

The role of academic advising in reducing test anxiety among sudanese university students

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ABSTRACT There are certain factors that influence Sudanese university students as relates to methods of tests' evaluation. Some previous studies that were done showed the importance of academic advising in reducing psychological test's disturbances. The researcher as being a staff member believes that it is necessary to shed light on this topic because it affects the teacher-student relationship. The research statement concentrates on the psychological effect of the evaluation system on the psychological state of universities' students. So the subject of this study was the role of academic advising in treating these psychological disturbances (test anxiety). The method used to collect data was a quantitative paradigm. The sample of the study was selected from the students' and staff populations of three universities: Khartoum University, Sudan University of Sciences and Technology and Ahfad University for Women. The size of the samples was 419 university's students (both males and females) and 56 university staff members. To collect data for the research, a questionnaire was distributed among the two samples of the study (both students and staff members) and a psychological scale was given to students to measure anxiety (test anxiety inventory). Data obtained was processed and analyzed by Statistical Package for Social Sciences (SPSS) The results showed no relation between anxiety and academic advising. Process, However, the academic advising, teaching and the learning process were closely related.

KEYWORDS: *Counseling techniques, academic adviser, students performance*

INTRODUCTION

Academic advising is a process by which the advising teacher attempts to guide, direct, and advise students academically and socially using the right psychological approach. Psychological approach comprises of making use of counseling science as a part of the academic advisor responsibilities. The advising teacher needs to be trained in counseling skills which may help him in practicing counseling techniques during advising when they are needed. (NACADA)⁽¹⁾, defined academic advising as "a process that is based on the teaching and learning mission of higher education, it is a series of intentional interactions with curriculum, a pedagogy, and a set of students

learning outcomes. In addition academic advising synthesizes and contextualizes student's educational experiences with in the frame work of their aspirations, abilities and lives to extend learning beyond campus boundaries and time frame. The major purposes of academic advising comprise of developing educational plans that are consistent with students' life goals, overcoming educational, personal and social problems, helping students understand the academic policies and procedures, providing students with accurate information about academic promotion and degree requirements, reviewing and using available data about students academic and educational needs,

performance, aspirations and problems. (use records, files for individuals.⁽²⁾ The above information of academic advisory reflected the significance of this topic according to its definitions and purposes, especially among university students. Hence university's students suffer from certain psychological disturbances due to the methods, and techniques used for evaluating and measuring the students' performance,⁽³⁾ So evaluation of the students is necessary since research has shown that students learn more in courses that use tests than in those that do not.⁽⁴⁾ Basically this research attempts to relieve the psychological pressure that can be put on the students, due to the methods, techniques, and means of evaluation. The present study therefore planned to illustrate the role of academic advising and its effectiveness. The focus objective was the way that can facilitate the effective role of academic advisor in the learning process. Several studies investigated the role of academic advising and counseling on Sudanese university's students as relates to their attitudes towards tests. One classical study was that of Intisar Salih (1999).⁽⁵⁾ She Investigated the problems of academics and academic Advising among female students in the basic Educational Colleges. The general aim was to explain the problems and obstacles that may face female students and suggest solution.. The method of research adopted was the descriptive method. A questionnaire was used to collect data. . The sample size was 238 female students. The results of the study showed that more than half of the sample of the study agreed on the effectiveness of the role of academic advising in explaining the system and regulating the syllabus. While majority of them disagree on academic advisor's

effectiveness, and they attributed that to their inability to help students in academic studies planning, keep records, inability to discriminate between required courses and pre-requisite courses, unaware of scientific and systematic procedures of academic advising processes. More than quarter (25%) of the sample specified the importance of academic advisor's work especially in evaluation process, in giving advice about academic promotion in future. The recommendation was to organize the process of academic advising, and training the academic advisors Missona Hamed's Study⁽⁶⁾, was designed to examine the impact of efficiency of group counseling in reducing test anxiety among Sudan University students. The method of the research used was the descriptive analytical and empirical one. The sample selection was a stratified random sampling. The results showed as follow a statistically significant correlation for a designed counseling program in reducing anxiety among the members of the experimental group, and recommended on stressing the importance of counseling, so she advised to establish counseling offices inside universities

Ali Ibrahiem's study⁽⁷⁾, attempted to explore the relationship between psychological pressures (various stresses) to which the students are exposed, and academic achievements among university's students. The method of the research was the descriptive analytic one. The Population of the study was university students in two universities (Sudan University of Science and Technology and Nile Valley University). The sample was selected according to the structural random sample method. The sample size was 951 male and female, chosen from first and fourth years only. The target

population was in both specializations of scientific and humanities colleges. The result of the study showed that there was a statistically significant correlation between the type of the stresses and academic achievement among university's students. It was recommended that psychological guidance and counseling unit should be established in each university.

