EXAMINING CIRCADIAN TYPOLOGY AND EMOTIONAL INTELLIGENCE ON THE ACADEMIC PROCRASTINATION OF COUNSELLING STUDENTS IN ADEYEMI COLLEGE OF EDUCATION, ONDO STATE

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Abstract
This study investigates the effects of circadian typology and emotional intelligence on academic procrastination among counselling students. Using the descriptive survey design, 200 Counselling students were randomly selected for this study from students in the Department of Educational Psychology and Counselling in Adeyemi College of Education, Ondo West, Ondo State, Nigeria. Four standardized instruments were used to collect data from the selected participants. Three research hypotheses were tested in this study at 0.05 level of significance. Data were analyzed with the Pearson Product Moment Correlation and Multiple Regression statistics. The result indicated that there were significant correlations among circadian typology, emotional intelligence and academic procrastination. Circadian typology and emotional intelligence accounted for 38.7% of the variation academic procrastination. The two independent variables contributed significantly to academic procrastination, with emotional intelligence being the most potent. Based on these findings recommendations and suggestions were made.
Keywords: Emotional intelligence, Circadian typology, Academic procrastination

Introduction
It is expected that the primary motive of any academic task provided to an individual is to enable the individual access effectively and efficiently his/her academic abilities and potentials to produce successful ends. However, for decades, one problematic phenomenon that has continually overwhelmed most researchers is that of academic procrastination (Day, Mensink & O'Sullivan, 2000). Academic procrastination is typically defined as an irrational tendency to delay in the beginning and/or completion of an academic task (Senecal, Juliene & Guay, 2003). Academic procrastination is common and easily recognizable, but it is often seen as a dysfunctional behavior that is usually associated with students. Academic procrastination is regarded as a dispositional trait that can have particularly serious consequences for students, whose lives are characterized by frequent deadlines. Ellis and Knaus (2002) regard it as an interactive dysfunctional and behavior avoidance process, characterized by the desire to avoid an activity, the promise to get to it later, and the use of excuse making to justify the delay and avoid blame.

Academic procrastination is extremely prevalent. Although virtually most people have at least been involve with it at one time or the other, some people have made it a way of life. Estimates indicate that 80% - 95% of college students engage in procrastination (O'Brien, 2002), almost 50% procrastinate consistently and problematically (Day, Mensink & O'Sullivan, 2000). The absolute amount of academic procrastination is extensive, with students reporting that it typically occupies over one third of their daily activities, often enacted through sleeping, playing, or television watching (Pychyl, Lee, Thibodeau, & Blunt, 2000). Furthermore, these percentages appear to be on the increase (Kachgal, Hansen, & Nutter, 2001). Hence it would seem that students engage in frequent procrastination and this occurs regardless of race or gender.

In Nigeria, research findings on the proportion of students who procrastinate is observed to not being consistent. However the situation may not be far from the findings identified earlier. It should be noted that people who are procrastinators may have low self-esteem; they may believe they lack the ability to be successful in their task which leads to the delay in completing the project and as well doubt their capabilities. Sirois and Pychyl (2002) reveal that students who suffer from avoidance coping styles (like procrastination) resist completing assignments and addressing other deadlines that evoke tension and anxiety. If the individual should emerge successful in such task the success is usually attributed to an external locus of control as being lucky rather than an effective utilization of one's academic ability (internal locus of control). Some of the external consequences of academic procrastination could include impaired work and academic progress, strained relationships, and lost opportunities (Carr, 2001). A school with students who are slow to carrying out a task or delay carrying out a task is often regarded as that which

is complacent to academic activities and would soon lose its students to better schools. This is because parents want their children engaged in academic activities for improved learning which transposes to success. Evidence abounds in research studies that procrastination is usually resulting to poor academic performance (Tuckman, Abry, & Smith, 2002). Academic procrastination appears to be a serious troubling phenomenon that has come to stay. However, it is still not clear of how the individual's circadian typology and emotional intelligence could influence academic procrastination and performance.

