Prevalence of Depression, Anxiety and Stress among Libyan Primary and Secondary Schoolteachers: A Cross-Sectional Study

Yousef A. Taher [1], Awatef M. Samud [2], Massara M. Hashemi [1], Nyruz F. Kabuoli [1]*

[1] Department of Pharmacology and Clinical Pharmacy, Faculty of Pharmacy, Tripoli University, Libya.
[2] Department of Anaesthesia and Intensive Care, Faculty of Medical Technology, Tripoli University, Libya.

ABSTRACT

Achievement of high academic performance needs good emotional expression. Studies have showed that depression, anxiety and stress (DAS) are the most common psychosomatic problems facing teachers worldwide. Therefore the present study aimed to investigate whether Libyan primary and secondary schoolteachers experience DAS manifestation throughout job programmers. So a cross-sectional survey was performed at different schools in Tripoli city, from July to October 2014; male and female teachers (n=200) were enrolled in terms of sociodemographic variables. Data were gathered using DAS scale (DASS-21) questionnaire. The mean age was 38.7±8.5 years, and the average tough experience was 13.95±0.69 years. Of 21 possible items, our study showed that 44.5% of teachers reported depressive sensation, 56% stated anxiety and 39.5% described stress mood. The most frequent reported items were, for depression "I felt down-hearted and blue" by 64%; for anxiety "I was worried about situation in which I might panic and make a fool of myself" by 60.5%, and for stress "I felt that I was using a lot of nervous energy" by 78.5%. In addition, increasing tea and coffee intake, and being smokers were associated with more symptoms, and increased number of taught experience, among females, resulted in fewer symptoms. Overall, 27.5% of teachers reported no symptoms, 22% specified one level of mind strife, 27% expressed two symptoms and 23.5% itemized the three DAS disorders. Furthermore, DAS sub-scales were significantly correlated. Hence, our findings support the predominance of DAS in tutors. It also shows that Libyan schoolteachers' experienced more symptoms than other survey countries; their quality of work possibly be affected by these events.

Keywords: Anxiety, Depression, Stress, DASS-21, Schoolteacher.

1. INTRODUCTION

Job related psychosomatic problems are either induced initially or exacerbated by work [1]. They often leave unrecognized, but joined by a considerable social indisposition, and seriously impact the quality of life of the persons involved [1]. Schoolteachers spend almost two third of their effective lives in job-related events [2]. The teaching atmosphere and emotional troubles may have undesirable effect on teacher's satisfaction, efficiency, their psychological and physical strength and also on behaves of their relatives [3]. A number of studies have ascertained that emotional problems are widely spread among schoolteachers' than in the others [4, 5] but teachers seldom seek help for their struggles. It is visibly clear that depressed individuals are less able to perform activities of daily living duties than mates. It has been demonstrated that 25-43% of teachers show burnout symptoms and about 30% of them experience stress impression[6]. Furthermore, studies have revealed that personnel's absence from their career was ordinarily owed to their nervous complaints [7]. Hence, it is essential for a teacher to know the prevalence, cause and level of psychological

symptoms which may not only bother his/her health situations but also can induce detrimental effects on their students [4].

Anxiety and depression, which are defined as psychiatric illness characterized by psychosocial difficulties and behavioral problems, are major public health concern worldwide. However, even though the majority of people experience depression, anxiety and stress in their lifetime most of studies have reported that clinical ratings of these constructs are time-consuming and expensive. Thus, access to quick and inexpensive instruments to screen those disorders or assess the severity of symptoms, and to determine the need for additional evaluation, is invaluable. Therefore, the long Depression, Anxiety, Stress Scale (DASS-42) and its brief form (DASS-21) established two decades ago by Lovibond and Lovibond [8] are increasingly used in numerous settings [9, 10]. DASS is characterized by the fact that the measure can be rolled out without incurring any charge. Moreover, since anxiety and depression have both unique and shared features DASS items implied that a stable three-factor solution of depression, anxiety and stress was the optimal fit. In addition, it grasps more potential for discrepancy between anxiety and depression, as well as between generalized anxiety and symptoms of physical arousal. However, unfortunately in area of increasing concern worldwide, internet-based search failed to locate any studies dealing with the mental health and emotional of the school teachers in Libya. This lack of information may reflect the fact that until recently there was no specialized multidisciplinary rehabilitation centers. Therefore, the present study was aimed to estimate the dependability, prevalence, and severity of depression, anxiety and stress among primary and secondary school teachers. A further was to observe any possible association between the levels of these symptoms and the socio-demographic factors for those school teachers.

