

Application of Applied Behavior Analysis To Mental Health Issues

Dr. Prem Chander¹, R.Anusha², V.Vyshnavi³, Y.Akhila Reddy⁴

1(Information Technology, Malla Reddy Engineering College For Women(UGCAutonomous), and Maisammaguda,Hyd-500100,Telangana,India.

2 (Information Technology, Malla Reddy Engineering College For Women(UGCAutonomous), and Maisammaguda,Hyd-500100,Telangana,India.)

3 (Information Technology, Malla Reddy Engineering College For Women(UGCAutonomous), and Maisammaguda,Hyd-500100,Telangana,India.)

4 (Information Technology, Malla Reddy Engineering College For Women(UGC-Autonomous), and Maisammaguda,Hyd-500100,Telangana,India.)

ABSTRACT: The field of applied behavior analysis (ABA) has increasingly come to be associated with the treatment of autism in young children. This phenomenon is largely the result of empirical research demonstrating effective treatment outcomes in this population. The same cannot be said with regard to the treatment of conditions often referred to as emotional or psychological problems. The current article describes the philosophical and descriptive differences that likely account for the lack of application of ABA in these areas and proposes potential solutions to help ABA practitioners more effectively address these issues. Specifically, the issue of how to objectively describe these “conditions” needs to be addressed so that careful study of treatment effects can occur in a manner similar to the way that brought ABA to prominence in autism treatment.

INTRODUCTION:

The etiology of mental illness is believed to be a complex interaction between genetics, physiology, neurobiology, and environmental factors that lead to psychological, physiological, and/or behavioral changes. When these deviations differ significantly from societal norms and interfere with one's ability to function in daily life, the person may be diagnosed with a mental disorder (American Psychiatric Association, 2000). Often a licensed physician, psychiatrist, or psychologist assesses an individual, diagnoses a mental disorder, and then designates a treatment plan for that individual. Although an interdisciplinary approach, wherein

representatives from various disciplines such as medicine, psychiatry, clinical psychology, neuroscience, education, social work, and behavior analysis convene to devise a treatment plan would be preferable, the logistics and resources required limit this practice to select clinical facilities. We posit that behavior analysis, which includes refined techniques for teaching and motivating adaptive behavior, should be an integral part of a multidisciplinary approach to mental health services. Combining technologies derived from behavior analysis and other disciplines could broaden our understanding of mental disorders, expand the range of available interventions, and improve

therapeutic outcomes and client satisfaction.

This article briefly examines early applied behavior analysis (ABA) research with mental disorders, the development of functional behavior assessment and functional analysis of behavior problems, potential contributions of ABA to multidisciplinary mental health services, and recent ABA studies with mental disorders in children and adults. While covering these topics, the present article highlights some of ABA's technological developments within mental health services and special challenges it has faced. The treatment of individuals with mental illness changed dramatically during the 20th century as custodial arrangements progressed to a mix of educative and therapeutic programs within mental hospitals, outpatient clinics, and community-based facilities (Braddock & Parish, 2002). The use of psychosurgery and electroconvulsive shock therapy decreased as pharmacology became the treatment of choice for many mental health impairments (Braddock & Parish, 2002; Wong, 2006).

RELATED WORK:

IN "SENSING BEHAVIORAL SYMPTOMS OF MENTAL HEALTH AND DELIVERING PERSONALIZED INTERVENTIONS USING MOBILE TECHNOLOGIES"

Unlike most other health conditions, the treatment of mental illness relies on subjective measurement. In addition, the criteria for diagnosing mental illnesses are based on broad categories of symptoms that do not account for individual deviations from these criteria. The increasing availability of personal digital devices, such as smartphones that are equipped with sensors, offers a

new opportunity to continuously and passively measure human behavior in situ. This promises to lead to more precise assessment of human behavior and ultimately individual mental health. More refined modeling of individual mental health and a consideration of individual context, assessed through continuous monitoring, opens the way for more precise and personalized digital interventions that may help increase the number of positive clinical outcomes in mental healthcare. In this paper, we provide a conceptual review of such techniques for measuring, modeling, and treating mental illness and maintaining mental health. Over the last 10 years, technology has become more proximal to human activity. As more and more people adopt today's technology, healthcare involving technology in some respect is becoming increasingly acceptable. Ownership of smartphones is especially prevalent among underserved minority groups: 47% of black non-Hispanics and 49% of Hispanics own smart phones, compared to 42% of non-Hispanic whites (Pew Research Center, 2013). From the perspective of mental healthcare, mobile technology appears to be a feasible medium for delivering care; for example, a recent community-based survey of over 1,500 people with serious mental illnesses found that over 80% of patients with bipolar disorder (BD) owned and used mobile phones regularly for calling, texting, and the internet (Ben-Zeev, Davis, Kaiser, Krzsos, & Drake, 2013). The evolution and rapid dissemination of mobile and sensor technology has created unprecedented opportunities for

personalized data collection in an extremely granular, unobtrusive, and even affordable way.

