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RESEARCH ARTICLE

THE RELATION OF HUMOR TO DEPRESSION AND PERSONALITY

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Key words:-

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Abstract

Background: Depression is a common illness in the world. Humor plays an important role in mental health filed as a coping mechanism. Different personality variables seem to be factors associated with depression. Therefore, in this study, we aimed to study the relationship among different personalities and coping humor which may lead to identified associated depression

Methodology: An online website of the questionnaires was created for data collection using three scales combined: Coping humor scale (CHS), Zung depression scale, Eysenck's Personality Inventory (EPI) which was conducted on a convenience sample population of at least 200 college students' participants from King Faisal University. After conducting the research, the data was collected, analyzed and processed in tables using the appropriate statistical measurements, in return the results were given and concluded.

Results: We collected data from 502 participants with mean age 23.6 ± 3.5 years old and 74.3 % of participants were females. The mean scores of CHS, depression scales, extraversion/introversion and Neuroticism/emotional stability were 20.27 (out of 28), 44.42 (out of 80), 18.27 (out of 24), and 10.99 (out of 24). There is a significant negative correlation between coping humor scale and depression scale ($P=0.00$).

Conclusion: There is a significant negative correlation between depression and coping of humor among students in Al Alahsa, Saudi Arabia. Moreover, extraverted participants and emotional stable participants were associated with higher usage of humor to cope and less level of depression.

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Introduction:-

More than 300 million people had been affected by common illness like depression. Depression is not like the usual mood fluctuations and short-lived emotional responses to challenges in everyday life. Depression could become a serious health condition, especially when long-lasting. Although depression can effectively be treated, less than half of those affected in the world (in many countries, less than 10%) get such treatments. The burden of depression is increasing globally [1]. This figure is even higher for certain populations, such as college students. In 2009, a nationwide survey of college students from 2- and 4-year institutions done by the American College Health Association-National College Health Assessment (ACHA-NCHA)— found that nearly 30 percent of college students reported feeling “so depressed that it was difficult to function” at some time in the past year [2]. Because of the prevalence of this disorder, depression has received wide- spread research attention. One area, though, which has

not received considerable attention is the relationship between humor and depression. Humor is known to be an indicator of mental health (Olson, 1976) [3]. Historically, humor has played an important role in the mental health field[4]. The fact that one usually feels better when one laughs suggests therapeutic properties [5]. Furthermore, humor has been supported for the emotionally therapeutic value as a coping mechanism and as a defense against depression [6]. A study which directly examined the relationship between humor and depression was conducted by Nussbaum and Michaux (1963). In which they observed 18 female inpatients diagnosed with clinical depressive disorder, which showed a positive correlation of humor with improved clinical rating in depressed patient. The results indicated that the humor response can be used as a predictor and evaluator of change in depressed patients [7]. Eysenck and Eysenck (1968) have done a research on the personality variables extraversion-introversion and neuroticism-emotional stability [8]. Extraversion describes the behavior of an individual who tends to be "outgoing, impulsive, and uninhibited, having many social contacts and frequently taking part in group activities" [9]. The introvert, on the other hand, is described as "a quiet, retiring sort of person, introspective" (Eysenck & Eysenck, 1968, p. 6). Neuroticism refers to emotional over responsiveness and over reactivity [9]. Stability refers to the behavior of an individual who is emotionally stable and is able to return to a normal state after emotional experiences. During several studies, Eysenck and Eysenck (1968) administered their inventory to college students, normal people with various occupations, and clinically diagnosed individuals. Analysis indicated that depressed individuals scored higher on the neurotic and introversion scales than all the normal individuals. These personality variables seem to be factors associated with depression⁹. There appears the need for research focusing on the identification of personality variables and coping strategies which may offer an important information in further clarifying factors associated with depression. The present research is to study the relationship among different personalities and coping strategies which may lead to identified associated depression.

