



CLINICAL ASSESSMENT OF DEPRESSION ON UNIVERSITY STUDENTS

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Abstract:

The purpose of the present study is to evaluate the depression of university students and to investigate statistically predictive factors of depression types. In Greece, the University is the beginning of a new life for all young people who enter adulthood from adolescence and when it is one of life's greatest goals, it often produces symptoms of stress and depression. Students have difficulty organizing and managing their work, setting goals and identifying priorities, working in groups, stressing public speaking, and experiencing emotional disturbances. So, we administered the Beck Depression Inventory (BDI) scale to 101 students at the University of Patras in Greece. The BDI measures the cognitive, behavioural, and physical manifestations of one's depression (and severity of depression) over the last week and includes 21 questions, ranging from 0-3, and depending on the overall score, 1) the depression is interpreted as normal 2) as a mild mood disorder, 3) as marginal clinical depression, 4) as moderate depression, 5) as severe depression and 6) as extreme depression. In this study, we separated our dataset into the above six depression categories and applied linear regression to predict the

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category Depression from the rest of the questionnaire variables. According to the results, we achieved a total prediction of 98% of the dataset that calculates the Regression equation.

Keywords: students, clinical assessment, depression, depression types, Beck Depression Inventory (BDI)

1. Introduction

Depression in children and adolescents has emerged as a major mental health problem in our time, with the average age of onset of depression having decreased (Abela & Hankin, 2008). It is estimated that by the age of 14, around 9% of young people will experience a severe episode of depression (Rudolf & Klein, 2009). Early onset of depression is significantly correlated with adulthood maintenance and appears to be associated with a number of mental and physical problems, as well as difficulties in the daily functioning of adults as adults (Harrington, Rutter & Frombonne, 1996).

Depression is defined as a transient mood or emotional state, as a symptom syndrome or a clinical disorder, based on DSM5 (American Psychiatric Association, 2013). Depression is a disorder that affects mood, thoughts and is usually accompanied by physical discomfort. It affects a person's eating habits, his sleep, the way he sees himself and the way he thinks and perceives. Depression is not the same as a normal, depressing feeling that passes quickly and is less intense. In depression, the feeling of depression is very intense, lasts longer and leads to a decrease in functionality in many areas of life.

The etiology of depression in children and adolescents is multifactorial and relates to individual characteristics (biological genetic factors and idiosyncratic and psychological characteristics), family function, social environment, and cultural context. These factors interact with children's developmental pathways and their frame of reference.

Students seem to experience depressive symptoms at some point during their studies as they deal with stressful situations such as stress of separation from family, stress of coursework and assessment, management of their interpersonal relationships and their social environment. They thus cause negative reactions from others, interpersonal tension, and conflicts. They often say that they are less socially adequate, they cannot easily make friends and are constantly seeking confirmation that they are worth it (American Psychiatric Association, 2013).

Throughout their studies, students follow a process of acquiring identity, socializing, integrating into professional life, renegotiating relationships and conflicting with ideologies and standards (Bayram & Bilgel, 2008; Clara, 1998; Giotakos, 2006; Efthimiou, Efstathiou, & Kalantzi-Azizi, 2007; Kalantzi-Azizi, Karadimas & Sotiropoulou, 2001; Skapetorachi, 2002). In other words, young people of this age are in a transitional phase in their development towards autonomy and maturity, the so-called

emerging adulthood (Arnett, 2000). This period is associated with developmental challenges, difficult in some cases.

Depression in students often has a high comorbidity with other mental disorders such as anxiety and obsessive-compulsive disorder. Both community and clinical studies indicate that early onset of depression is associated with continued onset in adulthood, especially when it is in adolescence and not in childhood (Harrington et al., 1990).

2. Types of Depression

The four main forms of mood disorders are major depressive episode (depressed mood or complete lack of pleasure in all activities for at least two weeks or irritability instead of depressed mood in younger children and adolescents), or irritability for a week, with indications such as excessive self-esteem, limited need for sleep, excessive activity or talk, etc., the mixed episode of sudden and frequent alternating between depressed mood or irritability and euphoria for at least a week and hypomanic episode presence elation, euphoria or irritability for at least four days (American Psychiatric Association, 2013; Bayram & Bilgel, 2008).

