



Detecting the Cause of Depression using BECK Depression Scale among Patients

Jaya Gawai^{1*}, Pooja Kasturkar¹ and Trupti Uke¹

¹*Department of Mental Health Nursing, Smt. Radhikabai Meghe Memorial College of Nursing, Datta Meghe Institute of Medical Sciences (Deemed to be University), Sawangi (Meghe), Wardha, India.*

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Background: The onset of Depression is a cause of concern. And various factors have been found to spark off this psychological set back among different groups of people.

Aim: This investigation aims to identify various trigger factors causing depression. BECK Depression scale will be the reference to gauge the intensity of depression among psychiatric patients at selected Health care institutions.

Objectives: Identifying and determining the type of trigger factors of depression.

Materials and Methods: Research design: Descriptive and evaluator approximation. Data Collection would be based on 'BECK' depression scale, translated in the vernacular language (Marathi) for its utility.

Sampling Technique: Purposive, of the size: 100 participants attending psychiatric OPD primarily diagnosed with depression.

Results: Cause factors of depression include: 1) Family history of mental illness, 2) emotional setback: Death or job lay-off, 3) discriminatory and sexual harassment at work place, 4) Chronic medical challenges and 5) Prolonged drug abuse in the view of physical infirmity. Most of the victims evaluated revealed stress in the background, developed pessimistic approach and un-conivial relationship among family members.

Conclusion: Chronic infirmity requiring, prolonged medical attention, lack of facilities, cost of the treatment, negligence, are the significant factors affecting the Indian rural community.

Keywords: Depression; BECK depression scale; triggers; factors; suicidal ideation; violence.

1. INTRODUCTION

The mental health has remained a challenge as the world has entered the twenty first century. 'Global burden' has been the term used for a major chunk of the population suffering Depression. Several factors have been identified as the cause of this major disorder. The more the problems, the more the remedies evolve. Spiritual counseling is more in demand, with concepts adding protective features. The health care sector, otherwise unnoticed, may specifically find the nurses as the prime victims suffering depression. Occupational stress [1], has been the culprit whereas the work pattern or the academic environment are yet to be identified as the spark-offs for depression [2]

Anxiety and depression [3] are the twin sisters found in such patients. Inference drawn through TSII revealed a variance of 68.75%. Cronbach's α and intraclass correlation coefficient of 0.70 and 0.99, has proved an excellent tool to identify triggers of suicidal ideation [4]. Sexual dysfunction [5] has not yet been proven the cause of depression, though. Monroe and Hadjiyannakis have stated that serious stress and diathesis are responsible for the onset of depression. The pattern of the relationship between life events and specific depression subtypes is still under consideration in some studies [6].

Women in general are found to be the victims of depression, anxiety, suicidal behavior, and ideation mostly due to discrimination, harassment ending with domestic violence [7].

Socio-economically challenged community have reported acute emotional stress and observed to be more vulnerable to subsequent depression and anxiety related coronary syndrome [8].

SNS Hyperactivity seemed to be the cause of depression in patients with systemic lupus erythematosus. Some showed uncoupling of the sympathetic nervous system and hypothalamic–pituitary–adrenal axis; higher salivary α -amylase. Cortisol levels as compared with NCs were found non variant [9].

Suicidal attempts were noted among people with symptoms of depression. Females compared to their male compatriots were more susceptible to such steps [10]. The younger generation seemed to be grossly affected leading to suicidal

tendencies severe than that in adult population as reported in some studies [11].

Common ailments like headache, migraine and tension type pain in head have been the factors triggering depression. Family history of migraine and related depression is yet to be considered in relation to the migraine due to stress and anxiety. A common analgesic as paracetamol has been assorted for all types of headaches. The prevalence of depression among student specifically the medical branch has been significant of the late. Complains of headaches and migraine has been on drastic rise [12]. Depression in subsequent stages of cancer is yet to be deliberated as many cases remain under diagnosed and under treated [13].

However, there exists a close relationship among healthy people and presence of Latent trigger points leading to depression [14].

2. RESEARCH METHODOLOGY

Research approach: Descriptive approach.

Material: BECK depression scale.

Sampling criteria: patients referred to the psychiatric OPD.

Sampling procedure: Purposive sampling, Sample size: 100.

Inclusion criteria: Both male and female were included.

Exclusion criteria: Illiterate and non-vernacular population, reporting at the psychiatric outpatient department.

