibility of using motivational interviewing (MI) as a therapy for insomnia patients. *Methods:* We reviewed the current practice guidelines for insomnia, and noted the issues pertaining to types of treatment, notably CBT-I. We also reviewed some studies which seem to suggest that MI treats insomnia. *Results:* MI is a proven technique for other psychiatric illnesses. There are currently not many studies done evaluating the efficacy of MI on insomnia. Of those published studies, they are either underpowered to draw any firm conclusions, or it is limited to a particular age group. *Conclusion:* There seems to be promise in the area of MI on insomnia. Given the paucity of data in this area, more research with bigger group of study participants are needed to fully conclude the effectiveness of this treatment. *ASEAN Journal of Psychiatry, Vol. 15 (1): January – June 2014: 106-112.

Keywords: Motivational Interviewing, Insomnia

Introduction

Insomnia is the difficulty initiating or maintaining sleep, and it is one of the most common sleep problems in the general population. Poor sleep may affect one's quality of life and day to day functioning due to fatigue and irritability. The cause of insomnia may be multifactorial in nature, ranging from anxiety, depression, and drug abuse to medical causes such as central nervous lesions and infectious/neoplastic factors. The prevalence of insomnia has been reported in Asian countries. A survey of the South Korean general population showed that insomnia symptoms at least three nights per week were reported by 17% of those surveyed [1]. Li *et al* observed the first large-scale cross-sectional study on insomnia among Chinese adults in Hong Kong. Overall, 11.9% of Hong Kong Chinese adults reported suffering from frequent insomnia (at least 3 times per week) for the preceding month with more female insomnia sufferers than male (14.0% vs. 9.3%) [2]. Locally in Singapore, a survey of 612 elderly people in the community indicated that about 25% had sleep difficulties but only 19% had physical or psychological problems related to insomnia [3]. The average cost annually of insomnia in the United States was reported to be around $92.5 and $107.5 billion dollars, which included the costs of comorbid medical and psychiatric treatment and medications, and decrease in individual economic productivity [4].

With rising trends of patients suffering from insomnia, there has also been a recent increase of numbers of errant physicians in Singapore who inappropriately prescribe benzodiazepines to insomniacs. A total of 42 physicians had been dealt by the Singapore Medical Council (SMC) from 2007 to 2010 with regards to this issue. The current guidelines for benzodiazepine prescription for insomnia by SMC are: judiciously prescribe a short course

of hypnotic medication (e.g. benzodiazepine), up to 2 to 4 weeks for relief of insomnia symptoms after considering non pharmacological treatments [5]. With current trends of patient abuse of benzodiazepines and tightening of guidelines on prescription of benzodiazepines, there should be a greater need to consider utilization of various psychotherapies for management of insomnia.

Motivational Interviewing

Motivational interviewing (MI) is a directive, client centered counselling style for eliciting behaviour change by helping clients to explore and resolve ambivalence [6]. Rollnick and Miller stresses the importance of keeping the spirit of MI which can be characterized in a few key points as such: (i) motivation to change is elicited from the client (ii) it's the client's task to articulate and resolve his ambivalence (iii) direct persuasion is not an effective method for resolving ambivalence (iv) the counselling style is generally a quiet and eliciting one (v) the counselor is directive in helping the client to examine and resolve ambivalence (vi) readiness to change is not a client trait, but a fluctuating product of interpersonal interaction (vii) the therapeutic relationship is more like a partnership or companionship than expert/recipient roles [6].

The Four Guiding Principles

MI is guided by four key principles [7]. (i) Therapists should *express empathy* towards the client, to better see the situation from their perspective. This better provides the client to be better understood and in turn they would be more willing to share their situation in depth with the therapist. (ii) Therapists should also support *self-efficacy* from the patient, and continually encourage the client that he has the capability to instil change by himself. Therapist can do so by reframing the client's attitudes and beliefs from past failures to change, and highlight previous successes and strengths that the clients already possess. (iii) It is also important for therapists to *develop discrepancy* by examining the patient's ideals and self-identified goals with the client's current behaviour. When clients realize the magnitude of difference between the two, they will develop the motivation for the change in their behaviour. (iv) "Rolling with resistance" is a principle therapists adopt, when clients resist changes. The therapist "rolls along" with client's thoughts and encourages them to take on new perspectives without confronting and strictly enforcing change on them. In this way, the client is still able to have autonomy over his own thoughts, thus increasing motivation for change.