Subjects and Methods
Participant sample and study design
A cross-sectional study was conducted in 12 primary

and secondary schools during the scholastic year 2013-2014. Gathering of data started few months after the examination period, from July 20 and continued to October 28, 2014, hence the actual effort pressure would not disturb the response of the teachers. In order to reduce the effect of sample homogeneity, teachers working at different schools inside Tripoli city were welcomed to participate in this study. So a total of 306 teachers, of various primary and secondary schools were requested to contribute, giving approximately 25 teachers per school. The inclusion criterion was Libyan school teacher working currently as a student instructor. Consequently, teachers from 12 schools were joined the study through Suq-algoma, Abo Sleem and Benghashir educational areas. Actually, in Libya the primary school course program has nine teaching levels of general education, and each student should start when he/she is six years old. The secondary curriculum course includes three pre-university teaching stages, the 10th, 11th and-12th of the general education levels.

In this survey DASS-21 questionnaire, described previously elsewhere [8], was processed throughout the school time and teachers were nominated randomly. A face-to-face interview of 2nd teacher who came to the school was the simple random sampling technique used. Of the subjects, female teachers constituted the larger portion of our sample (68.5%), while 31.5% were the male teachers, this in fact due to that more than two third of the teachers in these grades are females. The goals of the study and the guarantee of confidentiality were assured to all who decided to participate before administration of the questionnaire. Verbal consent was obtained from each contributor before enrolling the schedule. Teachers were entirely participated voluntarily and allowed to respond in their own time and completion of the questionnaires was anonymous. The exclusion rate was 34.6% and the exclusions criteria in this study were those participants who refused to join, have a previous psychiatric treatment, did not complete the questionnaire and who were uncooperative. For ethical aspects the study protocol was read and had approved by the ethics review committee of the University of Tripoli. Further,

this study was conducted under the authority of the Compulsory Education Administration Office at Tripoli city.

The requested information and data were picked up using the short Arabic version of DASS (DASS-21). The DASS-21 is a 21 item self-report screening scale that measures the presence of depression, anxiety and stress states by getting applicants to rate how well each statement describes them. In this study DASS-21 contained two sections. The first is a sociodemographic information including participant details such as age, gender, marital status, qualification levels, tea or coffee intake, smoking and if there is any physical or psychological problems. The second part of the DASS includes 21 items relevant to psychiatric properties, and distributed logically into 7-items for each domain; depression, anxiety and stress. The validity and reliability of DASS-21 were tested and published in different studies elsewhere [9, 10]. Teachers were queried to answer the 21 questions, before the end of their daily work, and to specify whether they had touched each item or problem over the past week. DASS-21 items were rating along a 4 point severity scales, from "zero ≈ no symptoms", to "1-3 scale ≈ yes", based on severity of clues. The range of achievable scores for each scale is 0-21. Thereafter, relevant item scores were added together as the outcome of the occurrence with which the distress was suffered, giving the score range for each subscale. The mean sum was calculated to which the symptom was troublesome for teachers by whom the problem was undergone. The significance score has a greater value if a larger number of teachers felt the problem and/or if teachers find the concern more disturbing.

Statistical analysis

Two hundred questionnaires were analyzed and the outcome data are, unless otherwise stated, expressed as means±SD or ±95% confidence interval (CI). GraphPad prism (version 3.0, USA) for windows statistical package was used to perform all the statistical analysis. The significance difference between groups was done using Chi-square test and independent *t*-test, as appropriate.

The odds ratio was used to observe and to quantify the dependent risk factors for DASS subscales. The statistical difference between groups was calculated using one way analysis of variance (ANOVA) followed by Bonferroni's multiple comparisons *post hoc* test. The p-value of <0.05, at two tailed critical area, was the level of significance for all values. Spearman's correlation coefficient was used to evaluate the strength of concordance between DASS subscales.

Results

The socio-demographic characteristics of the study population are presented in table 1. Out of the total of 306 questionnaires distributed during the period of the study, 200 teachers did return back the fulfilled inquiry form. The response rate was 65.4%. Table 1 lists the number of teachers and the percentage of respondents among those contacted participants. Of the 106 teachers who excluded or refused to participate, our sample consisted primarily of 137 female teachers (68.5%) and 31.5% male teachers. There were no reason was noticed to exclude any of them, as all of them did meet the inclusion criteria. The disproportionate number of male teachers (63 teachers) was consistent with gender distribution in the categorizing schools, which is related to distribution of school teachers over the entire province. Virtually, 4/5 of the female (83%) and male (79%) teachers were between the ages of 25-45 years (data not shown). There were no significant differences in ages between the two samples (*p*>0.05). The mean age of the whole subjects was 38.7±8.5 years (range=22–65 years) and have an average 13.95±0.69 number of years of teaching experience (range=<1 to 42 years; data not shown). Most of the participants were married (69.5%); 26.5% reported never having married; 4 teachers (2%) were divorced and similarly were reported widowed (table 1). With respect to education level, two-third of teachers (61%) and more than quarter of the participant's partners (28.5%) were college graduates. Whereas, about 2.5% of teacher's partners were illiterate and around 38.1% were not employed. Less than 25% of the participants knew that they had physical problems (table 1), while beneath 10%