3. RESULTS

The Table 1 reveals that 4% of them were from the age group of 18-30 yrs, 42 % of them were from the age group of 31-45 yrs, 25 % of them were from the age group of 46-60 yrs, 29 % of them were from the age group >60 yrs. And 38% of them were males and 62 % of them were females. 30% of them were residing in urban areas, 65% of them were residing in rural areas and 5% of them were residing in semi urban areas. 11 % of them were having single family, 67% of them were living in a joint family, 18% of

them were living as a nuclear family structure, and 4% of them were having extended family structure. Socio-economic status of Psychiatric patients admitted and attending psychiatric OPD: 31% of them were earning 5000-10000 ₹ per month, 18% of them were earning 10001-12000 ₹ per month, 15% of them were earning 12001-14000 ₹/per month and 36% of them were earning 14001-16000 ₹ and none of them were having >16000 ₹/ per month. 11% of them

unmarried, 78% of them were married, 1% are divorcees, and 7% separated from their husbands, 3% were widows. 25% of them were laborers, 35% of them were farmers, 23% of them were employed with the Government, and 9% of them employed in Private sector, 8% of them were self-employed. 92% of them belong to Hindu religion, 2% of belong to Muslim community and 6% of followed Buddhism.

Table 1. Proportionate distribution of patients in relation to the demographic characteristics (n =100)

Demographic Variables	Frequency	Percentage (%)
Age in years		
18-30 yrs	4	4
31-45 yrs	42	42
46-60 yrs	25	25
>60 yrs	29	29
Gender		
Male	38	38
Female	62	62
Residence		
Urban	30	30
Rural	65	65
Semi Urban	5	5
Family Structure		
Single	11	11
Joint	67	67
Nuclear	18	18
Extended	4	4
Socio-economic status/per month(Rupees)		
5000-10000	31	31
10001-12000	18	18
12001-14000	15	15
14001-16000	36	36
>16000	0	0
Marital Status		
Single	11	11
Married	78	78
Divorced	1	1
Separated	7	7
Widow	3	3
Occupation		
Laborer	25	25
Agriculture	35	35
Government	23	23
Private	9	9
Self Employed	8	8
Religion		
Hindu	92	92
Muslim	2	2
Christian	0	0
Buddhist	6	6
Others	0	0

The figure in Table 2 reveals various triggers of depression, 10% confirmed the family history of mental illness, 13% declared the loss of loved one in the family, 1% had lost once a regular employment, 38% Complained of work place harassment, 15% suffering from chronic diseases like diabetes, hypertension and cancer, 21% were chronic drug abusers, 86% found stress in the environment, 86% were in convivial relationship in the family and 14% were in non – convivial relationship with the family members, 81% showed positive attitude whereas 19% were

pessimistic and introvert,82% showed self-respect and 18% were found with self – Deprecation.

The Table 3 reveals the level of depression (according to BECK depression inventory), is 2%of them considered normal, 16% showed mild mood disturbance, 11%had borderline clinical depression, 56% showed moderate depression, 15% reported with severe depression. Extreme depression was not detected during the course of this study.

Table 2. Triggers of depression (n=100)

Triggers of depression	Frequency	Percentage
Family history of Mental illness in the past and present		
Yes	10	10
No	90	90
Loss in the family(person)		
Yes	13	13
No	87	87
Loss of job		
Yes	1	1
No	99	99
Work place harassment		
Yes	38	38
No	62	62
Chronic health problems		
Yes	15	15
No	85	85
Taking drug for long time (Physical illness)		
Yes	21	21
No	79	79
Stress in the environment		
Yes	86	86
No	14	14
Inter personal relationships in the family		
Good	86	86
Bad	14	14
Attitude towards self		
Positive	81	81
Negative	19	19
Respect towards self		
Yes	82	82
No	18	18

Table 3. Level of depression by using BECK depression inventory (n=100)

Beck depression inventory	Frequency	Percentage
These ups and downs are considered normal (1-10)	2	2
Mild mood disturbance (11-16)	16	16
Borderline clinical depression (17-20)	11	11
Moderate depression (21-30)	56	56
Severe depression (31-40)	15	15
Extreme depression (>40)	0	0
Total	100	100

4. DISCUSSION

Infertility among women has been an alarming cause of anxiety and depression. Negative attitude of the spouses, in – laws and the social groups are seen as the trigger for such state. Yet these women are noted recovering through their depression with age [15]. Third wave CBT interventions have proved more promising in treating depression and is suggested to be implemented in the clinical practice with adequate development of clinical guidelines [16].

