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Mass Media Target Audience and Mental Illness Stigmatization among Students of Kenya Medical Training College

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ABSTRACT

Mass media plays a fundamental role in influencing the society and their perceptions in daily life. The target audience by the media determines the how they frame their message and the subject matter that they focus on in their discussions. As mental illness is becoming one of the contemporary issues in the modern society, the role of mass media particularly how they define their target audience is not adequately explored. This is despite mental illness continuing to ravage the society, especially with the increased stigmatization. This study therefore sought to examine the how mass media target audience impact mental illness stigmatization in among students in Kenya Medical Training College. The study was anchored on the cognitive dissonance theory. Using a descriptive research approach, the study through a questionnaire surveyed 384 students drawn from a population of 51045 students at the college. The data was analysed using descriptive and inferential statistics through SPSS. The findings revealed that mass media target audience through the reduced dissonance, acquisition of new information and cognitive actions significantly impacted the mental illness stigmatization. Through the beliefs towards the mentally ill persons as projected by the mass media to their target audience, the stigmatization of mentally ill persons either increased or decreased depending on the approach used by the mass media. The study concluded that mass media target audience was instrumental in determining the level of stigmatization of the mentally ill persons. It is therefore recommended that the mass media should define their target audience in a manner that positively changes their perceptions towards mental illness.

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1. INTRODUCTION

Mass media content can have a significant influence on the stigmatization of mental illness. Portrayals of mental illness in media often rely on stereotypes, such as the "crazy" or "dangerous" person, which can reinforce negative attitudes and beliefs about mental illness in society[1]–[3]. This, in turn, can contribute to discrimination, prejudice, and marginalization of individuals with mental illness. Media also tends to sensationalize or exaggerate stories about mental illness, particularly in the context of violent crimes. This can lead to the false belief that mental illness is a direct cause of violent behavior, when in reality, the vast majority of people with mental illness are not violent. Moreover, media depictions of mental illness can also affect individuals' own perceptions of their mental health. For instance, if someone sees a portrayal of a person with a mental illness as being weak or unable to function in society, they may feel shame or reluctance to seek help for their own mental [4], [5]. However, it's important to note that media can also be a powerful tool in reducing stigma and promoting understanding of [6]–[8].

According to [9], accurate and sensitive portrayals of mental illness in media can help to educate the public and combat negative stereotypes. Positive media portrayals of people with mental illness can also provide role models for those struggling with mental

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health issues and help to promote self-acceptance and empowerment. According to [10], the influence of mass media content on mental illness stigmatization can be both positive and negative, depending on how mental illness is portrayed. It's important for media outlets to be aware of the impact of their content and strive for accuracy, sensitivity, and inclusivity in their depictions of mental illness[6].

Seen as both reflecting and shaping public discourse, analysis of news media coverage is considered critical in assessing the national dialogue around issues facing the society such as mental illness[8], [11]. In India, as well as in the United States of America and the United Kingdom, there is a growing trend of utilizing modern media technologies (such as smartphones, tablets, laptops, and desktops) to a greater extent. This includes the frequent engagement in activities like texting, emailing, blogging, and accessing social networking platforms (such as Facebook, Twitter, WhatsApp, Instagram, etc.). These technologies serve purposes ranging from business interactions and entertainment to maintaining connections with family and friends. Moreover, within these nations, individuals are concurrently seeking information about both local and global events from more traditional forms of mass media (like television, newspapers, magazines, books, movies, and radio)[10].

Mental illness is presently responsible for 12% of the global disease burden and is estimated to surpass 15% by the end of 2020. Accounting for one-third of disability adjusted life years (DALY), mental illness is a prominent cause of disability globally, and, therefore, has become a key public health concern [12]. The diagnosis of a mental illness among a family member places on the concerned family a big financial, psychological and social burden, and ultimately impacts on the family's quality of life significantly.

The financial and social distress caused by mental illnesses and the attached stigma, beliefs, and stereotypes continue to afflict countless individuals. As of 2010, mental and substance use disorders made up 10.4% of the global disease burden and stood as the primary contributor to years lived with disability across all categories of ailments [13], [14]. While these repercussions affect society as a whole, their impact is particularly evident in terms of economic ramifications. Accurately quantifying these costs is intricate and challenging due to incomplete data. Nonetheless, current estimates indicate that the worldwide economic burden resulting from mental illnesses stands at 1.6 trillion pounds or 2.5 trillion U.S. dollars. This surpasses the economic burdens of individual conditions such as cardiovascular diseases, chronic respiratory diseases, cancer, and diabetes [15].