knew that they touch some sort of psychological puzzles (data not shown). In addition, of the researched group, 81.5% were reported never smoked (female 100% and male 41.3%), and 79 teachers (39.5%) had not ever drunk tea or coffee, despite the fact that 60.5% of them reported did (Table 1).

Table 1. Characteristics of primary and secondary school teachers (n=200)

Characteristics	Teachers		
	men	women	all teachers
	n (%)	n (%)	n (%)
Age range	22-65	26-65	22-65
Gender	63 (31.5)	137 (68.5)	200
Marital status			
single	18 (28.57)	35 (25.6)	53 (26.5)
Married	44 (69.8)	95 (69.3)	139 (69.5)
Divorced	1 (1.6)	3 (2.2)	4 (2)
widow	0 (0)	4 (2.9)	4 (2)
Qualification			
University	32 (50.8)	90 (65.7)	122 (61)
others	31(49.2)	47 (34.3)	78 (39)
Partner education			
Illiterate	4 (6.4)	1 (0.7)	5 (2.5)
Primary	9 (14.3)	13 (9.5)	22 (11)
Secondary	17 (26.9)	36 (26.3)	53 (26.5)
University	14 (22.2)	43 (31.4)	62 (28.5)
missing	1 (1.6)	2 (1.5)	3 (1.5)
No partner	18 (28.6)	42 (30.7)	60 (30)
Partner employment			
Employed	20 (31.8)	94 (68.6)	114 (57)
Unemployed	24 (38.1)	0	24 (38.1)
missing	1 (1.6)	1 (1.6)	2 (1)
No partner	18 (28.6)	42 (30.7)	60 (30)
Smoking			
Non-smokers	26 (41.3)	137 (100)	163 (81.5)
smokers	37 (58.7)	0 (0)	37 (18.5)
Tea/coffee intake			
Yes	36 (57.1)	85 (62)	121 (60.5)
no	27 (42.9)	52 (38)	79 (39.5)
Physical problems			
Yes	12 (19.1)	35 (25.6)	47 (23.5)
no	51 (81)	102 (74.5)	153 (76.5)

The items for DASS-21 along with the percentage responses, mean responses and SD are shown in table 2. It was observed that the most frequently reported element among depression feeling was "I felt down-hearted and blue" by 128 teachers (64%). Other top-rated item was "I found it difficult to work up the initiative to do things" by 56.5%. For anxiety impression, "I was worried about situations in which I might panic and make a fool of myself" was the noisiest article reported by 60.5% of participants, followed by "I was aware of dryness of my mouth" by 56% (table 2). While, out of the 200 respondents, 36.5% agree that "I experienced trembling (in the hands)" is the quietest event. In addition, it was recorded that "I felt that I was using a lot of nervous energy" as the greatest statement scored by 78.5% of participants for DASS-stress subscale. Of those

contributed teachers, less than 60% have declared that "I found it hard to wind down" and "I felt that they were rather touchy" as the nethermost items that can make one stressed (table 2).

Table 2. Responses to structure matrix items of DASS-21 (n=200)

