On counting sheep: The self-medication and coping strategies of university students suffering from primary insomnia

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Abstract
A factor that affects university students' academic performance is the quantity and quality of their sleep. There is a high rate of insomnia in the general population, but the prevalence of sleep difficulties among university students has not been extensively studied. The current study found that 23 per cent of the researched student population may suffer from primary insomnia. The strategies used by these students to cope with insomnia were investigated by means of a self-report questionnaire, which examined two broad categories, namely self-medication and self-coping strategies. Students were found to employ potentially harmful coping strategies, while harmless strategies were not always perceived as helpful. Since the onset of insomnia is often during early adulthood, and since poor sleep impacts negatively on academic performance, this study indicates that education around this topic is vital for students.

INTRODUCTION
Much literature has focused on factors that contribute to success at university study, far less on factors that may hinder success. Sleep complaints are one such factor and may exist in relatively high percentages among university students, since they are common in the broader population. The prevalence of clinically diagnosed primary insomnia in the United States ranges between 15 and 25 per cent, with no figures currently available for the South African population (Kaplan and Sadock 1998). Students sleeping during lectures may not necessarily be because they are boring, but may be an indication of sleep disorders, such as
insomnia (difficulty in initiating or maintaining sleep at night). A consequence is daytime sleepiness, which may significantly impair the cognitive functioning of affected students and lead to lowered academic performance. Many may be unaware of this, as there is a tendency among students to make external attributions for their poor academic performance at university (Pilcher and Walters 1997). In addition to poor academic performance, insomniacs report heightened confusion, tension, irritability, depression and less vigour than matched normal sleepers, which affect general quality of life (Bonnet and Arand 1998; Buboltz, Brown and Soper 2001). High levels of daytime sleepiness have also been associated with frequent use of marijuana and alcohol (Jean-Louis, Von Gizycki, Zizi and Nunes 1998). Even students who generally sleep for eight hours a night, but who alter their sleep cycle by two hours, when preparing for examinations, experience heightened feelings of depression, reduced affability and difficulty concentrating (Taub and Berger 1974).

Since the typical age of onset of insomnia is during young adulthood (Kaplan and Sadock 1998), university students are an important population group for which to provide information and intervention. Consequently, the current study investigated the sleep habits and coping methods employed by undergraduate students who showed the symptoms of primary insomnia.

LITERATURE REVIEW

Primary insomnia among the student population

Primary insomnia is diagnosed when the chief complaint is non-restorative sleep or difficulty in initiating or maintaining sleep, which continues for at least one month (Kaplan and Sadock 1998). The term ‘primary’ indicates that the insomnia is independent of any known physical or mental condition. A focus on primary insomnia among university students may be valuable for several reasons. Firstly, primary insomnia is one of the most common sleep disorders, with its onset either in young adulthood or middle age (Barlow and Durand 2001). It usually has a rapid onset at a time of social, psychological and/or medical stress, for example university study, and is often exacerbated during times of stress and subsides during vacations (Kaplan and Sadock 1998). Secondly, the daytime features of primary insomnia may be considerably disruptive to academic efficiency and productivity, as well as to personal relationships, and may heighten susceptibility to illness (Barlow and Durand 2001). According to Simon and Von Korff (1997), the functional impairment associated with insomnia is equal in severity to that of other psychiatric and medical disorders. Thirdly, despite the high prevalence of primary insomnia and its disruptive effects on the sufferer, less than 15 per cent of sufferers in America seek professional treatment (Mellinger, Balter and Uhlenhuth 1985, in Mimeault and Morin 1999), implying that many sufferers may not
perceive their insomnia as serious enough to warrant medical attention. Consequently, many insomniacs are likely to turn to alternative methods, such as self-medication or other self-coping strategies, to alleviate the symptoms.

The prevalence of clinically diagnosed primary insomnia in America is 15 to 25 per cent (APA 1994). No specific prevalence rates for primary insomnia are available for student populations, although Buboltz et al. (2001) used the Sleep Quality Index to establish the prevalence of general sleep difficulties among 191 American students. Seventy-three percent reported occasional to frequent sleep problems. While this percentage may be inflated due to the self-report nature of the study, as well as its focus on sleep problems in general, it indicates that insomnia may be a problem within the university population and highlights the need for investigation into its prevalence.

