

EFFECT OF SLEEP DEBT ON DAY TIME PERFORMANCE, THINKING AND MOOD OF TEACHERS IN AKWA IBOM STATE, NIGERIA

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ABSTRACT

The purpose of this study was to determine the extent to which sleep debt affects the performance, thinking and mood of teachers in public Secondary Schools in Akwa Ibom State. 192 respondents were used for the study. Their nutritional status, environmental and health situations were considered. Structured questionnaires were designed and used to obtain the appropriate data and observations as carried out in the field. The data obtained were analyzed using simple percentages to measure the relationships between variables based on the research questions. The study reveals that late night activities and use of medication were the major sleep debt inducing factors indicated by 53.11% and 47.00% respectively. The other contributive factors; poor living condition, poor health condition and poor nutrition had responses of 31.20%, 19.79% and 15.60%, respectively. The respondents also agreed that sleep debt deprived them of impressive and efficient performance; thinking intelligently and with high resolution; and leave them dull and emotionally unstable.

KEYWORDS: Sleep Debt, Performance, Thinking Mood, Teachers.

INTRODUCTION

For most people sleep is a time to rest and a chance to dream. It is a behavioral state that is naturally part of every individual's life. However, this seemingly mysterious behaviour should not be seen as something to fill time when a person is inactive but an essential activity which occupies about one third (1/3) of our lives. Sleep is important for normal motor and cognitive function (Kruger, 2001). We all recognize and feel the need to sleep because after sleeping we experience the changes that have occurred; the feelings of rest and more alertness to daily activity and responsibilities. It is not normal for a person to be sleepy at times when he or she expects to be awake.

It has been reported that to be as alert as possible when awake, children need an average sleep of 10 – 12 hours per night while adult need 7 – 9 hours of sleep per night (Sachev, Lu, Willey and Ebner 1998). Certain factors can rob an

individual of this essential activity. Such factors include habits, lifestyle and sleep pattern. For instance, alcohol can help some people to sleep but it interfere with substances in the brain, the neurotransmitters that regulate the onset as well as the two phases of sleep (Ellis & Nathan, 2001). Thus, the use of alcohol disrupt both the Rapid Eye Movement (REM) and slow wave sleep cycles which are both vital in restoration and rebuilding of the mind and body (Fuchs, 2001). Lifestyle factors are also implicated in repeated waking, i.e. partial waking through the night. This according to Buzsaki (1998), leads to fewer hours of dreaming sleep and brings about sleeplessness, tiredness and irritability the next morning (Ellis & Nathan, 2001). When daily sleep time is less than an individual's need a "Sleep debt" develops. Even relatively modest daily reduction in sleep time (e.g. 1 hour) can accumulate across days to cause a sleep debt (Krueger, 2001) and if the debt becomes too great, problem sleepiness sets in. Whereas sleep

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debt can have powerful effects on day time performance, thinking and mood, problem sleepiness may be associated with concentrating difficulty, memory lapses (Gais & Born, 2001), loss of energy, lethargy and emotional instability (Sirito *et al*, 2003). Every professional including the teacher needs as adequate sleep as possible because any reduction in the average daily range may lead to poor school and work performance and interrelationship difficulty, as well as errors and accidents in the classrooms.

STATEMENT OF THE PROBLEM

The Nigerian society like other societies is changing at a fast rate with the citizens having high hopes on education as a means of transforming the society. Much emphasis is placed on education in Nigeria which faces the challenges of meeting the needs of youths in particular, and the changing society in general, in terms of man-power development (NPE, 1981). It is these challenges that give rise to educational problems in Nigeria today, especially Akwa Ibom State. With the recent increase in Senior Secondary Schools enrolment (Fafunwa, 1983) reported that there is a corresponding alarming rate of failure and drop out among the youths. In times like these, the teacher becomes the focal point because as demanded by the profession, a teacher is faced with the responsibility of improving the quality of education through his formal and professional knowledge, competence and performance (Adesina, 1983). The downward trend in educational achievement has been so worrisome in educational achievement, motivation/management etc. Since the above mentioned issue may not discuss extensively the factors that influence the academic performance in our institution, the issue of behavioral state

(sleep) and its relevance to teachers performance is a worthwhile area of research. Thus the essence of this study.