no.	scale/item summary	Yes		Score	
		n	%	Median	Mean ± SD
DASS-Depression					
3	I couldn't seem to experience any positive feeling at all	80	40	0	0.64 ± 0.91*
5	I found it difficult to work up the initiative to do things	113	56.5	1	0.85 ± 0.91
10	I felt that I had nothing to look forward to	81	40.5	0	0.70 ± 0.97*
13	I felt down-hearted and blue	**128**	**64**	**1**	**1.02±0.97**
6	I was unable to become enthusiastic about anything	98	49	0	0.80 ± 0.98
17	I felt I wasn't worth much as a person	64	32	0	0.53 ± 0.88*
21	I felt that life was meaningless	61	30.5	0	0.53 ± 0.92*
DASS-Anxiety					
2	I was aware of dryness of my mouth	112	56	1	0.82 ± 0.88
4	I experienced breathing difficulty (excessively rapid breathing, breathlessness in the absence of physical exertion)	85	42.5	0	0.70 ± 0.96†
7	I experienced trembling (in the hands)	73	36.5	0	0.58 ± 0.89†
9	I was worried about situations in which I might panic and make a fool of myself	**121**	**60.5**	**1**	**1.07 ± 1.09**
15	I felt I was close to panic	61	30.5	0	0.53 ± 0.90†
19	I was aware of the action of my heart in the absence of physical exertion (sense of heart rate increase, heart missing a beat)	97	48.5	0	0.76 ± 0.93†
20	I felt scared without any good reason	56	28	0	0.59 ± 0.94†
DASS-Stress					
1	I found it hard to wind down	116	58	1	1.00 ± 1.06#
6	I tended to over-react to situations	123	61.5	1	1.08 ± 1.06#
8	I felt that I was using a lot of nervous energy	**157**	**78.5**	**1**	**1.46±1.07**
11	I found myself getting agitated	132	66	1	1.03 ± 0.95#
12	I found it difficult to relax	129	64.5	1	1.09 ± 1.03#
14	I was intolerant of anything that kept me from getting on with what I was doing	138	69	1	1.25 ± 1.07#
18	I felt that I was rather touchy	113	56.5	1	0.91 ± 0.99#

* *P<0.05 compared to items number 13, †P<0.05 compared to items number 9. #P<0.05 compared to items number 8. ANOVA followed by Bonferroni's multiple comparisons test.*

Data in table 3 show the severity of the psychometric properties of DASS stated by the male and female teachers. The mean number and percentages according to cut-points for depression, anxiety and stress were calculated. For each DASS subscale the number and percentage of participants dropping into each of the four categories "mild, moderate, severe and extremely severe" created by elsewhere [8] described scores are postulated. Our data showed that 28 teachers (14%, 7 males and 21 females) detailed scores in the 'severe' and 'extremely severe' DASS-depression subscale, range for depression (probable case, DASS-D >21+ and >28+, respectively), while one-fourth of the participants (26%, 16 males and 36 females) specified for DASS-anxiety (probable case,

DASS-A >15+ and >20+, respectively) and 17.5% of them (7 males and 28 females) for DASS-stress subscale (probable case, DASS-S >26+ and >37+, respectively). Using the "no case" cut-point scores (DASS-D <7, DASS-A <9 and DASS-S <14), 55 participants (27.5%, 13 males and 42 females) reported had neither depression; anxiety nor stress. In contrast, exceeding one-fifth of teacher numbers (22%) had at least one of the three studied disorders; 27% had two disorders, and more than one-fifth (23.5%) had all the three DASS psychometric properties. As shown in table 3, the prevalence of depression of all levels was about two-fifth of our study sample (44.5%, 89 teacher), while the prevalence of anxiety and stress were respectively, 56%

and 39.5%. Using the "possible case" cut-point scores (DASS-D <10), 16% of participants had mild depression and 14.5% had moderate depression (DASS-D <14, table 3). Regarding anxiety, cut-point scores "DASS-A<8 and DASS-A<10", respectively 12.5% and 17.5% of

contributors had stated exacerbating mild to moderate symptoms. Moreover, it was also observed that, overall, 12.5% of teachers scored mild and 10.5% of them scored moderate stress situation (cut-point scores DASS-S<15 and DASS-A<19, respectively, table 3).

Table 3. Prevalence and intensity of depression, anxiety and stress among primary and secondary school teachers (n=200; male n=63; female n=137)

DAS disorders	DASS severity				Total n (%)
	Mild n (%)	Moderate n (%)	Severe n (%)	Extremely severe n (%)	
Depression					
men	12 (19.1)	13 (20.6)	4 (6.4)	3 (4.8)	32 (16)
women	20 (14.6)	16 (11.7)	7 (5.1)	14 (10.2)	57 (28.5)
all teachers	32 (16)	29 (14.5)	11 (5.5)	17 (8.5)	89 (44.5)
Anxiety					
men	7 (11.1)	17 (27)	2 (3.2)	14 (22.2)	40 (20)
women	18 (13.1)	18 (13.1)	15 (11)	21 (15.3)	72 (36)
all teachers	25 (12.5)	35 (17.5)	17 (8.5)	35 (17.5)	112 (56)
Stress					
men	7 (11.1)	8 (12.7)	5 (7.9)	2 (3.2)	22 (11)
women	18 (13.1)	13 (9.5)	19 (13.9)	9 (6.6)	59 (29.5)
all teachers	25 (12.5)	21 (10.5)	24 (12)	11 (5.5)	81 (40.5)
In each contributor	men n (%)		women n (%)		all teachers n (%)
no disorder	13 (20.6)		42 (30.7)		55 (27.5)
only one	17 (26.9)		27 (19.7)		44 (22)
any two	19 (30.2)		35 (25.6)		54 (27)
all the three	14 (22.2)		33 (24.1)		47 (23.5)
total	63 (100)		137 (100)		200 (100)