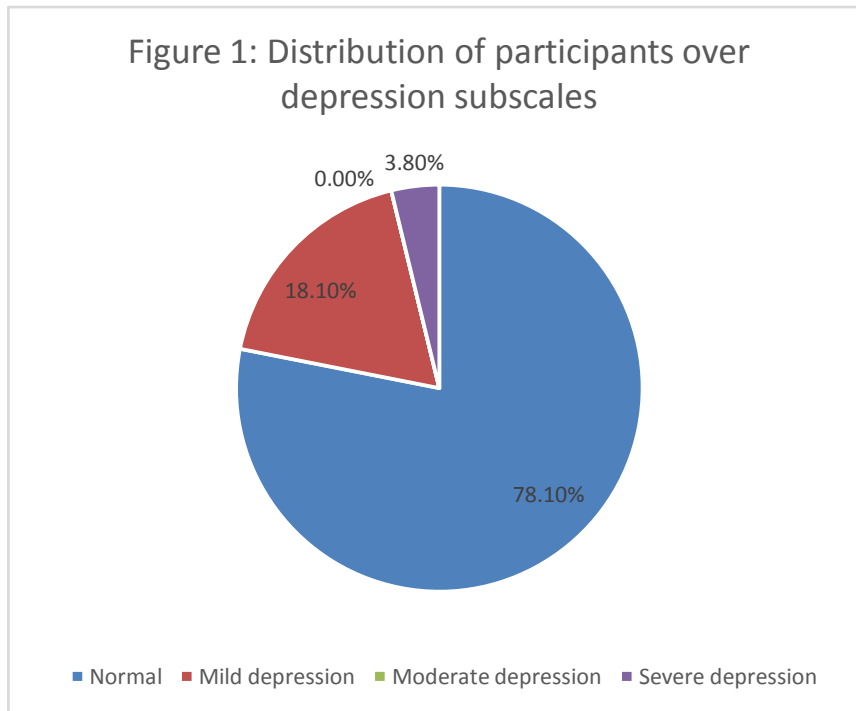
Methodology:-

A cross- section study was carried out by using an online questionnaire, collected from different college students from Alahsa, Saudi Arabia. A convenience sample technique(at least 200) was used for data collection, college students from King Faisal University were participating using an online questionnaire. The participant who would not complete answering all the questionnaires was excluded. An online website of the questionnaires was created for data collection using three scales combined: coping humor scale (CHS) [10], developed by Rod A. Martin & Herbert M. Lefcourt, 7 item version. Zung depression scale [11], developed by Duke University psychiatrist William W.K. Zung MD, 20 item version. Eysenck's Personality Inventory (EPI) [9], developed by the psychologists Hans Jürgen Eysenck and Sybil B. G. Eysenck, 57 item version. The study was carried out after the approval from King Faisal University, College of medicine. The data which was collected was kept confidentially without disclosure of any names of the participants, instead they were saved by numbers and stored in a database. After collecting data, MS Excel was used for data entry while SPSS for statistics package was used for data analysis. According to each scale, data was coded into number and total scores of each scale was assess. Frequency and percent were used for describing categorical variables as age, gender and marital status while mean and standard deviation was used for describing continuous data. ANOVA test was used to assess the relation between different demographic factors and scores of each scales and Pearson correlation test was used to assess the correlation between scores of different tools variables.

Results:-

Table 1:- Demographic factors of participants (N=502).

		Count	Column N %
College	Health college	467	93.0%
	Non-health college	35	7.0%
Age	<25	348	69.3%
	>25	154	30.7%
Gender	Male	129	25.7%
	Female	373	74.3%
Maritalstate	Single	335	66.7%
	Married	160	31.9%
	Divorced	7	1.4%



In this study, we collected data from 502 participants with mean age 23.6 ± 3.5 years old. Moreover, 74.3 % of participants were females while 66.7 % were single and 31.9 % were married. In addition, 93 % of participants indicated that they were in health colleges and 7 % were in non-health colleges (Table 1).