It appears that student sleep length has been steadily declining while reports of daytime sleepiness have increased (Bliwise 1996; Hicks and Pelligrini 1991). While daytime sleepiness is one of the contributing factors to poor academic performance, the relationship is not a simple causal one (Buboltz et al. 2001). Demands, both internal and environmental, such as the stressful lifestyle of students with university study pressures, poor sleep habits, use of caffeine and/or alcohol and inconsistent bedtimes, add to the sleep difficulties experienced by students in a cyclical fashion (Buboltz et al. 2001). That is, students experience stress due to the academic demands placed on them, and this disturbs their sleep habits, possibly causing sleep problems. This makes them less able to cope, increasing stress and, in turn, exacerbating their sleep difficulties. Since primary insomnia often persists long after the original cause has been resolved (APA 1994), educational authorities have an obligation to acknowledge and address the problem, otherwise potentially destructive habits such as self-medication and other harmful coping strategies may arise.

Self-medication and coping strategies

Many individuals suffering from primary insomnia do not seek professional assistance in this regard (Mellinger et al. 1985, in Mimeault and Morin 1999) and so are likely to resort to various coping strategies. For the purposes of this study, a coping strategy was defined as anything the student actively did to improve sleep or to cope with poor quality sleep. Coping strategies were divided into self-medication strategies, which included anything that the student ingested (such as alcohol, prescription and/or recreational drugs) to aid sleep, and self-coping strategies, which included strategies that the student engaged in (such as yoga and/or meditation) to aid sleep.

Self-medication refers to the use of prescription and/or recreational drugs to combat primary insomnia, often serving to aggravate it (Kay and Samiuddin 1988). Sedative-hypnotics, which include alcohol, sleeping pills and certain painkillers, are able to induce a state of unconsciousness in an individual that may resemble
natural sleep, but which differs from it in significant ways. Firstly, there is an increased arousal threshold as may be found in coma. Secondly, disinhibition and hyporeflexia (decreased reflexes) occur both prior to and after this ‘sleep’. Thirdly, an individual’s sleep becomes fragmented, particularly after consuming alcohol (Gross and Hastey 1976, in Kay and Samiuddin 1988). Chronic insomniacs may become tolerant to the effects of these drugs and dependency may occur. Since alcoholics often report insomnia prior to ingesting alcohol, there may be potential alcoholics in an insomniac student population (Gross and Hastey 1976, in Kay and Samiuddin 1988). Added to this is the accessibility of alcohol generally, and the high levels of alcohol consumption among students.

The opioid drug group includes morphine, and may be used for pain-related insomnia. However, the insomnia returns when the effects of the drug abate. Opioids are particularly disruptive to sleep because cessation of the drug initially causes excessive sleepiness followed by insomnia that may last several weeks. The stimulant drug group includes cocaine and ecstasy, and, while it is unlikely that such drugs would be taken to aid sleep, they may be used to remain awake and alert following insufficient sleep, possibly during examination time. Cessation of such drugs may lead to hypersomnia or insomnia. Hallucinogens, such as marijuana, do not have one typical effect on sleep. However, marijuana in particular, produces a drowsy, dreamlike state that is not as restorative as natural sleep, and a dependency may result. In addition, some hallucinogens may produce hyper-arousal and insomnia. Use of prescription and/or recreational drugs may be harmful to the individual and is likely to aggravate, rather than diminish, insomnia. If one adds to the stressful internal and external demands placed on university students, self-medication of any, or a combination of these drug groups, the potential complexity and disruptiveness of student insomnia becomes evident.

Coping strategies are not as clearly defined as self-medication is, since an individual may use a unique method or a combination of several methods. Some of the commonly used coping strategies to alleviate insomnia include bibliotherapy (reading booklets containing information about insomnia), relaxation techniques, meditation and yoga (Means, Lichstein, Epperson and Johnson (2000); Mimeault and Morin 1999). Mimeault and Morin (1999) found bibliotherapy to be an effective treatment for chronic insomnia in a sample of 54 adults, both when professional guidance was and was not included with booklets. The improvement was maintained at follow-up and was accompanied by a significant decrease in the use of hypnotic medications. Relaxation methods have shown mixed results in alleviating insomnia. For example, Means et al. (2000) treated 118 students between 17 and 44 years who suffered from insomnia with relaxation therapy, over three individual sessions. The treatment was effective as the students reported increased sleep duration and quality. However, there was no change in perceived daytime functioning, which remained poor, possibly due to the short duration of
the intervention. The use and effectiveness of particular self-coping strategies and/or self-medication in order to alleviate insomnia may be directly or indirectly related to one’s sleep habits or ‘sleep hygiene’.