Current Uses of Motivational Interviewing

MI is well known for its uses in addictive behaviours, mainly in alcohol abuse. In a meta-analysis by Hettema *et al* [8], MI was seldom given alone, but was typically combined with feedback and often with other forms of treatment. MI was normally combined with other interventions such as education, self-help manuals, relapse prevention, cognitive therapy, skills training, Alcoholics Anonymous, stress management, and treatment as usual for the particular setting [8]. Hettema *et al.* also suggests that MI may be more effective when clinicians and patients are not matched on the basis of racial, ethnic, or cultural characteristics [8]. Another meta-analysis done for the efficacy of using MI for excessive drinking versus no treatment at all [9]. Results showed that MI is effective as a treatment, indicated by the reduced number of standard drinks per week and number of heavy drinking days post therapy. They also found that MI was more superior than skill based counselling among individuals who were not ready to change [9]. An additional study on excessive drinking also showed that patients who received pre-treatment MI are more motivated to change their behaviour and more adherent to the treatment program instituted for them, thus having a better prognosis [10].

More recently, MI has been used for psychotherapeutic treatment for other non-psychiatric related conditions. MI had been tested in the context of promoting health behaviours for health promotion [11]. This technique has been applied in Zambia, Africa, enhancing villagers to adopt water disinfection practices and it has been quite successful [12]. Another study done to help improve the consumption of fruits and vegetables and physical exercise in individuals attending Black churches across America using MI over the course of one year revealed that MI had an addictive effect in the group taking fruits and

vegetables, but not the group doing physical exercise [13]. Picciano *et al.*used a randomized control design comparing MI with HIV education to a control group (HIV education only)for men identified as high risk for infection. Participant motivation and behavioural skills to practise safer sex improved in both groups of participants [14].

Current Treatments Used For Insomnia

Treatment for insomnia is considered to be one of the more challenging problems in sleep disorders. Treatment approaches for insomnia are primarily: (i) acknowledge distress (ii) treat any precipitating or primary cause if possible (iii) educate about trigger factors for sleep and reassure that sleep will improve (iv)establish good sleep habits (v) consider hypnotic medication [15].

Hypnotics. First line therapy would normally consist of antihistamines (i.e. hydroxyzine) and noradrenergic and specific serotonergic antidepressants(i.e. mirtazapine). Newer drugs in the market that target melatonin receptors [15]and regulate sleep wake cycles are also currently available (i.e. Agomelatine). Drugs like zolpidem and zolpiclone are benzodiazepine like drugs that are used as a second line therapy. Benzodiazepines (i.e. lorazepam, midazolam) should be judiciously used and not more than 2 weeks as per guidelines mentioned above, as there is a risk of tolerance and withdrawal symptoms may result.

Behaviour Therapy. Stimulus control (sleep hygiene) can be instituted in the patient, for example arising at the same time daily, avoidance of evening stimulation, and avoiding day time naps [16] may help to strengthen association in the mind between being in bed and being awake [15]. Relaxation therapy can be taught to the patient for utilization before going to bed. It usually involves the patient relaxing every major muscle group in the body starting from the face downwards. Studies have shown that relaxation technique has helped to improve measures of sleep, however not day time function [17].