Scale ranges: DASS-Depression 10-28+; DASS-Anxiety 8-20+; DASS-Stress 15-37+

Data presented in table 3 show that the levels of DASS subscales were higher in female teachers compared to male teachers. The Chi square test demonstrated that there were no significant gender differences in depression (females; M=9.81, 95% Cl 8.3-11.4 vs. males; 10.76, 95% Cl 8.4-13.1, P=0.41, table 4), anxiety scales (females; M=9.50, 95% Cl 8.1-10.9, vs. males; M=10.95, 95% Cl 8.9-13.0, P=0.31), stress scales (females; 15.17, 95% Cl 13.4-16.9 vs. males; 13.90, 95% Cl 11.7-16.1, P=0.28), and between the total DASS subscales (data not shown). Similarly, on the average, our results revealed that never married, divorced and widow teachers who were enrolled in this study scored higher impact than married teachers on the DASS subscales. However, then again analyzed data postulated in table 4

displays absence of any significant wedded status difference (P>0.05) in DASS-depression (M±95% CI=12.07±9.4-14.8 vs. 11.29±9.7-12.9), DASS-anxiety (M±95% CI=11.18±8.8-13.9 vs. 9.47±8.1-10.8) and in the DASS-stress subscale (M±95% CI=15.57±13.2-17.9 vs. 13.21±11.5-14.9). Furthermore, our results reveal that there were non-significant modest influence of the other remaining participants demographic details such as "male taught experience and qualification levels, (P>0.05)" on the three DASS subscale disorders. Nevertheless, the presence of seeming physical puzzles was found as independent risk factor for the outcome variables of DASS psychiatric properties (data not shown). On the other hand, with regard to smoking status, Chi square comparison test showed that smoking habits was a

significant predictor for development of DASS-anxiety subscale. Actually, our data in table 1 show that most of the teachers were currently non-smokers (81.5% for both male and female). In fact, cigarette smoke was observed has a significant relationship with only anxiety sensing since non-smokers (male only) described less anxiety feeling (M=9.89, 95% CI 7.3-12.5 vs. M=12.46, 95% CI 8.9-16.0, χ2= *6.68*, P<0.001, table 4), and this was not true for depression and stress impression. In this study the other difference found was that female teachers who their teaching experience were less than 10 years had higher anxiety and depression but not stress feeling than counterpart females (table 4). Also there was significant association between the coffee/tea consumption and the rate of depression and anxiety impression. With reference to 39.5% of our total sample, who had never drink tea or coffee in their life (table 1), low significant frequency rate of anxiety (M=8.18, 95% CI 6.5-9.9 vs. M=11.0, 95% CI 9.5-12.5, P<0.05, table 4) and of depression (M=8.24, 95% CI 6.4-10.1 vs. M=13.24, 95% CI 11.5-14.9, P<0.001) were observed compared to those tea/coffee user colleagues.

Table 4. Mean score number and comparison of mean values out of DASS-21 items

Characteristics	n	DASS Mean (95% CI)		
		Depression	**Anxiety**	**Stress**
Gender				
Men	63	10.76 (8.4-13.1)	10.95 (8.9-13.0)	13.90 11.7-16.1)
Women	137	9.81 (8.3- 11.4)	9.50 (8.1-10.9)	15.17 (13.4-16.9)
χ2 (P value)		0.68 (0.41)	1.05 (0.31)	1.19 (0.28)
Qualification				
University	122	12.03 (10.3-13.7)	9.97 (8.4-11.5)	14.08 (12.3-15.8)
Others	78	10.67 (8.4-12.9)	10.03 (8.2-11.9)	13.58 (11.3-15.9)
χ2 (P value)		0.005 (0.94)	0.47 (0.49)	0.18 (0.68)
Taught experience				
Men <10 years	23	10.35 (6.9-13.8)	9.65 (6.0-13.3)	14.09 (10.6-17.5)
>10 years	40	11.45 (8.2-14.7)	11.70 (9.1-14.3)	14.00 (11.0- 16.9)
χ2 (P value)		0.30 (0.59)	0.10 (0.76)	0.003 (0.98)
Women <10 years	52	14.62 (11.8- 17.4)	11.38 (8.9- 13.9)	15.54±10.44
>10 years	85	10.02 (8.0- 12.0)	8.42 (6.7- 10.1)	12.87±10.28
χ2 (P value)		**7.56 (0.006) ****	**5.34 (0.02) ***	0.30 (0.59)
Marital status				
Single (Divorced, widow)	61	12.07 (9.4-14.8)	11.18 (8.8- 13.9)	15.57 (13.2- 17.9)
Married	139	11.29 (9.7- 12.9)	9.47 (8.1- 10.8)	13.21 (11.5- 14.9)
χ2 (P value)		1.84 (0.18)	0.48 (0.49)	2.64 (0.10)
Smoking (male only)				
Yes	37	10.31 (6.5-14.1)	12.46 (8.9-16.0)	15.23 (11.0- 19.5)
No	26	11.08 (7.9-14.2)	9.89 (7.3-12.5)	12.97 (10.6- 15.3)
χ2 (P value)		0.01 (0.92)	**6.68 (0.009)****	0.64 (0.42)
Tea/coffee intake				
Yes	121	13.24 (11.5- 14.9)	11.00 (9.5-12.5)	14.39 (12.6- 16.2)
No	79	8.24 (6.4- 10.1)	8.18 (6.5- 9.9)	13.03 (10.9-15.2)
χ2 (P value)		**8.96 (0.003) ****	**4.48 (0.03) ***	0.59 (0.44)