Ali's Farah study, ⁽⁸⁾ was focused on counseling for university students (students of the faculty of education of the Sudan University of Science and Technology). The aim was to design and implement counseling program to meet students' needs. It also aimed to evaluate the efficiency of a counseling program which was designed to meet the needs for counseling among target population. The method used comprised of one group experimental design, and a questionnaire was used as tool for rating the sorts of problems that was actually found among the students. A well planned program was prepared by the researcher. The selection of sample was based on bias random selection. The program was implemented to cater for the needs of a sample of students during one semester. Hence to evaluate the efficiency of the program in achieving its goals pre and post measures were given. The study showed that students responded by asserting psychological, social and economical problems. The study's conclusion emphasized that counseling should be taken as a main academic activity in the teacher preparation program, and recommended that counseling and academic advising services at all Sudanese universities should be regarded as essential issue that may help solving the social and psychological problems of the students. It was also recommended that a

counseling model for the Sudanese students should be established, and also establishing counseling departments linked with the students' fairness in the universities, and train counselors and use new technology in counseling process. Mohaied Elmotoakiel's study, ⁽⁹⁾ entitled "The academic problems among students at governmental universities in Khartoum State" was focused on the problems of academic adjustment among students at governmental universities at Khartoum State, those who were living in governmental residences. A questionnaire was constructed as one of the instruments. It had seven dimensions designed to end scale of problems of academic adjustment. The sample size was 280 students, 134 of them were males and the rest were females. Relatively stratified random sampling method was adopted. The result showed that there was an inverse correlation between some dimensions of academic adjustment and class level variables. The researcher recommended: offering the academic advising programs inside universities to help students, and offer opportunity for universities' staff members in educational training to raise their skills and abilities. In Sahar Abdelrahim's study, ⁽¹⁰⁾ the aim was to introduce the capability of the rational and emotional treatment's-efficacy in reinforcing the burden of the pressures operations on anxious and depressed patients at Eltighani Elmahi Hospital. The writer used the experimental method of the research. There were two groups an experimental group and a control one. Information was collected through the method of pre-test and test. The sample size was 30 anxious and depressed patients classified into two groups each 15 patients.

Research's instruments were;-pressure operation inventory, irrational thoughts inventory, and rational and emotional program's treatment were used as independent variables on the experimental group. The out comes of this study indicated that the treatment's program was active and efficient in reinforcing the burden of the pressure operations. Asma Abdelmotaal's Study,¹¹⁾ aimed at examining the efficiency of a proposed psych-counseling program in treating the problematic students in psychological, social and study adjustment among secondary school students at Bahri Locality. The method of the research was adopted was defined as semi-experimental approach. The sample was selected in a biased way; it consisted of 115 students, including both sexes, male and female. The research's instrument was questionnaire embedding psychological, social dimensions and study of adjustment scales, which were designed to classify the problematic students, beside the proposed program as the main tool used during and after the evaluation list. The study confirmed that the proposed psych-counseling program is efficient in transforming the worrying students to better situation in both sexes. Significant differences were found in favor of females in both psychological and academic achievement adjustment, but not in the social one which came in favor of males. The objectives of the study was to exhibit the importance of the role of academic advising, and describe the advantages and disadvantages of the teacher-student relationship and also showed the effective role of academic advising among university's students.

The questions of the research were i) are academic advising services useful in reducing anxiety emerging from evaluation procedures? ii) are there any

relationship between presence of academic advisor and students in reducing test anxiety? and iii) what is the role of academic advisors in strengthening the staff member- student relationship and reducing test anxiety?

Hypotheses of the research were i) there is a positive correlation between academic advisor and student's achievement in reducing test anxiety.(students' questionnaire) and ii) there is a positive relationship between academic advisor and student in reducing test anxiety (Staff- members' questionnaire).

The research rationale was the underlying principles that concentrated on the psychological variables related to the quality assurance of educational procedures, the importance of offering a healthy psychological circumstance during examination, that all are attributed the role of academic advisors in reducing the psychological problems by advising and guiding students.