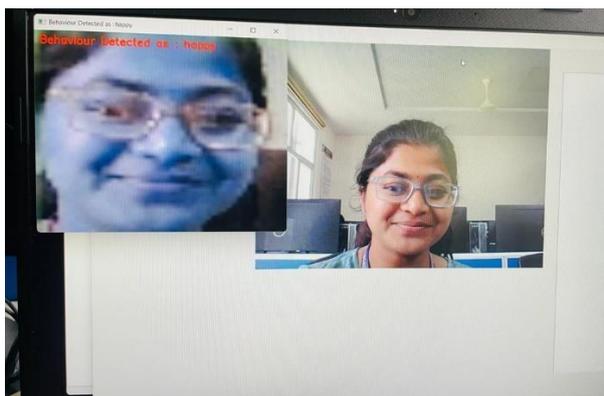
As a result, there has been a recent and significant increase in research to identify novel methods to measure, understand, and treat mental illness (and improve mental well-being). However, in

PROPOSED SYSTEM:

In this project student want to detect people's mental behaviour by analysing there's emotions and to implement this project we have used Facial Expression dataset and SVM machine learning algorithm. SVM is trained with facial expression dataset and then SVM trained model can be used to detect human mental behaviour. To implement this project we have designed following modules

- 1) Webcam connection: using this module application will be connected to live webcam
- 2) Load & Preprocess Dataset: using this module application read all dataset images from numpy array and then normalize and extract features from images.
- 3) Train SVM Algorithm: Extracted features will be used to train SVM algorithm

RESULT:



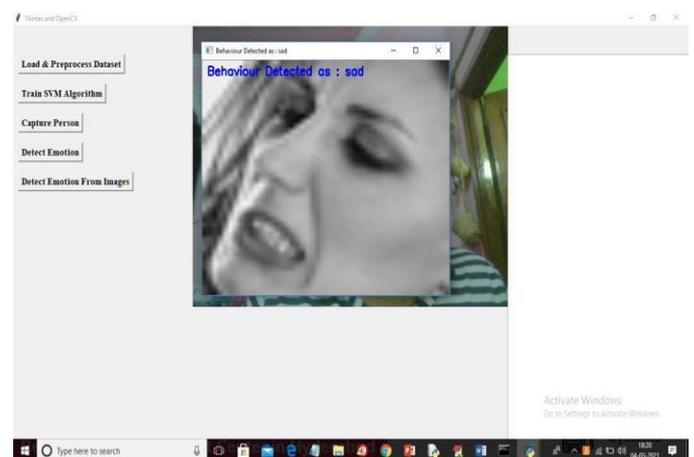
terms of day-to-day clinical practice technological approaches for measuring and treating mental illness are far behind developments in general health. This shortcoming is particularly important given that the accurate understanding of daily behavior is central to mental health and wellness assessment.

- 4) Capture Person: using this module we will capture person image and then detect face from that image

Detect Emotion: This module will take detected face as input and then by using SVM algorithm will predict person mental behaviour as SAD, HAPPY, NEUTRAL, ANGRY etc

ADVANTAGES OF PROPOSED SYSTEM:

- It is important to determine the onset of the mental illness to maintain proper life balance.
- It will benefit the society by serving as a monitoring tool for individuals with deviant behavior.
- It presents an analysis of applying certain algorithms on people and also suggests directions for future work.



CONCLUSION:

Although ABA is best known for its achievements in the habilitation of persons with developmental disabilities, this approach has a long history in the treatment of severe mental disorders. Some of the first published examples of ABA were studies

that increased appropriate behavior or reduced aberrant behavior of chronic mental patients in psychiatric hospitals. In recent years, ABA interventions for severe mental disorders have grown to include refined functional analyses of problem behavior as well as sophisticated verbal and self-instructional techniques (e.g., habit reversal, acceptance and commitment therapy). Refinement of assessment techniques are intended to rectify the treatment failures, lack of generalization, and poor maintenance sometimes associated with earlier behavioral interventions. Given the extensive history of successful contingency management programs for severe mental disorders and other myriad behavioral problems, it would be prudent to provide this as a treatment component and a foundation for other interventions. Some advantages of contingency management programs are that they make clear, explicit expectations of appropriate client conduct (essential for both client instructional and staff management purposes) and they provide positive reinforcement to strengthen and maintain desired client behavior. Considering the developments in functional analysis and functional assessment, it also would be wise to thoroughly investigate the function of problem behavior before attempting to eliminate it.

REFERENCES:

- [1] Twitter Depression tweets Prediction Analysis: The Good the Bad and the OMG! By Efthymios Kouloumpis, Theresa Wilson, Johanna Moore [2011]
- [2] Depression tweets Prediction Analysis of Twitter Data by Apoorv Agarwal, Boyi Xie, Ilia Vovsha, Owen Rambow and Rebecca Passonneau [2011]
- [3] Modeling and Representing Negation in Data-driven Machine Learning- based Depression tweets Prediction Analysis by Robert Remus [2015]
- [4] Depression tweets Prediction Analysis of Twitter Data Using Machine Learning Approaches and Semantic Analysis by Geetika Gautam [2015]
- [5] A Framework for Fast-Feedback Opinion Mining on Twitter Data Streams by Lokmanyathilak Govindan Sankar Selvan and Teng-Sheng Moh [2015]
- [6] Depression tweets Prediction Analysis on Twitter by Akshi Kumar and Teeja Mary Sebastian [2012]
- [7] Depression tweets Prediction Analysis on Twitter through Topic-based Lexicon Expansion by Zhixin Zhou, Xiuzhen Zhang, and Mark Sanderson [2014]
- [8] Serendio: Simple and Practical lexicon based approach to Depression tweets Prediction Analysis by Prabu Palanisamy, Vineet Yadav and Harsha Elchuri [2018]
- [9] Depression Detection on Social Media Network (Twitter) using Sentiment Analysis ;Prof. S. J. Pachouly¹, Gargee Raut², Kshama Bute³, Rushikesh Tambe⁴, Shruti Bhavsar⁵ [2021]