Cognitive Behavioural Therapy for Insomnia. CBT-I is cited as the behavioural treatment of choice for patients with insomnia, as up to 80% of patients who receive such therapy show treatment response [18]. A meta-analysis done for CBT-I on patients revealed that it helped in improvement of subjective sleep quality, and decreased subjective wake time during the night [19]. Studies also show that with CBT-I**,** there is an average reduction of about 50-60% in sleep latency, and wake-after-sleep onset [20]. These studies also established that after CBT-I treatment, patients had an increase of about 30-45 minutes of total sleep time. A meta-analysis of 21 studies done by Smith *et al*. (2002) comparing treatment efficacies between pharmacotherapy and behaviour for insomniacs revealed no differences in magnitude between pharmacological and behavioural treatments in any measures except latency to sleep onset, and overall behaviour therapy and pharmacotherapy produced similar short term outcomes in primary insomnia [21].

However there are certain treatment issues regarding the use of CBT-I on patients, notably the relatively high drop-out rates from treatment leading to persistent problems of insomnia for patients. Some studies reported that patient has early termination rates of CBT-I of up to 9.7% for group CBT-I [22]and30.3% to 38.8% in individual CBT-I [23] of which minimum adequate dose of treatment was defined as at least attending four sessions of CBT-I. There is currently very little data known about possible risk factors that predict patient dropout [23].

Why is Motivational Interviewing useful for patients with insomnia?

In the process of MI it assumes that the patient experiences ambivalence during the change process [24]. According to Marino, most people with insomnia display a reasonable amount of situational ambivalence [24]. Thus the use of MI may target self-efficacy as a method for decreasing ambivalence [24]. However there is currently limited research being done on the efficacy of MI for insomnia.

In 2008, Marino did a randomised control pilot study of using MI to promote adherence to CBT-I therapy for insomniacs [24]. Results showed that 5 out of 10 participants in the MI group and 1 out of 8 participants from the

control group attended at least 1 group CBT-I session. However results were not statistically significant and this study was severely underpowered to draw any firm conclusions.

Naralie *et al.* in 2011 performed a motivational school-based intervention for adolescent insomnia in a local school in Australia [25]. Students in the intervention group were reported to be more motivated to regularize their out-of-bed times, and there was a trend towards improved motivation to increase average total sleep time [25].

Given the paucity of data for the use of MI for insomnia management, and knowing the potential of MI use in this condition, it is pertinent that more research should be conducted in this aspect. Possible example of an exchange between client and therapist using MI was given in Appendix A.

Behaviour Change Plan

After the session of MI with the therapist has been administered, to further reinforce plans and strategies to counter insomnia, a sleep behaviour change plan would be developed by the patient with guidance from the therapist. It has been initially recommended for adolescent patients who are considering making an imminent change in their behaviour[26]. The following components are an example of a typical behaviour change plan [26].

1. The changes I want to make are:
2. The most important reasons to make these changes are:
3. The specific steps I plan to make in changing are:
4. Some people who can support me are:
5. They can help me by:
6. I will know my plan is working when:
7. Things that could interfere with my plan (barriers) and possible solutions include:

Conclusion

MI has seen its share of success in the treatment of psychiatric and non-psychiatric illnesses. It may be worthwhile to explore MI as a possible solution to the challenges faced in the treatment of persons with insomnia. Current research results are promising but we are still unable to make any conclusions to the effectiveness of this approach to treatment. Thus it is important to have more research done in this aspect of management for patients with insomnia.

References

1. Ohayon MM, Hong SC. Prevalence of insomnia and associated factors in South Korea. Journal of Psychosomatic Research 2002;53:593-600.

2. Li RHY, Wing YKM, Ho SC, Fong SYY. Gender differences in insomnia – A study in the Hong Kong Chinese population. Journal of Psychosomatic Research. 2002;53:601-609.

3. Kua EH. Depressive disorder in elderly Chinese people Acta Psychiatr Scand. 1990;81:386-388.

4. Stoller MK. Economic effects of insomnia. Clin Ther. 1994;16:873-897.

5. Prescribing of Benzodiazepines MOH Clinical Practice Guidelines 1st ed. Singapore: Ministry of Health; 2008.

6. Rollnick S, Miller WR. What is Motivational Interviewing? Behavioural and Cognitive Psychotherapy. 2009;23(4):325-334.

7. Millner S, Rollnick WR. Motivational Interviewing: Preparing People For Change. 2nd ed. New York: Guilford Press; 2002.