Methodology of the research:

The research conducted in the period June-2009 to June-2012 was limited to university students at Khartoum Province. The target population was; university staff members and the university students from second year to fifth year, first year students were excluded.

Research methods:

The researcher selected the type of the quantitative paradigm; because this type can help to investigate, explain, and explore the phenomenon in the human and social sciences, which is more preferable in educational researches,⁽¹²⁾.

Population-Frame:

The population frame of this study consisted of two types of population students and staff members. The sample

size was 419 university students and 56 university staff members.

Students Sample Rational:

a) - Universities' students.

The sample of students was selected in order to help in discovering factors that influence students. The main reason for students' selection was due to the fact that the study aims and interests were the students. So to assess the psychological disturbances among students was the central reason for selecting them, i.e. To measure the degrees of students' anxiety within three dimensions (anxiety-worry emotionality) that may result from evaluation's system. The number of students from each university was based on simple

statistical calculation, that was (10%) out of the total of the whole population. Approximately the total number of students in Khartoum University was sixteen thousand students (16.000), and fourteen thousands students in the Sudan University of Science and Technology (14,000), and eight thousands at Ahfad University (8,000).

Calculation Procedure and Students' Sample Description:

The selection of students' sample was so logical considered to the sample description table 1. The sample size for each group as illustrated in table 1 below showed that the proportion of specialization across the three universities was similar (51% from Art and 49% from Sciences).

Table 1. University Students distribution ratio in two Specializations (Art and Sciences).

Name of University	College		Total
	Art	Sciences	
Sudan University	72	86	158
	46%	54%	100%
Khartoum University	72	78	150
	48%	52%	100%
Ahfad University	66	45	111
	59%	41%	100%
Total	210	209	419
	51%	49%	100%

The distribution according to specializations in the three universities was as follows: 38% from Sudan University, 36% from Khartoum University, and 26% from Ahfad University

Staff Members Sample Rational and Sampling Characteristics:

b) Universities' staff members.

This study investigated certain questions and hypotheses and in order to answer them, Staff members'

attitudes and their perspectives about evaluation procedure and system was needed; besides their knowledge of student's psychological disorder was greatly required. The researcher believes that participation of Staff members will strengthen the study outcomes, for their experiences as teachers, academic advisors, and they are the persons who are responsible for students' evaluation.

Staff Members' Sample Description:

Table 2 shows the distribution of staff members both in specialization and gender. The percentage of staff members from Art specialization and sciences are similar in both fields (Art 52% and Sciences 48%). The males' participants were more than females (males 64% and females 36%).

The total distribution across the three universities was as follows; 30% from Sudan University, 40% from Khartoum University, and 30% from Ahfad University.

Table 2. Staff members Colleges Specialization and Gender

<i>Name of University</i>	<i>College</i>		<i>Sex</i>		<i>Total</i>
	<i>Art</i>	<i>Sciences</i>	<i>Males</i>	<i>Females</i>	
Sudan University	7	9	12	4	16
	44%	56%	75%	25%	100%
Khartoum University	12	12	13	11	24
	50%	50%	54%	46%	100%
Ahfad University	10	6	11	5	16
	63%	37%	69%	31%	100%
Total	29	27	36	20	56
	52%	48%	64%	36%	100%

Staff members' Characteristics:

The total number of respondents was 56 from university's staff members, as table 2 shows. Sixty percent of them (staff members) were trained in educational fields. The majority of them were trained in short length training. Fifty three percent of respondents had experiences not less than 10- years. Sixty eight percent 68% of the respondents were lecturers or assistant professors.

Sample Selection Approach:

The targeted population sample for both groups (university' staff members and university students) were selected by the random sample technique.

Instruments and Tools:

The researcher collected data and Information through the use of three

the two questionnaires, to get the information needed for conducting the study. Three instruments were:

a) **Questionnaire for university students.**

This instrument designed by the researcher and consisted of Demographic information and Construct of Academic advising contained of five items. The response Options contain of five ranges. (Strongly agree- agree- neutral-disagree – strongly disagree). –

b) **Questionnaire for university staff members.**

This instrument designed to measure the attitudes and point of view of university staff members was based on their experiences and observation. This instrument consisted of: Demographic information, and Construct of Academic advising, that had seven items. and response options that consist of five ranges (strongly agree- agree- neutral-disagree – strongly disagree).

c) **Test Anxiety Inventory (TAI) used for students to measure the degrees of test anxiety.**

This psychological measure scale (Test Anxiety Inventory –TAI) is an individual psychometric report, which measures the individual differences on test anxiety as personality traits in specific situations (tests or exams situation). This test was devised by a theorist called Spielberg. This test of anxiety has significant and high efficient degree in measuring the dimension of worry and emotionality as the basic elements of test of anxiety. The test is composed of twenty phrases, the response options are four; (Never / Sometimes / Often / Always).