In Kenya, a total of 1.9 million mental illness cases were reported in 2018 with the World Health Organization Annual Report (2017) indicating that the number of people with mental illnesses has increased by 18% from 2005. A report by the Kenya National Commission on Human Rights (KNCHR), 2011 denoted that up to 25% and 40% of outpatients and in-patients respectively visiting healthcare facilities suffer from mental illnesses. Five years later, in 2016, the Kenya Mental Health Policy (2015-2030) report indicates that nothing has changed. The report further says that mental illness cases may have risen exponentially in Kenya with estimates highlighting that 20-25 percent of outpatients seeking primary healthcare present symptoms of mental illness at any one time. Furthermore [16] stressed that the probable prevalence of the condition in Kenya is at an average of 1% of the populace with insufficient qualified medical personnel and facilities to take care of this rising population of patients.

Mental illness and associated stigmatization also affect medical students, who have been shown to have high levels of psychological distress, including self-stigmatization and unwillingness to seek care [17]. Medical students face numerous challenges such as financial constraints, academic targets, performance pressure, and competition from fellow peers, concerns about the future as well as societal expectations from parents, guardians or even members of faculty which can have negative impact on their (student's) ability to study and academic outcomes [18], [19]. Such conditions later lead to mental illnesses but students rarely try to find help for their problems[17], [20].

Mass media is an instrumental mode of communication that plays a significant role in influencing behavior and attitude[9], [21], [22]. One of the key aspects of mass media is their target audience, whom defines the type of information and content the mass media will relay. The programming, language and information that mass media transmit depends on what their audience expect[23], [24]. Key social aspects and issues such as stigmatization are strongly driven by the mass media audience, which is the information shared by the mass media outlets out of the influence and preferences by their target audience[25], [26]. On the other hand, one of the contemporary issues that the modern society is facing is mental illness. As stated by the World Health Organization (WHO) in 2016, more than 14% of the total burden of diseases worldwide can be attributed to mental disorders. Conversely, Global Mental Health (GMH) in 2019 highlighted that a significant proportion—over 31%—of individuals dealing with mental health issues globally were students attending colleges and other institutions of higher learning.

Within Kenya, the prevalence of mental disorders among college students was reported to be above 10.8%. These findings underscore the widespread nature of mental health concerns among students, particularly those in college, on a global scale, with Kenya also being affected by this trend. While there have been efforts to enhance mental treatment and reduce extreme cases, one issue that stands out to derail all the efforts is stigmatization of the mentally ill persons[27]. According to[6], stigmatization of the mentally ill persons has seen most mentally ill persons become worse and fail to recover, implying that it

becomes the stumbling block in the entire process of treatment[18]. While mass media audience has been known to influence the topics and scope of discussions in mass media thus shaping and influencing behavior and attitudes, there lacks adequate empirical evidence to show how mess media audience has contributed to or eradicated stigmatization among mentally ill persons. Moreover, studies have focused on contexts of the general society, with minimal attention given to enclosed societies such as the colleges where evidence shows that stigmatization is at the highest [28]; World Federation for Mental Health – WFMH, 2018). This motivated this study, therefore; hence, it sought to examine the extent to which mass media audience influenced stigmatization of mentally ill persons among college students at the Kenyan Medical Training College (KMTC).

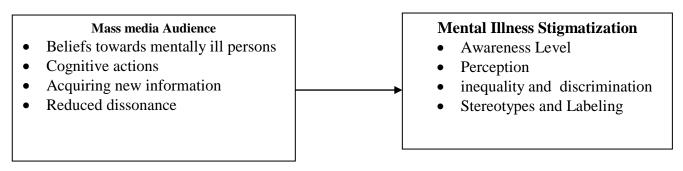
The investigation was guided by the principles of cognitive dissonance theory, initially formulated by Leon Festinger in 1957. This theory posits that individuals strive for internal psychological harmony to effectively navigate the real world. When confronted with internal inconsistencies, a person tends to experience psychological discomfort, motivating them to alleviate this cognitive dissonance. They achieve this by modifying their perceptions to align with the dissonant behavior, either by introducing new elements to their thoughts causing the dissonance or by avoiding situations and contradictory information that could exacerbate this mental conflict. In practical terms, people mitigate cognitive dissonance using four strategies: altering behavior or cognition, rationalizing behavior or cognition, changing conflicting cognitions, or justifying behavior or cognition by introducing new ideas while disregarding or rejecting conflicting information[29]–[31]