The finding of the study will provide the teacher, the government, and other stakeholders in education sector with the perspective about sleep as a strong factor in educational and academic development.

METHODOLOGY

This study is a survey design. The stratified random sampling (SRS) technique was used to select the population of two hundred (200) teachers from ten (10) out of the thirty seven (37) State Secondary School in Uyo Local Education Committee. Thus the three Local Government Area (Ekpe Atai, Uruan and Uyo) which constitute Uyo LEC and two departments of Arts and Science formed a strata.

The instrument developed for this study was a questionnaire which consisted of both close-and open-ended as well as Three-Point-Likert type scale of items. The questionnaire had three sections. Section A aimed at collecting demographic information from the respondents, section B aimed at getting information on habits, live style and sleep pattern of respondent while section C aimed at getting information on effect of sleep debt on day-time performance in their work place.

One hundred and ninety two (192) out of two hundred (200) questionnaire administered to the respondents were retrieved from them and were all suitable for analysis giving a respond rate of 96%. The data obtained were used for analysis. Simply percentages were used to establish the degree of the response and the observations made in the field and in answering the research questions.

RESULT

Table 1: Demographic Information of Teachers

		Frequency	Percentages
Sex	Male	86	44.79
	Fernale	106	55.21
Age Range (Yrs)	21 – 30	31 – 40	15.63
	31 – 49	119	61.98
	41 – 50	36	18.75
	51 an above	7	3.65
Qualification	NCE	71	36.98
	BA, BSc, BEd	97	50.52
	MA, MSc, MEd	24	12.50
	PhD	0	0.00
	Others	0	0.00
Teaching Experience (Yrs)	1 – 10	87	45.31
	11 – 20	75	39.06
	21 – 30	24	12.50
	31 & above	6	3.13

Source: Field Survey

Table 2: Habits, Lifestyle and Sleep Pattern of Teachers

S/N	Contributive Factors to Sleep Debt	Agreed Frequency	Disagreed Frequency	Undecided Frequency	Total
1.	Late night activities e.g. wake keeping, tarry night, domestic affairs, etc.	102 (53.11)	60 (31.26)	30 (15.63)	192 (100.00)
2.	Poor health condition e.g. sleep disorders insomnia, snoring, night mares, etc.	38 (19.79)	140 (72.92)	14 (7.29)	192 (100.00)
3.	Poor living condition e.g. housing, amenities, electricity, congestion, noise, etc.	60 (31.30)	102 (53.10)	30 (15.60)	192 (100.00)
4.	Medication, e.g. use of sedatives, stimulants, alcohols etc.	90 (47.00)	80 (42.00)	22 (11.00)	192 (100.00)
5.	Poor nutrition e.g. malnutrition, overfeeding, etc.	30 (15.60)	156 (81.30)	6 (3.10)	192 (100.00)

Percentages in Parentheses

Source: Field Survey

Table 3: Effect of Sleep Debt on Daytime Performance, Thinking and Mood of Teachers