Test Application:

The test was presented to the target sample as attitudinal scale for testing, the hidden feeling of anxiety. It can be applied for individual purposes or

for group purpose. The time range is flexible from 8-10 minutes, or more, instructions were written to help respondents to answer the questions. Motivating the respondents was crucial to answer all items of test that reflects their general feeling.

Administration of the Instruments:

Designing questionnaires: The all instructions were written and presented to respondents in Arabic language. The researcher translated the questions to Arabic language.

Questionnaires' arbitration: (Face Validity)

The instruments were associate by five (5) expert associated professors in different universities. The researcher benefited from their points of view specifying the instruments, and introducing the last modified version

Pilot Study

After designing the content of the two instruments, the researcher followed three methods; to make judgment and correction suggested by the arbitrators. The 2 types of questionnaires and test anxiety inventory were distributed to thirty students at Ahfad University for Women School of Psychology, third year group (2) and fifteen of staff members from physics Department at Ahlia University, composed of eleven males and four females. The majority of the staff members (96%) held the degree of PhD. The tables below illustrate the statistical analysis of instruments. Cronbach's Alpha was used to measure reliability

Students' questionnaire statistical analysis:

Table 3 shows the academic advising as illustrated by response range (strongly agree/agree/neutral/disagree and strongly disagree) which is similar in all construct (1-5), number of items, the mean, and the correlation between items. The correlations between items indicated that there was strong relation between items 3, 5 and 6, 2 and 1.

Table 3. Descriptive Statistics for Scales and Correlation between Variables

Variables Constructs	Response Range	NO. of Items	Items' Mean (SD)	Correlation Between Items						
				1	2	3	4	5	6	7
-Academic Advising.	1-5	4	3.52	0.576	0.604	0.621	0,539	0,352		

The; reliability of the construct (Table 4) which was acceptable (0.773) explained the high validity (0.87), range of corrected item-total

correlation, and explained the chi-square and significant of construct which were very high in all constructs (.000).

Table 4 Descriptive statistics for scales and correlation between variables

No. of construct	Reliability Cronbach's Alpha	Validity	Corrected Item-total correlation	Factor analysis KMO & Bartlett's Test.sig.	Approx-Chi-square Df.
(4)	0.773	0.87	0.539-621	0.000	34.13

Staff members' Questionnaire Statistical Analysis;

Table 5 shows the different five constructs; each constructs with; response range which is similar in all construct (1-5), number of items,

the mean, and correlation between items. The data, on the items presented, showed high correlation which indicate strong relation between items (0.376-0.726).

Table 5. Descriptive statistics for scales and correlation between variables

Variables Constructs	Response Range	No. of Items	Items Mean (SD)	Correlation Between Items									
				1	2	3	4	5	6	7	8	9	10
-Academic Advising.	1-5	7	2.78	0.524	0.707	0.691	0.869	0.376	0.726	0.734			

Table (6) describes each construct stating the; reliability of construct which is high (0.839), validity that is considered as high (0.915),

range of corrected item- total correlation, and explains the chi-square and significance of constructs was very high in all constructs (0.000).

Table 6. Descriptive statistics for scales and correlation between variables

No. of construct	Reliability Cronbach's Alpha	Validity	Corrected Item-total correlation	Factor analysis KMO & Bartlett's Test.sig.	Approx-Chi-square Df.
(1)	.839	.915	.376-.869	.000	54.01

Results and Discussions:

Statistics Analysis Techniques: The statistical techniques that were used in different stages of the present study were as follows: Frequency, Percentage, Mean, Standard Deviation, Pearson Correlation, and T- Test One Sample Statistics ⁽¹⁴⁾

Students' Questionnaire

Construct of academic advising: Examined the availability of; office, knowledge that makes students ask help from academic advisor when facing problems,

which is the active role of academic advisor. :