One advantageous aspect of the Cognitive Dissonance theory is its capacity to address more than two cognitions simultaneously. Additionally, it acknowledges that certain cognitions hold greater significance than others, impacting the degree of dissonance experienced. In particular, the theory predicts that dissonance level hinges on two factors: (1) the proportion of conflicting and consonant cognitions, and (2) the significance of these cognitions[32].

However, there exist several limitations within the theory. For instance, the theory fails to predict how inconsistencies in beliefs can be effectively diminished, which is crucial for managing resistant behaviors. It also neglects individual differences, hindering the theory's broad applicability. Lastly, it overlooks the impact of the persuasive message's nature, which can lead to diverse outcomes. Given these shortcomings, further insights are needed to comprehensively elucidate the psychological journey individuals undergo when confronted with organizational changes and how this might trigger resistant reactions.

The Cognitive Dissonance theory therefore supports the independent variable on mass media audiences. The theory tries to explain how individuals' psychological discomfort towards mental illness is brought about by experiences of internal inconsistencies. The theory shows how experiences of internal inconsistencies motivates them to reduce the cognitive dissonance by making changes to validate the stressful behavior and conform to group norms and collective meaning of mental illness, either by adding new parts to the cognition causing the psychological dissonance, or by actively avoiding social situations and contradictory information likely to increase the magnitude of the cognitive dissonance.

1.1 Conceptual Framework



Independent Variables

Dependent Variable

Figure 1: Conceptual Framework

1.2 Mass Media Audience and Mental Health Stigmatization

In the research conducted by [33], an exploration of literature regarding media portrayal of mental illnesses and media framing revealed a consistent use of negative frames in media representation, contributing to the emergence and persistence of negative attitudes in the public towards individuals with mental illnesses. The study recommended a comprehensive analysis of how media frames function, their structures, and elements employed to depict mental illnesses. Additionally, the study suggested conducting experiments to manipulate mental illness frames and observe their effects on media consumers, aiming to gain insights

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into specific reactions towards these frames. Another study conducted by [34] investigated the influence of watching a movie centered around schizophrenia on the stigma-related attitudes of rehabilitation science students who would eventually work with affected individuals. However, this study found no significant differences in stigmatization levels between those who watched the movie and those who did not.

In a broader context, media still predominantly portrays mental illnesses in a negative light, contributing to the sustained stigmatization of mental health conditions among their intended audience .further emphasizes that discussions about mental illnesses in direct-to-consumer advertisements and social media tend to be more balanced and informative, potentially enhancing mental health literacy and reducing stigma. Notably, research underscores the potential effectiveness of entertainment-education programs and online media in diminishing the stigma associated with mental illnesses among the intended audience.

Another study by [35] engaged in a content analysis to examine discourses related to depression on the Chinese social media platform Sina Weibo, as propagated by public opinion leaders and mainstream media. The study revealed that when opinion leaders presented individuals with depression using stereotypes, it often led to an increase in stigmatization or a decrease in support for those experiencing depression within their follower base.

2. RESEARCH METHOD

The research employed a descriptive survey research design, which involves clarifying a phenomenon, estimating the proportion of a population with similar attributes, and establishing the relationships between the variables being studied[36]. The study focused on the students and administrative staff within the Kenyan Medical Training College (KMTC) as its target population. To ensure practicality and accurate representation of the respondents' characteristics, the study concentrated on campuses with more than 1000 students as of July 2022, as specified by KMTC.

The sample size was determined through the application of the [10] and Cochran (1977) formulas, which are specifically designed for extensive populations. According to Fisher's guidelines, populations exceeding 10,000 are regarded as infinite, with the sample size calculation formula being utilized:

$$\frac{n = z^2 p (1-p)}{e^2}$$
 (1)

Where:

z = is the Z value for the corresponding confidence level (i.e., 1.96 for 95% confidence);

e = is the margin of error (i.e., $0.05 = \pm 5\%$) and

p = is the estimated value for the proportion of a sample that have the condition of interest.