Range 0-3: (0) Did not apply to me at all; (1) Applied to me to some degree, or some of the time; (2) Applied to me to a considerable degree, or a good part of the time; (3) Applied to me very much, or most of the time. CI. Confidence interval, *P<0.05, **P<0.01, χ2, Chi-square test

The percentage of prevalence, odds ratio and 95% CI for taught experience (female only), smoking habit (male only) and tea/coffee consumers (the whole contributors) as demographic concerns affecting the psychometric

properties of DASS are present in table 5. The logistic regression valuation illustrated that, with the exception of stress thought, females with less than 10 years' work experience had more than twice and half fold as likely to develop depression (OR=2.69, 95% CI 1.32-5.52; P=0.006), and had approximately twice to develop anxiety (OR=1.95, 95% CI 0.96-3.96, P=0.06) compared to women with more than 10 years taught experience (table 5). Then again, compared with non-cigarette smokers, four and half fold as likely to develop anxiety

and 1.5 fold for stress signals were remarked by workmate smokers. The odds ratios were 4.43 (95% CI 1.38-14.28, P=0.009) and 1.53 (95% CI 0.54-4.32, P=0.42) respectively. Consistent with this the distribution of depression was significantly related to teachers being either are tea and coffee users or not. It was found that the odds ratio, including being tea and coffee drinkable, is 2.48 (95% CI 1.36-4.54) as likely to develop depression compared with co-worker group (table 5).

Table 5. Multivariable adjusted analysis of risk factors for DASS subscales among respondents

Risk factor		DASS subscale	% prevalence (n)	OR (95% CI)	χ2 value	p value
Female only taught experience (in years) (n=137)	≥ 10 years	DASS-D	50.4 (69)	2.69 (1.32-5.52)**	7.56	**0.006**
	< 10 years			1		
	≥ 10 years	DASS-A	53.3 (73)	1.95 (0.96-3.96)	3.49	0.06
	< 10 years			1		
	≥ 10 years	DASS-S	39.42 (54)	1.22 (0.60-2.46)	0.29	0.59
	< 10 years			1		
Male only smoking habit (n-63)	Yes	DASS-D	50.79 (32)	0,95 (0.35-2.58)	0.01	0.92
	No			1		
	Yes	DASS-A	61.9 (39)	4.43 (1.38-14.28)**	6.68	**0.009**
	No			1		
	Yes	DASS-S	36.50 (23)	1.53 (0.54-4.32)	0.64	0.42
	No			1		
All respondents tea or coffee consumption (n=200)	Yes	DASS-D	51.5 (103)	2.48 (1.36-4.54)**	8.96	**0.003**
	No			1		
	Yes	DASS-A	57.5 (115)	1.33 (0.74-2.39)	0.88	0.35
	No			1		
	Yes	DASS-S	39 (78)	1.27 (0.69-2.33)	0.59	0.44
	No			1		

*Calculation based on presence of at least one psychiatric disorder/total absence of disorder. OR, Odds ratio; CI, confidence interval; **p < 0.01, χ2, Hosmer-Lemeshow goodness-of-fit Chi-Square.*

Moreover, Spearman's rank correlation coefficients showed that there were strong and good positive concordances between the overall DASS subscales. Among the three DASS subscales, depression correlated

with anxiety and stress at respectively 0.67 and 0.66, whereas anxiety correlated with stress at 0.71. The overall correlations are significant at P=0.0001 (table 6).