Hypothesis: There was positive correlation method between academic advisor and student in reducing test anxiety. To check the strength of the above assumption, the Pearson correlation coefficient is shown in table 7. The table shows the findings which are not significant in all dimensions of test anxiety with association to the academic advising. The out comes stated that no relation or even correlation between anxiety test and academic advising

Table7. Coefficients between correlation test anxiety degrees and academic advising

		worry	emotion	Anxiety
Academic Advising	Pearson Correlation	-.082-	-.072-	-.087-
	Sig. (2-tailed)	.095	.144	.077
	N	419	419	419

Some studies disagree with the findings of this study: As Missona Hamid's study ⁽⁹⁾ Ali's study Asma Ibrahiem's study ⁽¹⁴⁾ and Hassan Salih's study ⁽⁵⁾ all of them they found that there was statistical significant correlation between academic advising in reducing test anxiety

among students. But in spite of what was found about the impact of academic advising, the fact, is that most of the academic advisors don't discuss with students their personal affairs and rarely present to them an academic advice. The majority

or part of them believed in the importance of advising in the process of evaluation as Hassan Salih's study. Some disagreed of their effectiveness, and explained and revealed their inability in planning academic studies. Some are aware of required courses as Intisar Salih's study⁽⁸⁾ and others are not. Most of them said that there was no strong relation between academic advisor and students as the present study

Through interpretation of the present study the researcher explained and discussed the issue of academic advising as being part of teacher's responsibility and which was not activated till now. According to the finding of this result, the academic advising is a new concept which deals mainly with semester system and credit hours system that utilize formative evaluation.

According to this study the academic advisor is not a specific person at university or from staff members. The outcomes of this study indicated that 30% of respondents selected the academic advisor as being staff member (teacher), 30% of respondents assumed that the advisor is an employee at students' affairs office, 16% supposed the advisor as head of department or might be the Dean, and 23% stated that the advisor is any university members. These results explored that the academic advisor as known person is confused among students.

Are academic advisors knowledgeable of the concept of advising and are they aware of displaying it through the psycho social theory devised by Erik Erikson and others? That concentrated

on teacher's understanding of identity development; considering the competences, emotion, interdependence, social relationship and also based on cognitive theories that illustrate how individuals think, reason or rational their experiences, and may include ethical development. Finally, based on the typological theory that lay on discrimination between personality types, and how students adapt to educational environment.

Academic advisors didn't know the purposes of academic advising. especially those purposes concentrating on academic base, as: academically; explain education instructions policies, selection of courses, academic promotion, and needs.

This study examined the academic advising; it was found that there was no significant correlation in all dimensions of test anxiety with association to academic advising. The result confirmed that there is no relation between test anxiety degree and academic advising.

The result indicated that academic advising is not activated among university students. Thus there was no strong relationship between the teacher and the students. Consequently this led to lack of help offered for reducing anxiety in students. The researcher attributed this result as academic advising is not activated inside these universities. This hypothesis was not confirmed.

Staff members' Questionnaire:

Hypothesis: There is a positive relationship between academic advisor and student in reducing test anxiety. To examine the assumption stated above, the researcher used the

t- test. Table 8 shows the mean of the attitudes of staff members towards the importance of academic advising. About 28-30% of staff number showed positive attitudes to academic advising which is significantly ($p \leq 0.001-0.01$) higher

than the test value (21) which indicates positive attitudes and believes in academic advising and its role and impact in the teaching and learning process among university students.

Table 8. Importance of Academic Advising university staff member's perception

	N	Mean	Std. Deviation	Test Value	t	df	Sig. (2-tailed)
Academic advising	56	30.2857	3.38829	21	20.508	55	.000

Construct's items are; academic advising as part of staff members' job, guidance of student, help staff member discover student's psychological problems, find solution for psychological, academic, and social problems, and usage of counseling skills and techniques. The studies that agree with the current study are; Missona Hamid's study, Ali Ibrahim's study, Mohaied Elmotakiel's study, and Asma Abdelmotaal's study, all of them agreed on the positive impact of academic advising in reducing test anxiety of university students and helping them when they are facing academic or social problems. Also academic advising has a positive impact on both teaching and learning. Teaching and advising are the same in meaning concerning responsibility and activities towards students. A theorist⁽²⁾ defined advising as an integral part of the teaching role. The counseling is another responsibility of teacher for student in problem-solving and decision-making but it need teachers to have some skills of counseling. So teachers need to play the role of guide and advise student during teaching and learning, if so, this will strengthen the relationship between both teachers and students.