P= 50% (the most conservative estimate)

$$n = \frac{1.96 \times 1.96 \times 0.5 (1-0.5)}{0.05 \times 0.05} = 384$$

Stratified random sampling was implemented, where the three academic years (first, second, and third) were designated as distinct strata. The number of respondents required for each stratum, as determined by the sampling formula, was chosen randomly. This approach ensured the inclusion of students from all study years, while maintaining an equal chance for every student to be selected. This approach minimized bias and guaranteed that the selected sample accurately represented the intended population.

The primary data utilized in this study comprised information collected through a structured questionnaire and an interview guide. The researcher, along with two trained assistants, devised and administered the questionnaire to acquire qualitative insights from the sampled students. Prior to the main study, a pilot test was conducted to assess the research instruments, utilizing 10% of the total sample size (38 participants).

Quantitative responses from the questionnaires were subjected to a coding scheme for categorization. To mitigate data entry errors, all information was entered into the system twice. The data was then analyzed using descriptive statistics such as mean, mode, percentages, and cross tabulations. In addition, inferential statistics including correlation coefficients, regression analysis, and ANOVA were employed for further analysis.

3. RESULTS AND DISCUSSION

3.1 Response Rate

The research included a total of 384 participants, among whom 281 respondents returned fully completed questionnaires, resulting in a response rate of 73.2%. According to Saunders (2019), a response rate ranging from 50% to 70% is considered

satisfactory for a study involving a sample size of over one-third (30%) of the population. This suggests that the achieved response rate of 73.2% was deemed appropriate for representing the study's target population.

3.2 Mental Illness Stigmatization

The objective of the study was to assess the degree of stigmatization of mental illness among college students. The outcomes, as indicated in Table 1, disclosed that a majority of the participants acknowledged being aware of the stigmatization surrounding students with mental health issues (Mean = 4.16) and recognized ways in which their behavior might inadvertently offend such individuals (Mean = 3.55). Respondents agreed that they consciously avoided actions that might be hurtful to mentally ill students and held the perception that individuals with mental health conditions were not particularly friendly (Mean = 4.13). The respondents also concurred that they considered mentally stressed individuals to be a minority within their peer group and were actively involved in altering the perspectives of those who stigmatize individuals with mental illnesses (Mean = 3.43).

Additionally, the findings demonstrated that a majority of respondents acknowledged encountering instances where individuals discriminate against people with mental illnesses (Mean = 4.21) and that they consistently viewed those with mental health conditions as equal members of society (Mean = 3.05). A considerable number of respondents indicated encountering instances of stereotyping aimed at mentally ill individuals and observed cases where such individuals were unfairly labeled as unequal members of the community. These findings underscore the persistence of mental health discrimination and stigmatization among college students.

Table 1: Mental Health Stigmatization

Statements		Mean	
I am aware of the stigmatization among the mentally ill students	4.16	1.11	
I know ways in which I may offend the mentally ill students I come across	3.55	1.54	
I always avoid any actions that could be offensive to the mentally ill students	3.30	1.92	
I have perceptions that people with mental illness are not friendly	4.13	1.25	
I perceive the mentally stressed persons to be minority amongst other peers	3.23	1.51	
I always focus on changing the perception of individuals who stigmatize mentally ill persons	3.13	1.51	
I have come across individuals who discriminate the mentally ill patients	4.21	1.06	
I always consider those with mental health conditions to be equal members of the society	3.07	1.43	
Inequality and discrimination against the mentally ill students is prohibited in the institution	3.48	1.13	
I have come across stereotyping of mentally ill patients	3.01	1.26	
There are instances where mentally ill patients have been labeled as unequal members of the community	2.52	1.79	
I always discourage my peers against stereotyping and labeling the mentally ill individuals	2.91	1.78	

3.3 Mass Media Audience and Mental Illness Stigmatization

The study sought to assess the influence of mass media audience on mental illness stigmatization among students of Kenya Medical Training College towards people with mental illness. The respondents were asked to indicate their level of agreement with specific statements on mass media audience. Table 2 summarizes the findings. As the results portray, the respondents disagreed that the mass media messages depicted the right beliefs on mentally ill persons to their audience (Mean = 2.74); and that the media had always tried to change their beliefs on mentally ill persons (Mean = 3.08). The respondents however agreed that the mass media specifies its audience based on their attitude towards mentally ill persons and that through the mass media, they had acquired new knowledge on mental health (Mean = 3.04; 3.40).