In our study, we focus on the evaluation of depressive disorders in the form of persistent depressive experiences, which are mainly distinguished by major depressive disorder with one or more depressive episodes and in disorder characterized by melancholic or fallen mood for at least one year.

2.1 Symptoms of Depression

Depression occurs with different symptoms that affect many areas of a person's life. The severity of the symptoms varies from person to person, but also varies by person over time. Specifically, the main symptoms people can deal with when they are depressed are mood swings that last most of the day and almost every day for a period of two weeks. The person does not have the pleasure of doing things in the past. He feels anxious in the form of internal distress, fear and a sense of imminent danger. She has trouble sleeping, either experiencing insomnia or sleeping for many hours. Depression usually results in the loss of appetite, which can lead to weight loss while the opposite symptom can be observed at a lower frequency, i.e. increased appetite for eating and weight gain, as well as bulimic episodes of overeating.

Often a person complains that he is tired or exhausted, as if all his energy or vitality has disappeared. He can remain inactive for the whole day. The individual observes a decline in sexuality, impatience, despair, anxiety and pessimism about the future. He sees things black and thinks they will get worse. The individual also has difficulty concentrating, having trouble thinking, remembering, and making decisions. The person with depression may have feelings and thoughts of guilt and low self-esteem. He may also have thoughts of death and suicidal ideation. In people with severe depression, the risk of suicide is particularly high (Efthimiou, Mavroides, Pavlatou & Kalantzis-Azizi, 2006).

2.2 Causes of Depression

Depression can be considered as the ultimate common result of many factors that interact with each person's temperament. Some of the main factors that are considered to be causes of depression are genetic factors, biological factors. It has been found that some diseases may be responsible for the onset of depression. These diseases act on the central nervous system and affect the function of the brain regions that regulate emotion. Such diseases of the central nervous system as Parkinson's disease, multiple sclerosis, stroke, endocrine and metabolic diseases such as hypothyroidism, certain forms of cancer (e.g. pancreatic) and various drugs. Other factors considered to be the cause of depression are psychosocial factors. Negative life events, such as the death of a loved one, the breakup of a personal relationship, unemployment and financial difficulties, combined with their inability to cope, increase the risk of depression. Thus, the individual has formed a negative view of the self, the world and the future (Kalantzi-Azizi, Karadimas & Sotiropoulou, 2001).

According to Beck's theory, the way a depressed person perceives and treats the world around him is characterized by negative thoughts and negative conclusions about his life and himself, others, and the future. Specifically, from the point of view of negative self-esteem, the individual sees himself as inadequate, inappropriate, useless, and unwanted. In the context of the negative view of the world, the individual views his environment as particularly demanding and prohibitive in his individual pursuits and considers it rejected. He believes that the world has no meaning and cannot derive any pleasure or satisfaction from it (Efthimiou, Mavroides, Pavlatou & Kalantzis-Azizi, 2006).

3. Research Findings on Depression in Students

Epidemiological surveys do not clearly show the prevalence rates of psychopathology in students, as the rates range from 6% to 25% (Giotakos, 2006; Efthimiou, Efstathiou, & Kalantzi-Azizi, 2007). However, an important finding is that 75% of people with anxiety disorder experience it during college and that the most common reason for referral to student counseling centers is anxiety (47.7% of referrals) (Clara, 1998; Vitasari, Wahab, Othman & Awang, 2010). More specifically, epidemiological studies show that half of American students suffer from a psychiatric disorder, with the third most common mental health problem being anxiety disorders (10% -12%), with double rates of alcohol dependency compared to general health. Nevertheless, less than 20% of them receive some form of support from specialized services (Blanco et al., 2008; Hunt & Eisenberg, 2010; Oliver & Burkham, 1979).

