Including dreams, nightmare disorder, insomnia, night terrors

1. Various attempts have been made to formally classify psychiatric disorders, the two major systems being:

    1.1. The **ICD-10 Classification of Mental and Behavioural Disorders** (World Health Organisation, Geneva) is part of the 10th edition of the International Classification of Disease. This appendix follows the common abbreviation of **ICD-10**. It is the international system used by the majority of clinical psychiatrists in Great Britain.

    1.2. The **Diagnostic and Statistical Manual of Mental Disorders (fourth edition)** (American Psychiatric Association Washington DC). References to it in this appendix following the common abbreviation of **DSM-IV**. It is a system devised mainly by and for workers in the USA, however UK psychiatrists were consulted in its formulation.

2. The two systems above have been in existence for many years but only in their current editions have they been closely comparable. Other systems of diagnostic criteria exist however they are less widely used. The function of the classification systems is primarily to aid communication between psychiatrists, especially in the research field, however they do not fully reflect the full picture of mental disorders.

3. This appendix describes normal sleep and then discusses the most common forms of insomnia (both primary and secondary), nightmare disorder and sleep terror disorder. It is generally based on the ICD-10 system with any major comparisons and distinctions with DSM-IV being discussed where relevant. The ICD-10 codes are also provided.

NORMAL SLEEP

4. The period of sleep and wakefulness are governed by circadian rhythms, these being determined by a combination of both internal and external factors.

    4.1. The internal factors depend upon intact centres in the brain which regulate sleep. These include the midline raphe nuclei, the suprachiasmatic nucleus and the locus coeruleus.

    4.2. The most important external factor in humans is the period of darkness and light although social factors and learned behaviour have important influences.

5. The normal sleep pattern varies in duration between individuals but generally follows a pattern detectable by the electroencephalogram (EEG) and recordings of eye movements and of the limb muscles.

    5.1. Stage 1: When the eyes close and the person is relaxed the EEG is characterised by alpha waves. On falling asleep these disappear and low voltage desynchronized activity is seen.

5.2. Stage 2: Sleep is slightly deeper but the person is easily roused. The EEG shows bursts of activity ("spindles").

5.3. Stage 3: Sleep is becoming deeper with disappearance of the spindles and the presence of long slow delta waves. The sleeper is now difficult to rouse.

5.4. Stage 4: "Delta sleep" is now reached after about an hour of sleep: this stage lasts for about 30 minutes.

5.5. REM stage: The stages are now reversed, the person's sleep getting progressively lighter until stage 2 is re-entered. However instead of entering stage 1, a new stage is entered in which the pulse and blood pressure rise and eye movements become rapid and the EEG shows "saw toothed" waves with some alpha waves (similar to the EEG when awake with the eyes closed). The stage is termed the 'rapid eye movement stage' (REM). It is also termed "paradoxical sleep" as it is the most difficult stage from which to waken a person although they appear to be only lightly asleep. An average period of 10 minutes is spent in this phase of which 80% of the time is spent dreaming. Only 15% of dreams occur in the other types of sleep, designated as "non-rapid eye movement" (NREM).

5.6. These stages are repeated in approximately 90 minute cycles which occur throughout the night, the proportion spent in each changing as the night goes on. About one quarter of sleep is spent in REM.

6. The amount of sleep needed varies intrinsically from person to person. The amount of time spent in sleep decreases with increasing age and many people underestimate the amount of time spent asleep. It has been thought that the average adult requires between 6 and 8 hours, however this may be an overestimate of actual need. Some individuals require very little sleep to fulfil physiological requirements ("short sleepers") but may be concerned about the duration of sleep. However if they do not suffer from any of the other features of insomnia such as daytime fatigue, poor concentration etc. they can be reassured that they lie within the normal range.

7. Others may "catnap" during the day and evening either from boredom or tiredness yet still expect to be able to sleep for the full duration of the night. This type of catnapping reduces the need and ability to sleep for long periods during the night time hours.