The findings revealed that most of the respondents had not gained a better understanding on how to relate with mentally ill persons (Mean = 3.00). Majority of the respondents were of the opinion that mass media had not effectively enabled them to accept and help mentally ill persons and that the media did not effectively encourage them to share information on mental health awareness. According to, [37]is meant to change the perceptions of their audience and ensure that they turn to more positive relationships within the society. Without achieving this, the mass media may not achieve its potential in curbing mental illness stigmatization.

The findings further revealed that majority of the respondents disagreed that through mass media were able to educate others on mental health (Mean = 3.05), although it enabled a slight majority to effectively communicate to persons with stress/depression and other mental health issues through the information they had from mass media (Mean = 3.28). The respondents disagreed that the mass media had enabled them to change their actions to the mentally ill persons (Mean = 2.45). The media was found to not effectively focus on informing their audience on the need to equally treat people with mental illness and encourage the audience to change how they perceive their actions towards persons with mental illness. The findings concur with those by [38] that despite the mass media being an integral tool to create awareness among the public on key social issues, the media was not adequately focusing on mental health related issues, particularly to reduce stigmatization.

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Table 2: Descriptive Results on Mass Media Audience

Statements	Mean	Std. Dev.
The mass media messages depicts the right beliefs on mentally ill persons to their audience	2.74	1.76
The media has always tried to change my beliefs on mentally ill persons	3.08	1.75
The mass media specifies its audience based on their attitude towards mentally ill persons	3.04	1.41
Through the mass media, I have acquired new knowledge on mental health	3.40	1.60
I have gained a better understanding on how to relate with mentally ill persons	3.00	1.62
Mass media has enabled me to accept and help mentally ill persons	3.06	1.54
Mass media encourages me to share information on mental health awareness	2.39	1.62
Through mass media, I can now easily educate others on mental health	3.05	1.69
I can effectively communicate to persons with stress/depression and other mental health issues through the 3.28		
information I have obtained from mass media		
The mass media has enabled me to change my actions to the mentally ill persons	2.45	1.59
The media speaks to their audience on the need to equally treat people with mental illness	3.19	1.71
The mass media encourages its audience to change how they perceive their actions towards persons with 3.19		
mental illness		

3.4 Hypothesis Testing

The study hypothesis of the study was that:

Ho: Mass media target audience has no significant influence on mental illness stigmatization among students of Kenya Medical Training College towards people with mental illness

The summary of the model presented in Table 3 indicates that the R-square value for the model stands at 0.136. This signifies that around 13.6% of the variation in mental illness stigmatization can be attributed to mass media audience. The ANOVA outcomes are also displayed in Table 3. From these outcomes, it becomes apparent that the F-statistic associated with the model is 43.830. This is significant at a level of 0.000<0.05, indicating the statistical significance of the model. This suggests that the model holds the ability to predict the connection between mass media audience and mental illness stigmatization.

The regression coefficients pertinent to the model are also illustrated in Table 3. The outcomes reveal that the Beta coefficient for the model is 0.508. This implies that a one-unit alteration in mass media audience would lead to a corresponding change of 0.508 units in mental illness stigmatization. The t-value for this variable is 6.620<2.0, while the p-value is 0.000<0.05. This underscores that mass media audience significantly impacts mental illness stigmatization within the context of college students in Kenya.

	Model Su	ımmarv						
	Mod	R	R Square	Adjusted R So	uare	Std. Error o	of the Estimate	
el			1		1			
	1	.3	.136	.133		.93852		
	1 68 ^a							
	a. Predicto	ors: (Consta	nt), Mass Media Audi	ence				
	ANOVA							
	Model	<u>.</u>	Sum of Square	25	d	Mean Square	F	Sig.
	1110001		Sum of Square	f	G	Wear Square	•	5.5.
	Page	ression	38.606		1	38.606	43.830	.00
	Regression						0_{p}	
	Residual	245.748		2	.881			
	Residuai			79				
	Tota	Т.4.1	284.354		2			
	Total		80					
	a. Depend	lent Variable	: Mental Illness Stign	na			•	
	b. Predicte	ors: (Consta	nt), Mass Media Audi	ence				
	Coefficie	nts						
	Model		Unstand	dardized Coeffic	ients	Standardized Coe	efficients t	•

Std. Error

Beta

(Constant)	1.674	.291			4
				.750	000
Mass Media Audience	.508	.077	.368		(
				.620	000