The Jadoon et al. (2010) study was conducted at Nishtar Medical College, Multan in 2008. The questionnaire was conducted on 815 medical students who had spent more than 6 months in college and reported no physical illness. The incidence of anxiety and depression was assessed using a structured validated questionnaire. A high prevalence of anxiety and depression (43.89%) was found among medical students. The incidence of anxiety and depression among first, second, third, fourth and last year students were 45.86%, 52.58%, 47.14%, 28.75% and 45.10% respectively. The results showed that medical

students are a vulnerable group with a high prevalence of psychiatric morbidity that includes anxiety and depression (Hammen, 1980; Jadoon et al., 2010).

4. Our Research – Results

We administered the Beck Depression Scale (BDI) on web-base line to 101 students at the University of Patras in Greece. The study was approved by the University of Patras Bioethics Committee; the questionnaire is weighted in the Greek population (Mackenzie et al., 2011) and has been used in several research studies (Donias & Demertzis, 1983; Tselebis et al. 2006). The BDI (Depression Depression Inventory) scale was developed by A.T. Beck designed to measure the cognitive, behavioral, and physical manifestations of a person's depression (and the severity of depression) in the last week. The BDI scale contains 21 questions, ranging from 0-3. The overall score ranges from 0 to 63. It demonstrates sufficient validity and satisfactory reliability (Cronbach's a: 0.84).

For statistical analysis we used SPSS 23. According to the descriptive statistics in Table 1 and Figure 1, we can observe that out of 101 students, 17 (16.8%) students belong to Depression category 1 (Depression with normal range), 20 students belong to Depression class 2 (mild mood disorder), 14 (13.9%) students belong to Depression class 3 (marginal clinical depression), 20 (19.8%) students belong to Depression class 4 (moderate depression), 13(%) students belong to Depression class 5 (severe depression) and 17 (16.8%) students belong to the depression category 6 (clinical depression).

Table 1. Descriptive Statistics of Depression Categories

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	17	16,8	16,8	16,8
	2	20	19,8	19,8	36,6
	3	14	13,9	13,9	50,5
	4	20	19,8	19,8	70,3
	5	13	12,9	12,9	83,2
	6	17	16,8	16,8	100,0
	Total	101	100,0	100,0	

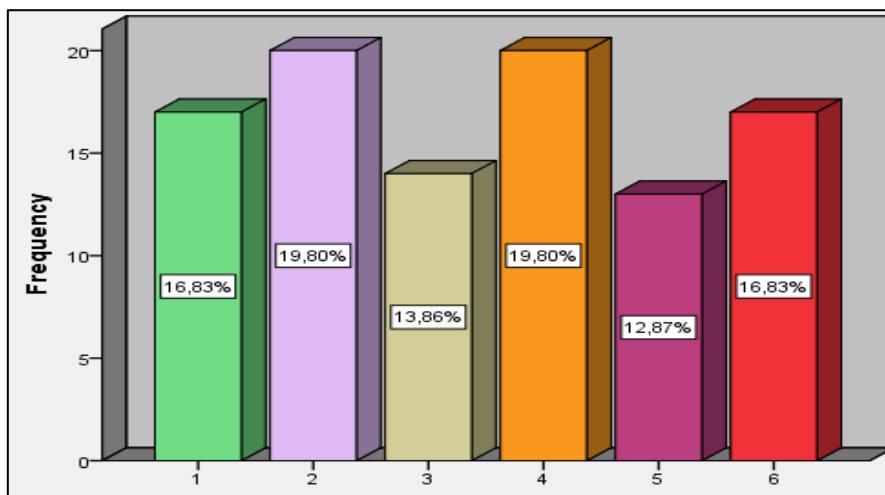


Figure 1: Bar chart of Depression Categories

In order to predict the Depression category as dependent variable from the rest of independent variables, we applied Linear Regression procedure with Stepwise method. During the Linear Regression, nine models were examined while the best overall model fit was model_9 which was able to explain the 98% of the dataset (R Square = 0.98) (Table 2).