In Table 2, we described the general mean scores of different used categories including Coping humor scale, Zung depression scale and Eysenck's Personality Inventory represented in two scales of extraversion/introversion and Neuroticism/emotional stability which were 20.27 (out of 28), 44.42 (out of 80), 18.27 (out of 24), and 10.99 (out of 24). Moreover, we found that 78.1 % of participants did not have depression while 18.1 % of them had mild depression and 3.8 % had severe depression (Figure 1). Considering personality, we found that 93.2 % of participants were extraverted and 56.8 % were emotionally stable. Colleges of students significantly affect level of depression among students where students of non-health colleges seem to have higher score of Zung-depression scale score mean having higher level of depression ($P=0.000$). Moreover, participants with age younger than 25 years old seems to have a significantly higher level of coping humor, lower level of depression and higher Extraversion-Introversion. Furthermore, males have a significant higher score of coping humor (21.17 vs 19.95) and lower level of depression (43.6 vs 44.7) with no difference on personality. Marital status of participants has significant effect on both coping humor and depression level where divorced participants had the highest coping humor scores and lower depression score in contrast to married participants (Table 2).

Table 2:- The relationship between demographic factors of participants and scores of main variables.

		CHS score		Zung depression scale Score		Extraversion-Introversion		Neuroticism-Emotional Stability	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
Total sample		20.27	3.32	44.42	8.15	18.27	4.01	10.99	4.4
College	Health college	20.24	3.24	43.95	7.29	18.19	4.07	11.00	4.25
	Non health college	20.60	4.34	50.71	14.37	19.37	3.88	10.91	6.20
	P-Value	0.539		0.000*		0.098		0.914	
Age	<25	20.46	3.50	43.29	6.96	18.63	4.01	11.05	4.60

	>25	17.82	2.84	46.93	8.59	17.48	4.08	11.86	3.93
	P-Value	0.047*		0.038*		0.003*		0.664	
Gender	Male	21.17	3.08	43.61	6.72	18.36	3.90	10.95	4.32
	Female	19.95	3.35	44.70	8.58	18.25	4.12	11.01	4.44
	P-Value	0.00*		0.191		0.791		0.890	
Marital state	Single	20.33	3.60	46.31	8.97	18.36	4.08	11.16	4.62
	Married	20.04	2.68	44.59	6.32	17.93	4.05	11.61	3.95
	Divorced	22.29	1.89	42.14	2.27	21.86	.38	11.21	3.35
	P-Value	0.000*		0.000*		0.001*		0.914*	

According to table 3, we found that individuals who scored lower on the depression inventory tended to score higher on the Coping Humor Scale. There is a significant negative correlation between coping humor scale and depression scale ($P=0.00$). Moreover, we found some significant relationships regarding the personality of dimensions. We found that individuals who scored higher scores on extraversion tended to score higher on coping humor scales with positive significant correlation where extraverted individuals tended to use humor more as a coping defense than introverted participants. On the other hand, using coping humor is negatively correlated with emotional stability of participants ($P=0.00$). Furthermore, we found that introverted participants have higher depression score and severity level than extraverted participants while participants who were neuroticism have higher depression score compared with emotional stable participants.

Table 3:- Correlation between different variables in this study including coping humor scales, Zung depression scale and Extraversion-Introversion and Neuroticism-Emotional Stability.

		CHS score	Zung depression scale Score	Extraversion-Introversion	Neuroticism-Emotional Stability
CHS score	Pearson Correlation	1	-.519 ^{**}	.433 ^{**}	-.230 ^{**}
	Sig. (2-tailed)		.000	.000	.000
Zung depression scale Score	Pearson Correlation	-.519 ^{**}	1	-.368 ^{**}	.216 ^{**}
	Sig. (2-tailed)	.000		.000	.000
Extraversion-Introversion	Pearson Correlation	.433 ^{**}	-.368 ^{**}	1	-.173 ^{**}
	Sig. (2-tailed)	.000	.000		.000
Neuroticism-Emotional Stability	Pearson Correlation	-.230 ^{**}	.216 ^{**}	-.173 ^{**}	1
	Sig. (2-tailed)	.000	.000	.000	