**Sleep hygiene**

Sleep hygiene refers to ‘various factors which may be beneficial or detrimental to sleep’ (Hauri 1982, in Morin 1993, 145). These factors are commonly divided into two groups, namely environmental influences (such as light, noise, temperature and mattress) and health practices (such as exercise and substance use) (Morin 1993). Substance use here refers to commonplace, acceptable substances (such as caffeine) that inadvertently produce or exacerbate primary insomnia, as opposed to substances used purposely for coping with existing primary insomnia. Caffeine is a sleep inhibitor, increasing sleep latency and nighttime awakenings if it is consumed half an hour to an hour before bedtime and lowering sleep quality (Morin 1993). Since caffeine occurs in a wide range of products, including coffee, tea, chocolate, nicotine and some medications, individuals may be unaware that it is being consumed or of the additive effect of taking in multiple products containing caffeine (Morin 1993).

Diet and exercise may be either beneficial or detrimental to sleep, depending on timing and intensity. For example, a light snack before bedtime may promote good sleep, whereas a heavy meal may interfere with sleep (due to activation of the digestive system). Similarly, regular exercise promotes good sleep, but engaging in very strenuous exercise, or exercising before bedtime may interfere with sleep (Morin 1993).

A wide range of environmental factors may facilitate or inhibit good sleep. A normal sleeper may not be disturbed by noise (although sleep may be of a poorer quality), while insomniacs are generally more sensitive to noise (Morin 1993). Similarly, insomniacs are likely to be affected by varying temperatures (especially heat), as they tend to have higher than average body temperatures (Morin 1993). Environmental factors are significant for students who often live in university residences or communes where there may be limited control over the environment. In addition, although insomniacs generally have a better than average knowledge of sleep hygiene, they are less likely to engage in healthy sleep habits than normal sleepers (Morin 1993).

With these issues in mind, the current study investigated the prevalence of primary insomnia, the most commonly employed coping strategies, the perceived efficacy of the strategies and the importance of sleep hygiene in a student population.
METHODOLOGY

Sample

The sample was one first year Psychology class at a Gauteng university. This constituted a group of 350 students. Three hundred and six completed questionnaires were returned, from which a final sample of 70 students was obtained who exhibited primary insomnia. In terms of demographic characteristics (age, gender and ethnic group), the insomniac group was found to be representative of the larger group of 306 student respondents. From hereon reference to the sample is to the final group of 70 students. The mean age of the sample was 19 years 8 months with a standard deviation of 1 year 5 months. The sample was skewed in terms of gender, with four females to one male, which is commonplace in a Psychology class. In terms of ethnic groups, 7 per cent of the sample was Asian, 10 per cent were Coloured, 13 per cent were Indian, 31 per cent were White and 39 per cent were Black.

Measure

A self-report questionnaire was completed by all participants. The questionnaire included five sections, namely demographics (age, gender, ethnic group), sleep habits and patterns (reports of primary insomnia and sleep habits, such as eating or smoking before going to sleep), self-medication and self-coping (what strategies, if any, are being used), efficacy (how beneficial the strategy is perceived to be) and correlates of sleep patterns (such as exam time versus vacation, weekdays versus weekends). A 5-point Likert scale (ranging from ‘never’ to ‘always’) was employed throughout the questionnaire.

Procedure

A subject information sheet was attached to each questionnaire detailing the purpose of the study and indicating that all information yielded would be anonymous and confidential. This sheet was detached from the completed questionnaire and collected separately, ensuring complete anonymity. Feedback from the pilot study resulted in several minor changes to the original questionnaire. Students were given fifteen minutes at the end of a lecture to complete the questionnaire and place it in a sealed box.

RESULTS

The data yielded by the questionnaires was first checked for normality of distribution using the Kolmogorov-Smirnov D-statistic. The data was not normally distributed ($p < .01$) and so non-parametric statistical analyses were administered.
Prevalence and frequency

A 23 per cent prevalence rate of primary insomnia was found for the research population. The mean hours of sleep reported for weekday and weekend nights within this sample are indicated in Table 1 below.