Table 6. Spearman's correlation matrix (two tailed) among DAS subscales (n=200)

DAS disorders	DASS-D		DASS-A		DASS-S	
	r	P-value	r	P-value	r	P-value
DASS-D	1	-	0.67	0.0001	0.66	0.0001
DASS-A	0.67	0.0001	1	-	0.71	0.0001
DASS-S	0.66	0.0001	0.71	0.0001	1	-
Mean ±SD	10.16±9.17		9.96±8.41		14.77±9.75	

Discussion

The main objective of the present study was to verify the prevalence and the severity of stress, anxiety and depression among primary and secondary school teachers. Our results reveal that male and female school teachers, in Tripoli educational area, experienced high prevalence of psychiatric disorders. The occurrence of these emotion troubles was fluctuated from mild to extremely severe. Nevertheless, the majority of teachers have mild level of depression and stress, but increasing to moderate level for anxiety. Consistent with the studies by others [11, 12] our findings showed that instruction career is cruelly worrying. In developed countries, it has been reported that, among job pressure, teaching is located in the first order of inducing psychotic disorders[4]. Therefore, based on the overall prevalence and intensity of observed DAS symptoms, it remains possesses risk for teachers' health status and well-being and consequently it may results into negative attitudes in evaluating students achievements. Additionally, the factors expressively interrelated certainly with DAS symptoms were characterized with tea and coffee drinkable habitus or being smoking dependency while inversely correlated with taught experience.

In this study we observed that a number of subjective variables did not contribute much to DAS symptoms among primary and secondary school teachers. Gender variation in regards to depression has been well reported throughout the world, based on cross-sectional [13] as well as clinical studies [14]. Numerous studies have indicated that women often expressed higher levels of DAS than men [15, 16]. In contrast, the present study findings and by others [17-19] have counseled that there are no dissimilarities in DAS levels as a result of gender difference. Indeed, our data show that manifestation of DAS symptoms are comparable in woman teachers compared to matching equivalent men. This might be explained by either owing to the different appliances used in other studies or it might be just due to chance. In addition, higher level of education, marital status as well as partner education and employment (data not shown) found to be not associated with all DAS subscale scores.

The present study showed that the emotive healthiness among school teachers is troublesome. Our findings that younger female teachers "less-experienced" have more psychiatric disorders than the older teachers are consistent with the observation by others [20, 21] who demonstrated that younger and older teachers expressed emotions at work differently. Nonetheless, the possibility that work experience factor might influence emotional expression is not clear since some studies [19, 22], but not all[6], showed a clear difference between less-experienced and more experienced teachers. This can be explained by the fact that it might be, at younger ages, the subject is exploring for other lifetime requirements to fulfill, such as financial needs and future family life [22]. The other side of possibility is that since expert teachers are officially selected to be skillful personnel in certain subjects it seems likely that the various responsibilities played by them such as they become a referral educator for that detailed subject, to conclude the intensities and limitations of the education system, to guide other colleagues and to become advisers in the topics they teach can lead to develop different levels of psychiatric disorders.

Several studies have demonstrated that smoking continues to be a vital problem in different health situations. Clinically it has been reported that smoking habits intensifies the risk of developing depressive symptoms [23]. In this study, we observed that smokers (male teachers only) showed significantly higher level of anxiety compared with non-smokers. Also, consistent with Al-Owesie et al [24] findings the joined teachers sample who being smoking dependent showed marked but insignificant higher levels of depression and stress compared to their non-smoking colleagues.

The present study reveals that there are considerable associations between those three considered psychiatric disorders investigated. Several reports have indicated that a workload demand is involved in induction of psychiatric properties [22]. Indeed, since increasing demand for work to be completed within a limited time and since time is a major factor contributing to finish up the syllabus, it is probably that workload/and time constraints

were important factors stimulating DAS symptoms among the participated teachers [22].

The present study has numerous limitations that could be counted during elucidation of this study outcome. First, since the study sample was booked only from Tripoli education area, so the obtained results are difficulty generalized over all Libyan school teachers. Second, although a direct contact with the participants was the set of rules used, however, it cannot be totally excluded that inaccurate answers might be created. The third limitation is that the other non-job related issues such as financial factors; personal emotions, social and health were not evaluated which, might be the main influential factors towards psychiatric symptoms among school teachers. Fourth, the study failed to evaluate the effect of those sense of excitement on the teaching career. Fifth, the possibility of the recall potential bias cannot be entirely eradicated since all the characteristics of the job situation such as working hours and working position were not taken in account. Finally, the survey was achieved by subjects from a single employment rather than evaluating and comparing different work-related categories. However, the upshots of the present appraisal give information regarding the extent of the problem among school teachers. The DASS-21 evaluation technique used in this study, although it is not meant for diagnosis of the categorical concept of psychological disorders, it did direct toward a need to explore the causal

reasons leading to these sense. In addition, the participated teachers demonstrated wide-range discrepancy from numerous traditions and also recorded acceptable response rate. Therefore, the greatest notable findings may represent critical knowledge regarding teachers' sense, and initiate a fundamental future research in this matter.