Cognitive behavioral therapy approach in Nurse-led interventions, (Lamers 2010; Lee 2015) pose to have more potential in eliminating depressive symptoms with qualitative improvement in modified life style [17]. Thus identifying the obstacles and rendering to specified treatment consorted for such patients (Maurer 2008)

Evidences suggest generated cognitive behavior therapy remains most effective in children and adolescents with mild symptoms of depression, but treatment for anxiety is yet to be established [18].

Certain studies show that the onset of depression is often related to the inability to attain optimal academic performance. Social abstinence, substance abuse, has often lead to attempt and more often complete suicides among students. Another study has reported augmented threat of later depression with substance abuse, suicidal behaviors, and mortality [19]. Patients with psoriasis are concerned about their physical appearance, and their complexes with the normal have resulted in high levels of anxiety and depression [20]. Depression and anxiety is often predominant in patients with end-stage of kidney diseases [21]. Musculoskeletal trauma is also considered as a predictive factor triggering symptoms of depression [22].

The influence on superiority of life in patients with Parkinson's disease cannot go unnoticed. This has a negative impact with visible effects of depression and anxiety. Both anxiety and depression are independent of sociodemographic characteristics, patient's comorbidities, or antiparkinsonian treatments; present as intrinsic symptoms in PD [23] Smartphone addiction is another triggering factor for depression and traits of anxiety among University students is alarming [24]. Type D

personality could be absolutely connected with barrenness, especially in young adult women [25].

The children from low socioeconomic backgrounds and adolescent with chronic renal failure showed predictive recurrent depression and conduct problems. Psychiatric treatment is suggested for such offspring's and youths. This will encourage enhanced bodily doings, mainly in offspring through low SES [26] Depression is more evident among refugees due to imposed psycho – social pressures, instability and insecurities in a foreign land [27].

Loneliness and despair levels among college students are equal in occurrences. Demographic variables like education level, type of family, region of hometown, parent's education level, and financial conditions are important indicators triggering loneliness and despair. Health Care nursing professionals from Psychiatric health school can prove to be helpful in rehabilitation center for such students. Here the student will therefore be able to express his / her psychological problems and get professional help in changing the set of behaviors and lifestyles [28].

Evidences shows, lower levels of educational status, are prone to a primary start of ailment. Poor social support, high perceived stress, high seizure frequency, and poly-therapy constraints are the factors statistically associated with depression. This demands early detection and expert diagnosis and treatment thereof by a trained health professional [29].

Other triggers are workplace bullying. Dejection and reckless behavior on part of the superior or colleague can lead to depression. A timely social support can prove a defending aspect against such dejection and maltreatment to save the victim from a certain doom [30].

Hopelessness is seen imperative and is a disease allied with stroke that effects the regaining. Though a posing threat such frequent drives go unobserved are imperfectly treated [31]. People with prolonged disorder or other corporal well-being situations are at a higher risk, than other people with developing depressive modes. This is generally seen affecting the quality of life in such victims. Depression is characterized often by symptoms such as inappropriate mood, desperation, denunciation and loss of curiosity in things once considered as

pleasure or hobby. Other symptoms include sleep disturbances. Prolonged physical disabilities may also develop depression to the extent of vulnerability, and at times may prove difficult for a complete recovery. Preventing depression in people with these kinds of disorders and other corporal well-being should remain a priority towards a strategic health care restoration plan [32].

Mostly women from the North Pole latitudes are plagued with seasonal affective disorders due to limited sunlight. People in this region suffer fatigue. They mostly consume more carbohydrates and show a dejected mood. These seasonal affective disorders precipitate in depression and is seen in the drastic change in their daily routine for most of them. Come winter two-thirds of this population experience depressing symptoms every year [33]. Chronic Obstructive Pulmonary Disease remaining neglected or ignored is seen leading to depression among the collective disorders reported with these natives. The life span of these people is often altered and most of them are found seeking repeated admission to the hospital for the treatment for COPD. In most of the cases the treatment plan is modified and antidepressants are added along with psychosocial therapies [34].

Sudden Heart failure is a serious health problem and has become more evident in the present generation. Depression has proved to be fatal in heart conditions. Studies show repeated episodes of depression induce cardiac problems as a result of abnormal patho-physiological functioning of the heart. Thrombogenesis or ventricular arrhythmias are seen associated with such conditions. Depression leads to a poor compliance with medications and an inappropriate lifestyle, increases the likelihood of recurrent cardiac events and eventually leading to death [35].