Table 1: Mean hours of sleep for weekday and weekend nights (n = 70)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekday nights</td>
<td>6.77</td>
<td>1.36</td>
</tr>
<tr>
<td>Weekend nights</td>
<td>8.04</td>
<td>2.10</td>
</tr>
</tbody>
</table>

Table 1 reveals that the average time spent sleeping by the sample, both on weekday and weekend nights, is within the 7 to 8 hours per weekday night reported in the literature (Barlow and Durand 2001). Although the range of hours of sleep reported for weekday nights (between 4 and 11 hours) overlaps with the range for weekend nights (between 3 and 13 hours), the difference between them was significant ($t_{69} = 4.7, p < .0001$), with students in this sample sleeping for significantly longer periods on weekend nights than on weekday nights.

Table 2: Frequency of coping strategies

<table>
<thead>
<tr>
<th>Coping strategy</th>
<th>Never or seldom (%)</th>
<th>Often or always (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>97</td>
<td>1</td>
</tr>
<tr>
<td>Recreational drugs</td>
<td>94</td>
<td>4</td>
</tr>
<tr>
<td>Over-the-counter medication</td>
<td>90</td>
<td>9</td>
</tr>
<tr>
<td>Herbal/homeopathic remedies</td>
<td>93</td>
<td>4</td>
</tr>
<tr>
<td>Relaxation techniques</td>
<td>84</td>
<td>11</td>
</tr>
<tr>
<td>Try to stop mind working</td>
<td>35</td>
<td>60</td>
</tr>
<tr>
<td>Other strategy</td>
<td>67</td>
<td>17</td>
</tr>
</tbody>
</table>

Note: Individuals who fell into neither group (by responding 'don't know') were excluded from the analyses. For this reason, although the percentages reported in Table 2 refer to the percentage of the sample of 70, they may not always total 100.

Table 2 reveals that attempts at stopping one’s mind from working was the most popular coping strategy, with 60 per cent using it often or always, while use of alcohol to aid sleep was the least popular strategy, indicated by only 1 per cent the sample. The category, ‘any other strategy’, was selected by 17 per cent of the sample and these strategies included reading, praying, having a warm bath, watching television or fantasising.
Six percent of the sample reported using no strategy to aid sleep, while 47 percent reported using more than one strategy, with the most typical combination being herbal/homeopathic remedies, relaxation techniques and attempts at stopping one’s mind working. When more than one strategy was used, it was likely that a combination of at least three were employed.

Correlations

Spearman's correlation coefficient with a significance level of $\alpha = .05$ was applied to explore the relationship between a reported coping strategy and its perceived efficacy. These results are shown in Table 3. The variables used to establish perceived efficacy included whether the individual sleeps better when using the strategy, whether there were any perceived negative consequences to using the strategy and whether the respondent would recommend the strategy to a friend who was having similar trouble sleeping.

<table>
<thead>
<tr>
<th>Coping strategy</th>
<th>Perceived efficacy</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sleep better</td>
<td>Negative</td>
<td>Recommend</td>
<td></td>
</tr>
<tr>
<td>Alcohol</td>
<td>.21</td>
<td>-.02</td>
<td>.14</td>
<td></td>
</tr>
<tr>
<td>Recreational drugs</td>
<td>.06</td>
<td>.05</td>
<td>-.13</td>
<td></td>
</tr>
<tr>
<td>O-T-C medication</td>
<td>.26</td>
<td>.44**</td>
<td>-.17</td>
<td></td>
</tr>
<tr>
<td>Herbal/homeopathic remedies</td>
<td>.38**</td>
<td>.15</td>
<td>-.03</td>
<td></td>
</tr>
<tr>
<td>Relaxation techniques</td>
<td>.27</td>
<td>.31</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>Stop mind working</td>
<td>-.01</td>
<td>.22</td>
<td>.30</td>
<td></td>
</tr>
<tr>
<td>Other strategy</td>
<td>.33*</td>
<td>-.07</td>
<td>-.03</td>
<td></td>
</tr>
</tbody>
</table>

$p < .05$  **$p < .01$

As can be seen in Table 3, there was a significant, positive relationship between the use of over-the-counter drugs and perceived negative consequences of their use ($r_s = .44, p < .01$), implying that students who used such drugs found that these often had negative consequences. Unfortunately, no elaboration regarding specific side effects were reported. The correlation between the use of herbal/homeopathic remedies for helping one to sleep and improved sleep was also significant ($r_s = .38, p < .01$). There was also a significant relationship between the use of strategies not listed and their perceived efficacy at improving sleep ($r_s = .33, p < .05$).