For instance, researchers investigating the effects of circadian typology normally refer to individuals who have their peak or optimal performance time during the early morning hours as morningness types; conversely the eveningness type refers to individuals who experience their optimal performance in the evening hours. Although, research has demonstrated the effects of circadian rhythm on individual performance and abilities, to date there have been only a small number of studies on students morningness-eveningness preference (Goldstein, Hahn, Hasher, Wiprzyck & Zelazo, 2006) and poorer academic achievement (Kim, Duecker, Hasher, & Goldstein, 2002). In Natale and Lorenzetti's, (1997) study, findings indicates that morning types have better immediate recall in the morning, whereas evening types perform better in the evening (Natale & Lorenzetti, 1997), Goldstein et al. (2006), shed more light to this when he found that adolescents tested at their non-optimal times of day and adolescents who are evening-types tested at morning terms appear to be a risk for poor academic performance and evening-types appear to be at risk for behavioural adjustment problems. Of potential great practical importance is the report of a synchrony effect: individual adults cognitive functioning (such as memory and attention) is at its peak at their preferred or optimal time of day and falls of substantially at their non-optimal times (May & Hasher, 1998; Yoon, May & Hasher, 1999).

It has also been found that moods vary and change throughout the course of a day (Marco, Neale, Schwartz, Stone & Shiftman, 1999). The length of the circadian rhythm is 24 hours and fluctuations within this rhythm predict when a person is likely to be at his/her best (Roberts & Kyllonen, 1999). That this optimal performance at certain time of day may have a relationship with student academic self-efficacy is speculative. However, considering the fact that performance is inhibited or enabled by time of day preference (May & Hasher, 1998) self-beliefs in designated task might also be affected by such principles.

Emotional intelligence is another independent variable in this study. This construct has been known to play a critical role in attaining success in most endeavours. For instance, research findings indicate that emotional intelligence skills are important and perhaps critical factors of students achievement, retention, and personal health (Nelson and Low, 2005; Elkins & Low, 2004; Williams, 2004; Potter, 2005). These plethoras of studies argue the potency of emotional intelligence in measures of success. Extensive interdisciplinary research indicates that early discussions on the relationship between emotional intelligence and achievement in various educational contexts claimed a strong association between the two variables (Abisamara, 2000; Mathews & Zeidner, 2000; Mathews, Roberts & Zeidner, 2003; Ishola, 2005; Adewoye, 2005; Adeniji, 2004; Aremu, et. al., 2007).

This study focuses on counselling students' base on the peculiarity of the course of study and relevance to educational development and advancement. For instance, in the training of counsellors, researchers have found that current counsellor education methods are effective in teaching discrete behavioural skills such as reflection of feelings and attending behaviour (Hill & Lent, 2006). Student counsellors are provided among many, intensive training in observing non-verbal behaviour, analyzing motives, handling confrontations and reflecting feelings, making the counsellors to be the most attractive human beings, expert at efficiently developing trusting and productive relationships. However, less is known about the development of counselling skills. This systemic pressure could yield the way for procrastination in varied forms influencing negatively their learning. For example, failing to meet deadline for registration, payment of fees, submission of assignments, writing a term paper, studying for examination or attending to academic and administrative tasks often result in the individual forfeiting registration, paying additional fees (late registration), poor performance or failure as it applies to the delayed task. Hence, the findings of this type of study could be useful to redress academic procrastination, in addition to developing appropriate trend among counselling students that would enable effective and efficient educational development.

Purpose of the Study
The purpose of this study was to investigate the influence of circadian typology and emotional intelligence on academic procrastination among counselling students. To do this the study would seek to;

i. determine any significant correlations among circadian typology, emotional intelligence and academic procrastination.
ii. determine any significant combine effect of circadian typology and emotional intelligence to the prediction of academic procrastination.
iii. determine any significant relative contribution of circadian typology and emotional intelligence to the prediction of academic procrastination.

Research Hypotheses
The following hypotheses were tested in this study.
1. There will be no significant correlations among circadian typology, emotional intelligence and academic procrastination.
2. There will be no significant combine effect of circadian typology and emotional intelligence to the prediction of academic procrastination.
3. There will be no significant relative contribution of circadian typology and emotional intelligence to the prediction of academic procrastination.