S/N		Agreed Frequency	Disagreed Frequency	Undecided Frequency	Total
A	Effect on daytime performance				192 (100.00)
i	Impressive	30 (15.63)	90 (46.87)	72 (37.50)	192 (100.00)
ii	Spectacular	69 (35.94)	87 (45.31)	36 (18.75)	192 (100.00)
iii	Efficient	40 (20.83)	127 (66.15)	25 (13.02)	192 (100.00)
iv	Strong and energetic	48 (25.00)	120 (62.50)	24 (12.50)	192 (100.00)
B	Effect on thinking				
i	Intelligently	38 (19.80)	125 (65.10)	29 (15.10)	192 (100.00)
ii	Thinking with high resolution	24 (12.50)	120 (62.50)	48 (25.00)	192 (100.00)
iii	Without memory lapses	70 (36.46)	70 (36.46)	52 (27.08)	192 (100.00)
C	Effect on mood				
i	Angry	100 (52.08)	71 (36.98)	21 (10.94)	192 (100.00)
ii	Intolerant	91 (47.40)	86 (44.80)	15 (7.81)	192 (100.00)
iii	Emotionally unstable	95 (49.48)	70 (36.46)	27 (14.06)	192 (100.00)
iv	Dull	130 (67.71)	30 (15.63)	32 (16.67)	192 (100.00)

Percentages in Parentheses

Source: Field Survey

DISCUSSION

As shown on table 1, 55.21% of the respondents were females while 44.79% were males. This implies that majority of the teachers in the study area were female. Majority depicted by 61.98% of the teachers were within the age bracket of 31 – 40 years. Only 15.63% and 18.75% were within the age of 21 – 30 years and 41 – 50 years respectively. Only 3.65% were above 51 years of age. This indicates that most of the respondents were in their active age group and very old people are not functioning as classroom teachers. Findings also reveal that most of the teachers had first University degree qualifications representing 50.52%. Those with NCE followed closely by 36.98%. No respondent had PhD qualification. This might be due to the salary which is incommensurate with their qualification. Most of the respondents (45.31%) had put in between 1 and 10 years in the teaching service while only 3.13% had teaching experience of more than 31 years.

Table 2 shows factors which contribute to sleep debt. Late night activities had the highest percentage 53.11%. This showed that the

teachers are involved in many activities that trespass into their sleep time, such activities like house chores are considered better done at night since school work may not allow the respondents to execute them in the day time. As shown on the table, 47.00% of the teachers agreed to the use of medication as one of the contributive factor to sleep debt. This is in line with what Levine (1983) reported that certain medication like sedatives and antidepressants have the ability to produce a non specific but generalized effect on the motor activity of the central nervous system thereby inducing fatigue or wakefulness. The number of teachers who disagree that poor living condition contribute to sleep debt were 53.10% while 81.30% disagreed that poor nutrition cause sleep debt. Flegal and Carroll (1998) reported that unhealthy eating habit can contribute to health problems. Such problems if not curbed can interfere with the normal functioning of the system including the brain that controls sleep. A total of 72.92% of the respondents did not agree that poor health condition rob them of a good night sleep. This might be due to the fact that teachers were not suffering from any sleep disorders.

Table 3 reveals the effect of sleep debt on performance, thinking and mood of the teachers. From the results, 46.87% and 66.15% refuted the fact that sleep debt lead to impressive and efficient performance. As seen, 62.50% of the respondents accept that sleep debt causes weakness thus confirming that problem sleepiness is associated with loss of energy and drowsy driving in drivers (Hasseimo, 1999). Majority of the respondents (65.10% agreed that sleep debt rob them of thinking intelligently and with high resolution while 67.71% admit that sleep debt make them dull and angry. This finding confirms the statement of Krueger (2001) that changes occur in the body during a good night sleep which affect our ability to move, think, concentrate, be energetic and relate well during the day. It also confirms the findings made by Ekpo (1995) that teaching efficiency and effectiveness can only be achieved by a performing teacher.

CONCLUSION AND RECOMMENDATION

From the findings, this study has shown that teachers' habit, lifestyle and sleep pattern which cause sleep debt has serious consequences on performance, thinking and mood of the teachers in their various schools in the teaching-learning process. It attendant difficulty to concentrate, memory lapses, loss of energy, emotional instability, errors and accidents culminate in inefficiency, incompetence and poor performance on the part of the teacher and consequent low academic performance by the students.

To address this situation the teachers should create time and rest. A good night sleep will help the teachers to perform better in the class room the next day.

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