Factors that are responsible for the depression are essentially Psychosocial and environmental based. Problems in marriage, unsupportive society, low socio-economic status, residing in the suburban area, structure of the village and psychosocial stress are main triggers for the onset of depression [36].

We find most of the cancer patients more depressed and the episodes occur frequently as the disease progresses. This is often related to the severity and thereof exaggerated fear of the

disease. Such patients need urgent attention and adequate treatment as soon as possible [37].

Post natal Depression that occurs after six weeks of delivery is associated with changeover to motherhood. This causes potential stress and sensitive disturbances among such women. These women are to be prepared during the antenatal period itself to counter the depressive moods [38].

It is a common coincidence to find major depression disorder associated with alcohol dependence. Weight loss or excessive weight gain, excessive sleep disorders, agitated or retarded psychomotor activities, fatigue, guilt, worthlessness, unfocussedness, induced self-harm, are the features of depression in such patients [39].

Comprehensive Mental Health Action Plan 2013-2020 stated by the World Health Organization carries a report of 300 million people across the Globe affected by depression and is one of the largest concerns, particularly as mostly women are found to be the worst affected [40].

A man in a longer run will always run into depression, when experiencing a difficult break up. He may end up with increased feelings of anxiety and negative thoughts leading to self-isolation in an unaddressed scenario for a longer period of time [41].

Drug interaction has been a concern of the late. Anti-anxiety and acne drugs have been the cause of influencing depression among geriatric population. Steroids and anti-cholinergic drugs consumed together also change the mood of the people. Antihypertensive drugs like beta blockers induce depression [42].

According to an epidemiological study it is found that women are more exposed to post traumatic disorder and stress than men. The recent evidence indicates the during the ongoing COVID 19 pandemic, women are suffering from anxiety, depression and stress more than in men specifically in the age group of 21-40 years. The women are more affected by job related problems, lack of financial support and business closures. Social media is seen of provoking stress among the women.

The COVID-19 pandemic has rendered all the socio – economic activities to a standstill. The educated lot has been confined to work from

home routine. Lack of physical and social activities has triggered anxiety, depression, and stress. Evidences show reciprocal changes in levels of stress and depression related to education. A Study in China has indicated that higher the level of education higher the incidences of mental symptoms. Increased awareness has lead people to remain preoccupied with their own consciousness about health and wellbeing. Anxiety related to the COVID 19 affected family member remains exponential related to the level of awareness.

Recent studies have reported a close association between medical history and increased anxiety leading to depression caused by the COVID-19 spread [36]. Some research work has shown individuals with medical problems and longtime illnesses, of having greater association with psychiatric illnesses in addition to disease of pandemic [43].

Uncertainty prevails during home quarantine, lockdown leads to closed educational institutions, affecting the student's academic and professional career, impacting the mental health of the students. The ongoing COVID-19 pandemic has disturbed the people's life giving rise to mental health problems all over the world. Anxiety, depression, stress, sleep disorder as well as fear, among the people, have ultimately augmented the substance abuse and more often suicidal behavior because of helplessness. Researchers in China observed, misinformation by the social media is further increasing anxiety and depression among general population [44].

Depressed participants have experienced lack of appetite and higher cortisol levels than other subjects. Their cortisol values correlated are inversely to their ventral striatal response to food cues. In contrast, depressed participants who experienced increased appetite exhibited marked immunometabolic dysregulation, with higher insulin, insulin resistance, leptin, C - reactive protein (CRP), interleukin 1 receptor antagonist (IL-1RA), and IL-6, and lower ghrelin than subjects in other groups, and the magnitude of their insulin resistance correlated positively with the insula response to food cues [45]. Interesting studies related to depression were reported by Jonas et al. [46], Kale et al. [47], Behere et al. [48], Ransingh et al. [49], Mishra et al. [50-52].

5. CONCLUSION

Depression is always associated with other medical infirmities and other factors that

influence an individual's life time. Exposed to a long term stress can also be among the factors, but healthy individuals cope up with it to some extent. Therefore interventional studies are required to prevent from being affected by depression.

ETHICAL APPROVAL AND CONSENT

Institutional Ethical committee of Datta Meghe Institute of Medical Sciences (Deemed to be University), has approved this study. A written and attested consent for the study is taken from each participant.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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