Methodology
This study adopted a descriptive survey design. A survey usually deals with the description and analysis of current status of an area. It attempts to describe what exists at the moment and explain why certain situations exists as well as focuses on the characteristics of the population by studying representative sample. The population for the study consists of all senior secondary school students in Ondo Town, Ondo State, Nigeria. A representative sample of five (5) secondary schools in the designated area was randomly selected for the study. Forty (40) students were randomly selected from each of the five (5) schools amounting to two hundred (200) students (93 girls and 107 boys) selected for the study.

Morningness and Eveningness Questionnaire (MEQ): The instrument used to measure circadian typology is the morningness and eveningness questionnaire developed by Horne and Osteberg (1977). It is an evaluative instrument to identify one's typology. It is a seven item scale with varying degree of response anchors. The scale has a theoretical value ranging between 6 and 32. Low score is indicative a greater degree of eveningness and high score indicate a greater level of morningness (Natale & Lorenzeth, 1997). The scale has a reliability coefficient of 0.83.
Emotional Intelligence Scale **:** Wong and Law (2002) developed the measure. The items on the measure are self-rated on a 5- point Likert-type scale (1 = totally disagree to 5 = totally agree). All items are positively keyed. The interscale correlations were mild to moderate in one sample (r=0.13–0.42) and higher in another sample (r=0.60–0.76) (Wong and Law 2002). After subjecting the test to a split half reliability test it has reported a coefficient alpha of .75 and a standardize item alpha of .73. *Academic procrastination:* The instrument used as a measure is the modified version of the validated 35 item likert type academic procrastination scale, developed by Tuckman (1991) with an original reliability coefficient of r = 0.90. The modified version was reduced to twenty (20) items and revalidated before use. The modification of the items in the instrument was done in conjunction with the study's supervisor. High score indicate decreased intensity of academic procrastination, while low scores indicated increased intensity for academic procrastination. The revised scale reported a reliability coefficient alpha of .796 using two weeks test re-test procedure.

The researchers personally distributed and collected the completed questionnaire from the students. Permissions were obtained from the principals of the sampled schools after which the researchers with other research assistants administered the questionnaires on the participants. The consent of all the participants was also sought before administration. Response rate of 100% was recorded. Relationship between the independent variables (circadian typology and emotional intelligence) and the dependent variable (academic procrastination and performance) was ascertained using Pearson product moment correlation while multiple regression was used to determine the predictive capacity of the independent variables.

Results
Research hypotheses 1: There will be no significant correlations among circadian typology, emotional intelligence and academic procrastination.
Table 1: Descriptive statistics and correlation among variables

Variables	Mean	Standard deviation	Academic procrastination	Circadian typology	Emotional intelligence

Academic procrastination	78.80	13.076	1.000		
Circadian Typology	24.45	4.907	.335	1.000	
Emotional Intelligence	36.78	17.338	.258	.138	1.000

From table 1, the correlation coefficients between academic procrastination and the two independent variables were significant. Academic procrastination correlated positively and significantly with (1) circadian typology (r=.335) and (2) emotional intelligence (r=.258).

Research hypotheses 2: There will be no significant combine effect of circadian typology and emotional intelligence to the prediction of academic procrastination.

Table 2: Summary of Regression Analysis between Predictor Variables and Academic procrastination

R = 0.622; R^2 = 0.387; Adj R^2 = 0.384; std. error Estimate = 7.487					
Source of Variation	df	Sum of squares	Means square	F-ratio	P
Regression	2	23021.924	11510.962		
Residual	297	16646.553	56.049	205.37	<.05
Total	299	39668.477			

Going by the result presented in table 2, the two independent variable (Circadian typology, emotional intelligence and creativity), as a composite construct yielded a coefficient of multiple regression (R) of 0.622 and a multiple correlation square (R^2) of 0.387. This shows that 38.7% of the total variance in academic procrastination of the participants is accounted for by the combination of the two variables. The table as well indicates that the analysis of variance of the multiple regression data produced an F-ratio value which was significant at 0.05 level ($F_{(2,297)}$= = 205.37, P<.05). The findings thus, confirm that circadian typology and emotional intelligence are potent predictors of academic procrastination.

Research Hypotheses 3:
There will be no significant relative contribution of circadian typology and emotional intelligence to the prediction of academic procrastination.

