**CHAPTER ONE**

**INTRODUCTION**

* 1. **Background of the Study**

Depression is a common mental disorder, characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness, and poor concentration. It affects approximately 350 Million people worldwide. Various factors including but not limited to physical, mental, social, biological causes, may lead to Depression. Depression may manifest in one of the many types such as Major Depression, Bipolar or Seasonal Depression, to name a few. Depression diagnosis is not easy due to the fact that there are no direct physical and /or pathological indicators. A lot depends on the question-answer type diagnosis by the doctor. While there are multiple channels (like support forums, counselors, guide websites, etc.) which provide online support for patients in terms of guidelines to identify depression symptoms and look for possible remedies, while all these has its upsides the downside to that is that most of this forums are not very affordable as the charges are usually exorbitant, the ones that are free are not private and the forums are usually made up of non professional counselors.

In this research we are proposing a web based expert system for depression management, the system will be able to diagnose the different kinds of depression cases and proffer possible solution on how to manage the situation.

* 1. **Problem Statement**

Depression cases are increasing on a daily bases, students doing poorly in school, increased suicide rate, and many advanced mental degradations that arises from undiagnosed cases of depression are on the rise and yet very little is being done to tackle the situation,

And since most people do not have time to check on their mental health because of other priorities and feeling worried that others will think they need to be confined in an asylum, aside issues that borders on time, Nigerians are yet to embrace the culture of going for routine mental health checkup or any form of health checkup as it were.

In light of these it is obvious that traditional method of diagnosing and managing depression may not solve the problem of depression in this part of the world. Hence the need for a web based depression management system.

* 1. **Aim and Objectives**

The aim of the study is to assemble a knowledge base, that is common to the diagnosis and management of most depression symptoms, and then develops an online system that will help users to test for depressive disorder.

The objectives of this study are to develop a system:-

1. That a user can interact with to identify the type of depression he/she is diagnosed with, if any.
2. That a user can interact with to determine the severity of the user’s condition.
3. That will provide a simple user interface.
   1. **Significance of the study**

This will help to educate the public on the dangers of depression and will also provide a platform for quick diagnosis and possible treatments. It is worthy of note that if the society does not start thinking in this line of providing a web based depression management system then we will continue to experience an increase of the many manifestation of depression in the form of suicides, lack of motivation, other associated degrading mental ailment and so on

* 1. **Scope of the study**

The research study will focus on the following areas

* The proposed system can determine the forms of depression disorder, bipolar Disorder, and post Natal Depression.
* The proposed system can determine the degree of depression such as mild, moderate and severe.
* The proposed system can provide brief but effective treatment. These include behavioral inspiration, guided self-management, and treatment monitoring
  1. **Limitations of the study**

The proposed system has the following limitations:

* The proposed system cannot advice any medical prescriptions
* The proposed system cannot give treatment for severe conditions

In addition to the above mentioned limitations the proposed system cannot contain all it is suppose to because of the following constraints:

* **TIME FACTOR: -** The aim that is given for the research on this study is very limited making it impossible to go further into the research.
* **UNAVAILABILITY OF THE NEEDED INFORMATION: -** Seeing that only a few depression therapists are available and easily accessible in this country, it was difficult for me to get much informant for the work.
* **LIMITED RESOURCES: - Because** of the cost in transportation and other financial demands, it was not possible to get all the information needed for an elaborate work.
  1. **DEFINITION OF TERMS**
* DEPRESSION

Depression, in psychology, is a mood or emotional state that is marked by feelings of low self-worth or guilt and a reduced ability to enjoy life.

* EXPERT

And expert is one who is extraordinarily capable or knowledgeable in a particular field of study

* SYSTEM

A collection of organised things

* EXPERT SYSTEM

According to Daniel L. Stotink and his friends in a book “computer and applications an introduction to data processing” expert system is also a knowledge based system. It is a complex software (program), designed to imitate the thought processes and decision making patterns of human experts in a given field. The expert system is an off-spring of artificial intelligence (AI) and it is developed using the programming techniques of A1. When the expert knowledge of human being in a domain of activity is stored in the computer, such that the computer repository of this expert knowledge in some way, reaching the same conclusion as the expect himself and efficiently replacing him, an expert system or knowledge based system results.

* KNOWLEDGE – BASE

A repository in a computer of an expert’s knowledge in a given domain.

* DOMAIN EXPERT

It is not easy to effectively replace the human being with just one expert system rather; a piece meal approach is used in which an expert system is instrumental for a narrow domain to mimic the human being in one activity at a time.

* REASONING BY INDUCTION

If in an expert system past conditions and corresponding decisions reached are stored such that where a new condition arises. The computer tries to match it with one of the previous condition, the approach is known as reasoning by induction.

* HEURISTIC

In general, the experience a human being acquires in any area of human endeavour is often in the form of rules of thumb which the human experts falls upon when confronted with a new but related situation. Such rules of thumb are known as heuristic in artificial intelligence terminology.

* INFERENCE ENGINE

The knowledge of an expert can be represented as a set of rules that allows the computer to make human like decisions on the subject. In other words, knowledge – base can actually be in the form of rules and not only in the form of tables of information which can also be used as alternative approach. The computer program written to shift through the set of rules representing human expert knowledge so as to reach a decision on the current situation can be referred to as inference mechanism or inference engine.

REFERENCES

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