Several significant correlations emerged between the various coping strategies and sleep hygiene practices. For example, individuals who drank alcohol to aid sleep were more likely to also use recreational drugs to aid sleep ($r_s = .32, p < 0.01$); students who slept poorly during vacations were likely to take
recreational drugs to aid sleep (rs = .37, p < 0.01); individuals who used recreational drugs to aid sleep were likely to exercise before bedtime (bad sleep hygiene) (rs = .24, p < .05); individuals who used over-the-counter drugs to aid sleep were likely to be accident-prone when not sleeping well (rs = .32, p < 0.01) and the latter individuals were also likely to use herbal/homeopathic remedies to aid sleep (rs = .25, p < .05). Individuals who used herbal/homeopathic remedies to aid sleep were less likely to use alcohol or recreational drugs for purposes other than helping them to sleep (rs = -.55, p < 0.01), while those students who used relaxation techniques to help them sleep were less likely to use relaxation techniques for other purposes (rs = -.50, p < 0.01) and were likely to experience trouble falling asleep (rs = .29, p < 0.01). Finally, individuals who tried to stop their mind working to aid sleep were likely to have consistent sleep patterns (rs = .25, p < 0.05), were not able to perform as well as they would like to when they did not sleep well (rs = .37, p < .001), experienced difficulty falling asleep (rs = .34, p < .05), suffered from nightmares (rs = .24, p < .05) and did not eat large meals before bedtime (rs = -.32, p < .01). A significant, negative relationship was found between difficulty staying asleep and eating large meals before going to bed (rs = -.27, p = 0.05), which indicates bad sleep hygiene.

Difficulty staying asleep was significantly correlated with sleeping for more or fewer hours than usual during exam time (rs = .31, p = .01) and with sleeping for more or fewer hours during vacation time (rs = .24, p < .05). This provides support for the relationship between inconsistent sleeping hours and insomnia (Taub and Berger 1974).

DISCUSSION
The early identification of sleep difficulties may have multiple effects on students' academic performance, as well as their physical and mental health. The prevalence of primary insomnia for the researched population was 23 per cent, which is within the range of prevalence of clinically diagnosed primary insomnia (15 to 25%) (APA 1994). While a self-report measure cannot be equated to a clinical diagnosis, 23 per cent is high enough to warrant attention, particularly since a 17 per cent prevalence of insomnia among American undergraduate Psychology students was found only two decades ago (Lichstein 1983, in Means et al. 2000). One reason for this may be because the students in the current study were sleeping for significantly less than the seven to eight hours per weekday night that Barlow and Durand (2001) reported as typical for students, and were sleeping for significantly longer periods on weekend nights than on weekday nights.

It was assumed that self-medication and self-coping strategies would be common in the current sample since Mellinger et al. (1985, in Mimeault and Morin 1999) found that less than 15 per cent of insomniacs seek treatment. This was confirmed as 73 per cent of the sample reported using some coping strategy often or always, while only 6 per cent reported using no coping strategy at all. The remaining 21 per cent reported seldom using a coping strategy.
Ohayon, Caulet and Guilleminault (1997) reported that 3.8 per cent of a sample of 1 722 Canadians who suffered from insomnia used sleep-enhancing medication. By comparison, the 9 per cent of the current sample who reported using over-the-counter medication is high. While it is possible that the small sample used in the current study accounts for the higher percentage, it may also be a result of differences in prescription habits, where certain sleep-enhancing medications that are available over-the-counter in South Africa, require a prescription in Canada. Of concern is that Ohayon et al. (1997) found that once sleep-enhancing medication was prescribed, they were generally taken chronically. One factor that mitigates against such an occurrence in the current sample is the significant relationship found between the use of over-the-counter medication and perceived negative consequences. This may be because the reported medications were sedative-hypnotics (painkillers and sleeping pills), which induce a 'sleep state' similar to a coma, fragmented sleep, disinhibition and decreased reflexes (Kay and Samiuddin 1988) and which may account for this group being more accident-prone when not sleeping well. As found by Mendelson (1995), this group of students also reported low satisfaction with the use of such medication to alleviate sleep difficulties.