Table 3: Relative Contribution of the independent variables to the prediction of Academic procrastination

	Unstandardised coefficient		Standardized coefficients	t-ratio	P
Predictor	B	SEE	Beta (P)		
Circadian typology	.274	.110	.253	2.153	<0.05
Emotional Intelligence	.128	.020	.148	1.184	<0.05

From the result displayed in Table 3 above, each of the independent variables made significant contributions to the prediction of academic procrastination in varying weights. The results indicated that the following beta weights which represented the relative contribution of the independent variables were observed; circadian typology (P = .253, t = 2.153, P < 0.05) and emotional intelligence (β = .148, t = 1.184, R < .05).

Discussion
The analysis of relationship among circadian typology, emotional intelligence and academic procrastination as shown in the correlation matrix of table 1 indicates that there is a positive and significant correlation among the variables. This suggests that circadian typology and emotional intelligence could predict academic procrastination of the participants. The multiple regression analysis in table 2 shows that circadian typology and emotional intelligence could significantly predict academic procrastination of the participants. The magnitude of this relationship in predicting the academic procrastination of students is reflected in the values of co-efficient of multiple R^2 (0.622) and in multiple R^2 adjusted (0.372) as shown in table 2. Thus it can be said that 67.2% of the total variance in the academic procrastination of the students is accounted for by the combination of circadian typology and emotional intelligence. The F-ratio value of 205.37 which is significant at 0.05 level further attests to the fact that the predictive capacity of the independent variables are not due to chance factors.

With regards to the extent to which each of the three independent variables contributes to the prediction, it could be ascertained from Table 3 that circadian typology is the best predictor of academic procrastination. This finding is in consonance with previous empirical works (Kyllomen, 1999; Marco, Neale, Schwartz, Stone & Shiffman, 1999). In these studies it was reported that there is a positive relationship between the periodicity of the psychological and physiological variables of individuals and their beliefs in performance in work related tasks at certain times of the

day. Though, circadian typology was not the point of focus, the variables are auspiciously related. Thus, it is not out of context to assert that the circadian typology of the individual would influence academic procrastination of the individual. Hence, people rely partly on their somatic and emotional states in judging their capabilities in designated task. Therefore, periodical preference for time related academic task could enhance the academic procrastination for such task.

The investigation also reveals emotional intelligence as a significant predictor of academic procrastination. This finding is in congruence with the theoretical postulations of Goleman (1997) and the empirical works of previous researchers (Karen, Thijs & Schakel, 2002; Parker, Creque, Banhart, Harris, ajeski, Wood, Bond, & Hogan, 2004; Romanelli, JeffCain & Smith, 2006; Adeyemo, 2007). By the nature of the construct of emotional intelligence, it is expected that a good recognition and understanding of one's and other people emotions, as well as one's ability to regulate and manage them will have a strong positive effect on the individual's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives.

Conclusion

While the findings seem most relevant for students the implications for educational advanvement in continuing and non-formal education as well as significant others are as well important. For instance, it is evident considering the Circadian typology phenomena that extreme morning or evening class times should be avoided to prevent complications, sympathy and prejudice in achievement among students. Furthermore, it is also important that emotional intelligence should be fostered and encouraged among students in accordance of enhancing students positivity in the academia. Hence, testing and developing student training programmes based on emotional intelligence targeting academic success should be promoted. Restructuring the school curriculum to accomodate emotional intelligence may also be vital to student success in performance and managing procrastination. Since the constructs of circadian typology and emotional intelligence could have enormous influence on individuals' academic procrastination and performance, it can be reasonably concluded from the result of the study that these variables are highly germane to academic success among students. It is therefore important that teachers, school administrators and counselling psychologist should take into consideration the appropriate time to teach curriculum content to students and further assist students to acquire emotional intelligence competencies. Students should also be sensitized to the possible positive impact the variables could have on their academic procrastination and performance.

Recommendations

The following recomendations were raised in this study.
1. Lecturers should avoid extreme morning or evening class so as to enable students explore similar times of optimal performance
2. Lecturers should acknowledge the fact of individual differences and unique patterns of learning
3. Counsellors should assist counselling students in identifying their circadian typology to enable them boost their performance rating based on their time of preference for academic task.

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