8. Hettema J, Steele J, Miller WR. Motivational interviewing. Annu Rev Clin Psychol. 2005;1:91-111.

9. Vasilaki EI, Hosier SG, Cox WM. The efficacy of motivational interviewing as a brief intervention for excessive drinking: a meta-analytic review. Alcohol. 2006;41(3):328-335.

10. Brown JM, Millner WR. Impact of motivational interviewing on participation and outcome in residential alcoholism treatment. Psychology of Addictive Behaviours. 1993;7:211-218.

11. Miller WR. Motivational interviewing in the service of health promotion. Am J Health Promot. 2004;18:1-10.

12. Thevos AK, Quick RE, Yanjuli V. Motivational interviewing enhances the adoption of water disinfection practices in Zambia. Health Promot Int. 2000;15:207-214.

13. Resnicow K, Jackson A, Blissett D. Results of the healthy body healthy spirit trial. Health Psychology. 2005;24(4):339-348.

14. Picciano JF, Roffman RA, Kalichman SC, Walker DD. Lowering obstacles to HIV prevention services: Effects of a brief, telephone-bsedd intervention using motivational enhancement therapy. Annals of Behavioral Medicine. 2007;34(2):177-187.

15. Wilson S, Nutt D. Sleep Disorders. 1st ed. New York: Oxford University Press; 2008.

16. Kaplan & Sadock's Synopsis of Psychiatry. 10th ed. New Delhi: Lippincott Williams & Wilkins; 2007.

17. Means MK, Lichstein KL, Epperson MT, Johnson CT. Relaxation therapy for insomnia: nighttime and day time effects. Behav Res Ther. 2000;38(7):665.

18. Buysse DJ. Insomnia state of the science: an evoluntionary, evidence-based assessment. Sleep 2005;29(9):1045-1046.

19. McCurry S, Logsdon R, Teri L, Vitiello M. Evidence-based psychological treatments for insomnia in older adults. Psychol Aging. 2007;22(1):18.

20. Morin CM. Cognitive-behavioural approach to the treatment of insomnia. Journal of Clinical Psychiatry. 2004;65(suppl 16):33-40.

21. Smith MT, Perlis ML, Park A, et al. Comparative meta-analysis of pharmacotherapy and behavioural therapy for persistent insomnia. American Journal of Psychiatry. 2002;159:5-11.

22. Jacobs GD, Benson H, Friedman R. Perceived benefits in a behavioral-medicine insomnia program: a clinical report. Am J Med. 1996;100(2):212-216.

23. Ong JC, Kuo TF, Manber R. Who is at risk for dropout from group cognitive-behavior therapy for insomnia? J Psychosom Res. 2008 Apr;64(4):419-425.

24. Marino C. Motivational interviewing in insomnia treatment: a randomized control pilot study. Palo Alto, California: Standford University; 2008.

25. Cain N, Gradisar M, Moseley L. A motivational school-based intervention for adolescent sleep problems. Sleep Med. 2011;12(3):246-251.

26. Gold MA, Dahl RE. Behavioural treatments for sleep disorder. 1st ed. London: Elsevier; 2011. p. 367-381.

Corresponding author: ***Lucas Lim Jun Hao, Medical Student, Dean’s Office, Yong Loo Lin School of Medicine, 1E Kent Ridge Road, Singapore 119228.***

Email: lucaslimjh@gmail.com

Received: 6 July 2013 Accepted: 19 August 2013

Appendix A: ***Possible Example of an Exchange between Client and Therapist Using Motivational Interviewing***

C (Clinician): Hi Sharon, how have things been for you since our session 2 weeks ago? (Open ended questioning)

P (Patient): Not so good… I tried getting to bed earlier but it hasn't been easy…

C: Although I hear that nothing really worked out for you last week, the very fact that you came down today shows that you are still motivated to change your behaviour. (Affirmation) Could you tell me more about the challenges you have been facing getting to bed earlier? (Open ended questioning)

P: Well I have really tried but I can't help feeling it's a waste going to bed by 10pm! After all, I'm at my most productive in the evenings. Even if I do try to get to bed early I end up tossing and turning and just worrying about all the things I haven't finished. So I just sit in bed and start reading and watching TV till I feel sleepy which takes really long! However, there was one night when I managed to get to bed by 10.30pm.