Table 2: Linear Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig. F Change
1	,871 ^a	,758	,756	,849	,000
2	,948 ^b	,899	,897	,550	,000
3	,971 ^c	,942	,941	,419	,000
4	,977 ^d	,955	,953	,373	,000
5	,981 ^e	,963	,961	,341	,000
6	,984 ^f	,969	,967	,312	,000
7	,987 ^g	,974	,972	,287	,000
8	,989 ^h	,978	,976	,265	,000
9	,990 ⁱ	,980	,978	,255	,006

In Table 3, we can observe the regression equation and Model's_9 significant predictors. According to model_9, the significant predictors of Depression category are (Table 3): Loss of libido (Beta = 0.257, p <.001), Failure of feeling (Beta = 0.230, p <.001), Irritability (Beta = 0.071, p <.05), Hypotension (Beta = 0.136, p <.001), Easy-fatigue (Beta = 0.149, p <.001), Indecision (Beta = 0.197, p <.001), Feeling guilty (Beta = 0.124, p <.001), Satisfaction (Beta = 0.105, p <.001), Weight loss (Beta = 0.102, p <.05). According to Table 3 resulting the below Regression equation (equation 1) that can predict the Depression category (dependent variable) from the above independent variables.

$$\text{Depression category} = 0.742 + 0.389 * \text{Loss_of_libido} + 0.421 * \text{Feeling_fail} + 0.171 * \text{Irritability} + 0.289 * \text{Hypothetical_hassles} + 0.288 * \text{Easy tired} + 0.340 * \text{Indecision} + 0.256 * \text{Feeling guilty} + 0.175 * \text{Feeling satisfied} + 0.194 * \text{Weight loss} \text{ (Equation 1)}$$

Table 3: Linear Regression Coefficients, Dependent Variable Depression

Model	Unstandardized Coefficients		Standardized Coefficients	.t	Sig
	B	Std. Error	Beta		
(Constant)	,742	,060		12,466	,000
Loss of libido	,389	,061	,257	6,415	,000
Feeling fail	,421	,052	,230	8,114	,000
Irritability	,171	,071	,071	2,408	,018
Hypothetical_hassles	,289	,043	,136	6,768	,000
Easy tired	,288	,051	,149	5,617	,000
Indecision	,340	,051	,197	6,661	,000
Feeling guilty	,256	,068	,124	3,740	,000
Feeling satisfied	,175	,036	,105	4,867	,000
Weight loss	,194	,069	,102	2,817	,006

5. Conclusions – suggestions

The purpose of the present study is to evaluate the depression of university students and to investigate statistically predictive factors of depression types. Depression is one of the most well-known, most painful and serious mental disorders. It is one of the major mental health problems of students and one of the main causes of delay in their studies.

The problem is that many students are left undiagnosed and, in some cases, misdiagnosed, as sometimes it is a depressive transient mood. High levels of depression in the student population underline the need for proper assessment and timely intervention to ensure the quality of life of students and their academic performance. Adequate structures need to be created to take care of students during this critical transition period in their lives.

In this research we implemented statistical analysis applying Linear Regression with Stepwise method in order to predict at which Depression category every student belong (mild mood disorder, moderate depression, severe depression, clinical depression) and which variables of our dataset are affecting the Depression. The Regression results showed that we can predict at about 98% (R Square=0.98) percentage in which Depression category every student belong calculating the Regression equation 1. According to Linear Regression results, the significant predictors of Depression category are Loss of libido, Failure of feeling, Irritability, Hypotension, Easy-fatigue, Indecision, Feeling guilty, Satisfaction and Weight loss. If the fear of failure is too great, it may disrupt the student's studies more or less in advance. Instead of focusing on one's studies, one's thoughts are monopolized by all that can go wrong with them, thus increasing the fear of failure.

Having in mind that the above situations emerge in a period of developmental challenges for the students (emerging adulthood), we realize the catalytic role of the university context in supporting them during this difficult time. Therefore, the necessity of creating successful learning conditions that take into account the emotional factors is decisive within university, if we aim to help young adults achieve their learning goals and address their fears.

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