Conclusion:

The principal aim of this disturbances associated with test anxiety in the three dimensions of worry, anxiety and emotional dimension that might be due to evaluation strategies.

The present study investigated the academic advising in higher education to reflect its role in problem - solving among university students. The staff members' attitudes about the role of academic advising in reducing test anxiety, the current study result considered the importance of academic advising not in reducing test anxiety, but also to associate with positive teaching and learning process of the students that reflects its impact on efficiency of teaching. It is the way that strengthens the staff member-student's relationship. The academic advising and counseling are both important in the university. It is a method that can help students to be more familiar with university environment, and help to strengthen the relation-ship between staff members and students. The researcher recommends the following: i) establishing academic advising and counseling services units in all Sudanese's universities. These units may help in solving social and academic problems

and ii) the academic advising and the counseling units are to be responsible for training university staff members in the academic advising and counseling skills that help them in practicing the guidance and advising students. University staff members should take it as an initial part of academic activities that is related to teaching strategies.

To realize the above mentioned recommendations, the researcher hopes the Ministry of Higher Education takes into consideration the need for raising a special budget for supporting universities to introduce facilities for using educational technology in the teaching and learning process.

REFERENCES

1. Kramer, H.C. (1983). Advising implications for faculty development. *National Academic Advising Association. Journal*, 3,25-31.
2. National Academic Advising Association, (2006). NACADA concept of academic advising= Retrieved From: (http://Wikipedia.org/Wiki/Academic_advising):Categories Education stubs-11/15/2009.
3. Chansky, N.M. (1978). A Critical examination of school report cards from k I through 12, *Reading Improvement*, 12,84-192.
4. Dempster (1991). Synthesis Of research on reviews and tests.*Educational,Leadership*, 72:71-76
5. إنتصار صالح سالم (1999).المشكلات النفسية والشخصية والحاجة للإرشاد النفسي لدي بعض طالبات كلية التربية بجده، مجلة الإرشاد النفسي العدد الحادي عشر، جامعة عين شمس القاهرة.
6. ميسون حامد بابكر (2004)، فعالية الإرشاد الجمعي في تخفيض قلق الاختبار وسط طلاب جامعة السودان للعلوم والتكنولوجيا ،- رسالة
7. على ابراهيم على (2004)، العلاقة بين الضغوط النفسية والتحصيل الأكاديمي لدي الطلبة الجامعيون،- دراسة دكتوراة - جامعة السودان للعلوم والتكنولوجيا- التربية - قسم على النفس.
8. على فرح (2005)، تصميم وتجريب برنامج الإرشاد النفسي على طلاب كلية التربية جامعة السودان . دراسة دكتوراة، جامعة السودان للعلوم والتكنولوجيا - التربية - قسم علم النفس.
9. المتوكل محمد مهيد(2007). مشكلات التوافق الدراسي لدى طلبة وطالبات الجامعات الحكومية المقيمين بالمجمعات السكنية التابعة للصندوق القومي لرعاية الطلاب- في مجلة دراسات نفسية العدد السادس- سبتمبر 2008 ص (11-47).
10. سحر عبد الرحيم عبد الله (2008)، فعالية العلاج العقلاني الانفعالي في تعزيز عمليات عمليات تحمل الضغوط لدي مرضي القلق والاكتئاب ، رسالة ماجستير ، جامعة الخرطوم ، قسم علم النفس.
11. اسماء عبد المتعال(2009)، فعالية برنامج نفسي في سوء التوافق النفسي والاجتماعي والدراسي لطلاب المدارس الثانوية،- دراسة دكتوراة غير منشورة - جامعة السودان للعلوم والتكنولوجيا، التربية، قسم علم النفس.
12. محمد عبد الظاهر الطيب(1997)، إختيار قلق الامتحان، تأليف تشارلز د سيبلرجر ومكتبة الانجلو المصرية. القاهرة .
13. Creswell John W. (1994) *Research Design Qualitative kindergartey, and Quantitive Approaches*, Sage publication. Inc. U.S.A
14. Leech Nancy L., Karen C. Barrett, and George A. Morgan(2008). *SPSS for Intermediate Statisics*, Taylor and Francis Group. New York / London
15. Ahfad University for Women,(2009). *Workshop of Conceptual and Interactive Academic Advising* 23-24 November 2009.