In conclusion, our study shows that the existence of depression, anxiety and stress among primary and secondary school teachers are excessive and are higher than that observed in other studies carried out at Taiwan[18], Saudi Arabia [6] and Malaysia [22]. So, it is important to recognize altitudes of depression and anxiety among school teachers to help them maximize their enhancements in rehabilitation and psychological well-being. Therefore the present study recommended and stressed that: (1) further studies are necessary on a much larger scale to sight-see the source of those troubles. (2) Factors that may influence teachers' impression and attitude should be itemized. (3) Valuable instructions that may support teachers to control their act and prevent negative effects, throughout well-organized social strategies, must be informed.

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دراسة مستعرضة لمعرفة مدى انتشار الشعور بالاكتئاب والقلق والتوتر بين معلمي المدارس الليبية في المرحلتين الابتدائية والثانوية

يوسف المدني الطاهر¹، عواطف صمود²، مسرة الهاشمي¹، نيروز الخبولي¹

¹ قسم الصيدلة، جامعة طرابلس، ليبيا.

² قسم التكنولوجيا الطبية، جامعة طرابلس، ليبيا.

ملخص

يتطلب تحقيق الأداء الأكاديمي العالي توافر الظروف النفسية الجيدة. فقد أفادت الدراسات السابقة أن الاكتئاب والقلق والتوتر هي مشكلة نفسية شائعة الانتشار. استهدفت هذه الدراسة معرفة مدى انتشار هذه الأعراض النفسية بين معلمي المدارس الابتدائية والثانوية. أجرى الباحثون دراسة مستعرضة لجمع البيانات باستخدام مقياس DAS في مدارس مختلفة في مدينة طرابلس/ ليبيا خلال الفترة ما بين يوليو – أكتوبر لسنة 2014 . شملت هذه الدراسة 200 معلم ما بين ذكور وإناث يتوزعون على فئات اجتماعية وديموغرافية مختلفة. كان متوسط أعمار الفئة المستهدفة 8.5 ±38.71 سنة، وكان متوسط الخبرة التدريسية لهذه الفئة 0.9 ± 13.95 سنة. من ضمن 21 عنصرا داخل محتوى الاستبيان اتضح للباحثين أن 44.5% من المعلمين يشكون من الإحساس بالكآبة، 56% يشكون من الإحساس بالقلق، بينما 39% وصفوا بأن مزاجهم متوتر. كان العنصر الأكثر شيوعا للاكتئاب هو "شعرت بالحزن والغم" بنسبة 64%، للقلق "كنت خائفا من مواقف قد أفقد فيها السيطرة على أعصابي وأسبب إحراجا لنفسي" بنسبة 60.5%، بينما العنصر الأكثر انتشارا للتوتر هو "شعرت بأنني أستهلك الكثير من قدرتي على تحمل التوتر العصبي" بنسبة 78.5%. اتضح أيضا بأن الزيادة في شرب القهوة والشاي أو تعاطي التدخين كان أكثر ارتباطا بهذه الأعراض، بينما الزيادة في الخبرة التدريسية بين المعلمات الإناث ارتبط بأقل الأعراض.

في المجمل 27.5% من المعلمين أفادوا بعدم وجود أعراض نفسية، 22% ذكروا على الأقل وجود عارض واحد، 27% ذكروا وجود عارضين، بينما 23.5% أفادوا بوجود أعراض الكآبة والقلق والتوتر مجتمعة. إحصائيا كان هناك ارتباط واضح ما بين هذه الأعراض النفسية. خلاصة هذه الدراسة أكدت أن المعلمين الليبيين بالمدارس الابتدائية والثانوية يمرون بأعراض نفسية أكثر من غيرهم عند مقارنتهم بدراسات في عدة دول أخرى وبالتالي قد تؤثر هذه العراض بصورة سلبية على الأداء الأكاديمي لهذه الفئة.

الكلمات الدالة: الشعور بالاكتئاب، القلق، التوتر، معلمي المدارس، ليبيا.