C: It seems that you have really tried your best to have an earlier bedtime but it is quite challenging to do so, leaving you feeling frustrated. (Reflective listening)

P: Exactly! It is frustrating!

C: A lot of our patients share that making the changes can be challenging at first. (Normalizing) Would it be alright for us to talk more about your bedtime? (Asking Permission)

P: Sure.

C: What do you see as the 'good things' about staying up late at night? (Open Ended Questioning)

P: I usually have to stay back to finish up my work so by the time I return home, I like having some 'downtime' to do what I like watching TV dramas, catching up with friends on Facebook and surfing the net. Sometimes though, I do lose track of time.

C: I'm hearing that the evenings are when you try to catch up with friends and what you enjoy. I'm wondering what would happen if having a later bedtime persists? (Eliciting Change Talk)

P: I think things might start getting worse. As it is, when I get to work, the first half of the day goes very slowly.

C: What does your day going very slowly mean? (Clarifying)

P: I feel so tired from not having enough sleep that the first half of the day at work is spent trying to wake up. I end up drinking a few cups of coffee to help me stay awake. It takes me longer to finish my work so I don't have much choice but to stay back late after the rest have left.

C: It sounds like on the one hand, you enjoy staying up late as that is the time you catch with friends and shows you enjoy, while on the other hand, staying up late makes functioning at work the next morning a bit difficult for you. (Developing Discrepancy)

P: Actually it's not just a bit difficult but really difficult.

C: It may not have started off as being a problem but it is starting to create more difficulties for you. (Reflective Listening)

P: It seems like a cycle, staying up late and not being able function well at work in the morning, then staying back late to catch up on work…

C: You feel that there is a connection between staying up late and how well you function at work the next day.

P: Seems like it.

C: On a scale of 0 to 10 where 10 is the most important, what number would you give for how important it is to change your bedtime? (Readiness to Change Ruler)

P: Looks like a 7.5 to me.

C: Could you explain why you are at a 7.5 instead of a 5? (Readiness to Change Ruler)

P: Maybe if I was younger and could cope with less sleep it would be alright for me. But age is catching up and getting to bed on time so feeling refreshed the next day means a lot to me.

C: What might happen that could move you from a 7.5 to perhaps a 9? (Readiness to Change Ruler)

P: I guess getting a warning letter from my boss for not being keeping to my deadlines at work.

C: From what you have said so far, what keeps you from getting to bed earlier is that evenings and nights appear to be a good time to catch up on what you like doing such as chit chattingwith your friends online and watching your favourite shows. Howeverfinding ways to get to bed earlier is important for you as it seems to be having some negative consequences at work such as reduced concentration, fatigue and even having to stay on after office hours to finish your work. (Summarize)

P: I'm not sure what I can do though.

C: You mentioned earlier that you managed to get to bed on one night at 10.30pm. That's a great start! How did you manage to do it? (Support Self Efficacy)

P: I had my last coffee at around 2pm. And also, since I was quite tired by around 10pm, I decided to reply to my friend's emails the next day.

C: That's a great start, how did you feel about it? (Support Self Efficacy)

P: Woke up the next day feeling refreshed and actually managed to get a lot more done during office hours.

C: Would it be alright for me to share some other strategies?These strategies were shared by other patients who found them helpful in managing their bed time better. (Asking Permission)

P: There might be something others have tried that might work for me.

C: For a start, we would want to have a look at limiting the level of stimulation you have before bed time. Having activities that help you to mentally wind down such as relaxation exercises instead of watching TV dramas may help you to relax your mind just before bed time. What do you think of my suggestion? (Advice/Feedback)

P: I could try them.

C: Let's spend some time working out a plan to see how we can start using some of these strategies.