Thirteen percent of the research population used potentially harmful self-medication to cope with their insomnia. If the negative consequences of these strategies, such as addiction, are considered, this is a cause for concern. Alternative, harmless strategies that could be promoted include homeopathic remedies since the sub-population who reported using such remedies also reported sleeping better when using them and were less likely to use alcohol or recreational drugs to aid sleep.

The sub-population who reported using recreational drugs referred mostly to marijuana, which does not produce restorative sleep, may result in dependency and/or lead to the use of more harmful narcotics (Kay and Samiuddin 1988). Despite this, there may be a perception that marijuana induces restorative sleep, as it makes a person feel more relaxed. These same individuals were more likely to use alcohol, which is a sedative-hypnotic, with the same physiological consequences as painkillers and sleeping pills, to help them sleep. Also, this sub-population was more likely to exercise before bedtime and to sleep more poorly during vacation time, the latter which is possibly the result of changes in habits between term-time and vacation. The overall picture here is of a group of students, employing bad sleep hygiene as well as use of hallucinogens (marijuana) and sedative-hypnotics (alcohol) that, in combination or alone, may exacerbate pre-existing primary insomnia, or cause it.

Individuals who reported using relaxation techniques to help them sleep were unlikely to use these techniques for any other purposes, possibly because such a strategy is only implemented when the motivation is strong, as when being unable to sleep. Although relaxation techniques can be useful for combating insomnia, this sub-population indicated that they did not alleviate the daytime effects of insomnia, as also found by Means et al. (2000).

Individuals who reported trying to stop their minds working to help them sleep
On counting sheep...

also reported consistent sleep patterns year round. The consistency of their sleep patterns may explain the choice of a non-intrusive strategy. Inconsistent sleep patterns may cause greater anxiety about not sleeping, leading to more intrusive coping strategies. Individuals in this group also reported frequent nightmares, which may exacerbate insomnia as sleeping is associated with the anxiety caused by nightmares.

Sleep hygiene has received much attention in the literature, and is scrutinised in the treatment of insomnia (Morin 1993). However, only one significant relationship was found between insomnia and sleep hygiene in this study, in which poor sleep hygiene was evident. Eating large meals before going to sleep has been found to exacerbate insomnia (Morin 1993), yet respondents in the present study indicated that eating large meals before going to sleep results in difficulty staying asleep. This may be due to the initial drowsiness (which is not sustained) experienced when digesting a large meal.

The current study raises three important points with regard to insomnia and the student population. Firstly, the prevalence of primary insomnia in the sampled student population appears to be similar to that in the American population in general. Comparison with an earlier study of a student population suggests that the rate of primary insomnia in this population appears to be increasing (Lichstein 1983, in Means et al. 2000).

Secondly, although it was not the majority, some students were found to employ coping strategies that are harmful and which may have negative consequences, such as addiction. Education about these strategies is thus needed, including the negative consequences of their use and alternative, beneficial strategies. Very few students reported that their choice of strategy was beneficial, and a small number reported not trying to combat the insomnia at all. This could potentially lead to chronic insomnia as well as the associated negative effects of increased tension, irritability, depression, confusion, poor concentration, lowered academic performance and lowered life satisfaction (Buboltz, Brown and Soper 2001; Pilcher et al. 2001).

Thirdly, bad sleep hygiene practices, which are often the norm among students, may become entrenched during student years and could exacerbate or cause insomnia (Means et al. 2000). These bad practices may contribute to insomnia in the cyclical pattern outlined by Buboltz et al. (2001), serving to decrease coping abilities and increase stress, which further aggravate sleep difficulties.

CONCLUSION

Sufficient sleep is a vital aspect of success at university study. This makes primary insomnia a relevant issue for the student population, warranting more attention than it has previously received. This is especially true as the majority of students in the current study reported attempts at combating the insomnia themselves, even though these efforts were rarely helpful and sometimes even harmful. The consideration that insomnia often begins with this age group, and the chronic
course that can develop, serves to strengthen the need for further research on this population. An examination of those variables that lead to poor sleep quality would be particularly useful. With such information, students could be taught how to prevent sleep difficulties and avoid the deleterious effects that such difficulties may have on their academic performance.

REFERENCES


APA, see American Psychological Association.