** . Correlation is significant at the 0.01 level (2-tailed).

Discussion:-

The relation between depression, humor and personality had been discussed before in many pervious studies however, up to our knowledge, there is no studies dealing with this topic in Saudi Arabia and especially among students of Al Ahsa, Saudi Arabia. Another advantage of this study is the ability to collect a large sample size of more than 500 which is more higher than other studies [12–14]. In our study, the prevalence of depression was 21.9 % which is in consist with the prevalence reported by Amr. M [15] while it was higher than reported by El-Gilany AH in a study conducted in King Faisal University, Saudi Arabia which found that prevalence of depression was 16 % among medical students [16]. However, our prevalence was greatly lower than reported by Abdulghani H who reported that prevalence of depression among Saudi medical students was 57 % [17] and study of Alsalameh N who reported a prevalence of 85 % among medical students [18]. Different between studies in prevalence rate may be due to different tools used to assess the prevalence of depression as well as most of these studies conducted among special population. Moreover, our mean score of coping humor scale (CHS) is higher than other results in different countries as study of C Chen who found that that overall mean score of Coping humor for Chinese participants ($M:19.2, SD=3.18$) while mean score of coping humor in Canadian students was 19.8 ($SD=3.29$) [19], and study of S Deaner in which mean score of coping humor was 19.84 ($SD=3.55$) [20]. Moreover, we found that college of the students have a significant effect on their depression. We found that 17.1 % of non-medical students reported

symptoms of depression compared with 22.3 % of medical students however, students of non-medical colleges had more severe degree of depression meaning that medical students are generally more liable to be affected to depression while depressed non-medical students would have more severe degree of depression than medical students. This is disagreement with previous studies which indicated that medical students have 25 % higher depression rate than people in other specialties [21]. Moreover, we found that age of students had effect on their coping humor ability, developing depression and their personality. Older students have lower coping humor ability, higher degree of depression, were more introverts and more emotional stability than younger participants. This could be explained as older students have higher level of responsibilities than could make them stress and unable to cope humor. Other studies showed that depression symptoms unlike our results decreased by age explained that by increase confidence among older populations [22,23]. The impact on age on coping humor ability of our results was similar to reported results by study of A Menendez [24] and study of A Besser [12]. However, study of M Kfreer did not find any correlation between age and humor styles [14] which is similar to results of Martin [25]. Gender has only significant effect on coping humor as defending mechanism where male are more able to cope humor than females as male had a greater ability of finding joke in problem than females. Similar results reported by study of S Deaner [20].

Moreover, we found a significant negative correlation between depression and coping of humor where individual who was less depressed tended to use humor more as a coping mechanism. Similar results were reported by study of S Deaner [20] and study of M Kfrerer [14]. These results may suggest the two socially positive styles of humor serve as a protective factor against depression where individuals diagnosed with depression also tend to not use positive styles of humor as often as the nondepressed individuals. Using of positive styles of humor help individuals to have more social relation with others however as noted in Barrett and Barber study, depressed individuals surprisingly tended to be more nurturing turning them by time from making strong social connection to perceived social isolations [26].

The findings of the present study are consistent with previous research regarding the existence of a relationship between personality variables with humor and depression [12,13,20,27]. Extraverted participants were associated with higher usage of humor to cope with stressful events, and were more able to notice humorous situations than introverted participants while more emotional stable participants were associated with higher ability to cope humor, more able to notice humor in the environment, report more enjoyment of humor. Emotional stability appears to be strongly related to the humor construct. Moreover, it was found that there is a significant relation between personality variables and depression where introverted students tended to be more depressed than their extraverted peers. A person who was more neurotic tended to be more depressed.

This study had some limitations . The main limitation of this study is the depending on self-reported tool in diagnosis of depression. However, it is validated tool, there is a possibility that some participants were diagnosed as well, but did not report as such? Ideally independent verification of depression diagnoses should be obtained in future studies. Moreover, depending on self-reported questionnaire may cause some personal and memory bias where the questionnaire depended on recall of previous memory. Finally, the questionnaire was provided only in English version thus there is a risk that some students did not fully understand the used tools and could be the reason behind the domination of medical students over non-medical students who may not encourage to participate in a English questionnaire.

In conclusion, there is a significant negative correlation between depression and coping of humor among students in Al Alahsa, Saudi Arabia. Moreover, extraverted participants and emotional stable participants were associated with higher usage of humor to cope and less level of depression. Depression is a major health disorder and thus a rigorous research focusing on understanding depression, treatment techniques and more importantly prevention of depression should be conducted.

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