Dreams

8. Dreams are neurally determined phenomena and appear to be essential to psychological health in that if sleep is manipulated to prevent dreaming abnormal behaviours occur including disorientation, confusion and hallucinations. These disappear when normal sleep has been allowed. A rebound effect of increased dreaming occurs following sleep deprivation suggesting that dreams fulfil a physiological function.

9. The quantity of dreams varies considerably from person to person although many people who only report having a few dreams in fact are probably not remembering their dreams. If sleep is broken just after or during a dream this will probably be remembered although if sleep had been continuous it is very possible it would be forgotten on waking. The frequency of dreaming tends to fall slightly with age. An increase in dreaming occurs with certain medications and following the withdrawal of benzodiazepines.

10. The content of dreams may be considered on several different levels. They often have some recognisable content from the previous day's events and some are clearly based on past events and previous recollections. The content may vary across a wide range from being very pleasant to puzzling, exciting, disturbing or upsetting. Some dreams occur in which a problem in waking life is obviously solved in the dream. Some have more symbolic content which may have a similar, although less obvious, problem-examining purpose often relating to internal conflicts.

11. Some dreams are very upsetting and the emotion they provoke may be experienced as very real especially for the first few minutes or even hours after waking. The content of these emotionally charged dreams however is often irrelevant to the underlying ideas which provoked dreaming, in that psychological mechanisms frequently disguise the underlying conflict.

12. The degree of distress which an unpleasant dream may provoke may be such that it can be termed a nightmare. Only if these are sufficiently frequent and distressing enough to significantly affect the person during the day can it be classified as a mental disorder. Nightmares may be precipitated by various drugs such as reserpine, adrenergic blocking drugs and thiothixene. They are also reported following the withdrawal of alcohol and amphetamines.

DISORDERS OF SLEEP

INSOMNIA

13. Insomnia is a disorder in which the amount or quality of sleep is insufficient for the individual and causes significant impairment in waking life. Sleep difficulty must have been present for at least a month: occasional or less frequent sleepless nights (ie less than three times a week) are within the normal range.

14. Insomnia is of two basic types, primary (or nonorganic) and secondary, the latter accounting for 85% of cases.

AETIOLOGY OF SECONDARY INSOMNIA

15. The commonest disorder of sleep is insomnia due to a physical cause or particularly painful conditions, which prevent sleep.

16. Many drugs taken for medical conditions also cause insomnia including aminophylline, mono-amine oxidase inhibitors, some tricyclic anti-depressants and serotonin re-uptake inhibitors. The withdrawal of long term sedatives and tranquillisers invariably produces a rebound insomnia if they have been taken for sufficient length of time; this can sometimes be seen briefly after even only a few day's use.

17. Over-indulgence in caffeine induces insomnia and it also may be associated with moderate alcohol intake. In cases of alcohol dependence insomnia may be part of the pattern of symptoms seen during abstinence. Excess indulgence in tobacco may also act as a stimulant producing insomnia.

18. Insomnia may be encountered in several mental disorders including the depressive disorders and anxiety. Disturbance of the sleep-wake pattern may occur in schizophrenia and some sufferers developing a reversal of the usual pattern with sleeping during the day and being active mainly at night. Dementia may also be associated with insomnia. The aetiology of the secondary insomnia is therefore that of the provoking condition.

19. Noise can be a cause of sleep disturbance, in particular intermittent and unpredictable noises are more likely to interfere with sleep. Conversely certain noises may be soporific, particularly rhythmic or continuous noise for example the engine of a train or a car. In many cases of sleep disturbance due to noise, habituation occurs and the individual develops a sleep pattern despite the noise.

NONORGANIC or PRIMARY INSOMNIA F51.0

20. The essential feature of this disorder is the complaint of either:

    20.1. difficulty getting off to sleep,

    20.2. difficulty maintaining sleep, or

    20.3. the sleep is non-refreshing or non-restorative.

21. For a diagnosis of primary insomnia to be made **none** of the causes of secondary insomnia as discussed above must be present.

AETIOLOGY OF PRIMARY INSOMNIA

22. In 15% of cases no cause for the insomnia can be found. The aetiology is particular to the individual and may be multifactorial. In some people worrying about problems may cause sleepless nights and this is a function of the personality, some people being able to "brush off" their worries more easily than others. If prolonged this may become a habit in which there is a marked pre-occupation with not being able to sleep: this creates a self-fulfilling prophecy with increasing inability to relax whilst struggling for sleep. In this state of lying awake the person may feel as though his thoughts are racing or crowding in and feels anxious, worried and tense at bedtime. A conditioned response then occurs in that being in bed is associated with not being asleep and being worried. Such people sometimes find it easier to sleep in a strange bed which does not carry such associations.

23. Fatigue may lead to sleeping during the day and the person may fall asleep readily whilst watching television or reading. Catnapping during the day (for example as a result of boredom) can be an important factor in preventing sleeping at night. Both these factors reduce the need for night time sleep and a vicious circle is triggered. Long term insomnia may also cause decreased feelings of well being with lowered mood, decreased energy, concentration and attention. This in turn produces a feeling that it is imperative to obtain "more sleep" which provokes further tension.

24. Lack of exercise or an impoverished leisure time compound the problem of insomnia and conditioned responses may further augment the behaviour. The requirements for sleep decrease with age although many older people still expect the amount of sleep they had in their youth. This may produce the above scenario of "struggling for sleep" and the vicious circle is initiated.

NIGHTMARE DISORDER (DREAM ANXIETY DISORDER) F51.5

25. The ICD-10 now calls nightmare disorder, **"nightmares"**, however not all nightmares represent a mental illness (see paragraph 13 above). Nightmares are dream experiences which are unpleasant and produce anxiety or fear. Upon awakening from the dream the individual becomes rapidly orientated and alert. The dreams are vivid and recalled in detail. During a nightmare there is no appreciable vocalisation or body movement, however talking, shouting or moving the arms may appear as a brief phenomenon at the termination of a nightmare.

26. Occasional nightmares are normal, however if they occur frequently and cause clinically significant distress they may be considered to constitute a disorder especially if they impair social, occupational or other important areas of functioning.

27. The course of nightmare disorder is variable. Children frequently outgrow the disorder but if it begins in adulthood the disorder frequently persists for decades.

Aetiology

28. In adults nightmares are often found to be associated with psychological disturbance such as personality disorder. Nightmares may also be stimulated by frightening experiences.

29. Nightmares may also be a symptom of other physical or mental disorders notably delirium, post traumatic stress disorder, acute stress disorder, depressive disorders, substance abuse and as a side effect of medication. The diagnosis should therefore depend on the main pathology present.

30. In children there is no consistently associated psychological disturbance as childhood nightmares are usually related to a specific phase of development.

SLEEP TERROR DISORDER (NIGHT TERRORS, PAVOR NOCTURNUS) F51.4

31. These are nocturnal episodes of extreme terror and panic associated with intense vocalisation, motility and high levels of arousal, with rapid pulse, sweating and tremulousness. The person may be difficult to rouse, becoming disorientated for a few minutes after waking. Usually there is no recollection of the episode.

Aetiology

32. Genetic, developmental, organic and psychological factors all play a role in this condition and it is thought to be related to sleepwalking.

CONCLUSION

33. Normal sleep and the causes of abnormal sleep patterns are discussed above. **Insomnia** may be primary or secondary. **Dreaming** is a normal phenomenon and has an important psychophysiological role. The relevance of the content of dreams is discussed above. **Nightmares** may be a normal experience, they may constitute a disorder in their own right, or they may be a symptom of other physical or mental disorders.

REFERENCES

The ICD-10 Classification of Mental and Behavioural Disorders: Clinical Descriptions and Diagnostic Guidelines. 1992. Geneva. World Health Organisation. p181-191.

Diagnostic and Statistical Manual of Mental Disorders. 4th Edition. 1994. Washington DC. American Psychiatric Association. p551-557 and 580-587.

Parkes J D. Sleep and its disorders. 1985. London. W B Saunders Co.

Gelder M, Gath D, Mayou R, Cowan P. Oxford Textbook of Psychiatry. 3rd Ed. 1996. Oxford. Oxford University Press. p409-413.

Gross R D. Psychology: The science of mind and behaviour. 1988. London. Edward Arnold. p403-410.

July 1996