The study sought to assess the influence of mass media audience on mental illness stigmatization among students of Kenya Medical Training College towards people with mental illness. The descriptive analysis results revealed that the respondents disagreed that the mass media messages depicted the right beliefs on mentally ill persons to their audience and that the media had always tried to change their beliefs on mentally ill persons. The respondents however agreed that the mass media specifies its audience based on their attitude towards mentally ill persons and that through the mass media, they had acquired new knowledge on mental health. The findings revealed that most of the respondents had not gained a better understanding on how to relate with mentally ill persons and that mass media had not effectively enabled them to accept and help mentally ill persons and it did not effectively encourage them to share information on mental health awareness. The findings further revealed that the mass media was not effectively focused on informing their audience on the need to equally treat people with mental illness and encourage the audience to change how they perceive their actions towards persons with mental illness. The inferential analysis results on the other hand revealed that mass media audience had a significant influence on the mental illness stigmatization among medical college students in Kenya

4. CONCLUSION

The study concluded that mass media audience had a significant influence on mental illness stigmatization among students at Kenya Medical Training College. The study established that the beliefs towards mentally ill persons through the mass media audience, the cognitive actions and reduced dissonance orchestrated by mass media target audience played a critical role in determining whether mentally ill persons were stigmatized or not. It is therefore concluded that mass media audience has a significant role to play in determining the mental illness stigmatization among Kenya Medical Training college students.

The mass media audience (the members of the public) has the duty to heed to the appropriate information shared by mass media regarding mental illness and how to avoid stigmatization. Mass media is meant to enhance reduced dissonance and change the beliefs and attitude of the masses against the mentally ill persons. It is therefore recommended that the audience should play their role to be responsible and mindful of the mentally ill to treat them equally and support them where necessary.

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REFERENCES

- [1] R. Anggrainingsih, N. R. Khoirudin, and H. Setiadi, "Discovering drugs combination pattern using fp-growth algorithm," in *International Conference on Electrical Engineering, Computer Science and Informatics (EECSI)*, 2017, vol. 4. doi: 10.11591/eecsi.4.1085.
- [2] M. Mohapatra, A. K. Parida, P. K. Mallick, and N. Padhy, "Mango Leaf Disease Detection Based on Deep Learning Approach," 2022. doi: 10.1109/ASSIC55218.2022.10088323.
- [3] D. Leman, "Expert System Diagnose Tuberculosis Using Bayes Theorem Method and Shafer Dempster Method," 2019. doi: 10.1109/CITSM.2018.8674380.
- [4] P. J. S. Vie, M. Gilljam, J. Wind, T. Lian, and S. Forseth, "Observations of Gas Evolution at End-of-Life in Commercial Li-Ion Cells Analyses and Diagnostics," *ECS Meet. Abstr.*, vol. MA2021-01, no. 5, 2021, doi: 10.1149/ma2021-015283mtgabs.
- [5] B. K. C. Pokuri, S. S. Annamneedi, A. C. Kamani, S. T. Thalluri, and S. Kurra, "Mental Illness Detection with Facial Movements using Neural Networks," 2022. doi: 10.1109/ICMACC54824.2022.10093486.
- [6] R. K. Gupta and R. Sinha, "On the Estimation of Difficulty in Emotion Regulation using Spoken Dialogue," in *IEEE Region 10 Annual International Conference*, *Proceedings/TENCON*, 2021, vol. 2021-December. doi: 10.1109/TENCON54134.2021.9707222.
- [7] Y. T. Yang and T. Wang, "The Treatment and Development Prospect of VR Exposure Therapy for Mental Diseases," 2022. doi: 10.1109/IWECAI55315.2022.00072.
- [8] N. Amate, S. Patil, P. Jojan, and S. Morankar, "Use of social media and smartwatch data analytics for mental health diagnosis," 2021. doi: 10.1109/ICITIIT51526.2021.9399591.

- [9] J. C. Newby, M. C. Mabry, B. A. Carlisle, D. W. M. Olson, and B. E. Lane, "Reflections on nursing ingenuity during the COVID-19 pandemic," *J. Neurosci. Nurs.*, vol. 52, no. 5, 2020, doi: 10.1097/JNN.000000000000525.
- [10] W. Sardjono, A. Retnowardhani, A. Rahmasari, Johan, R. E. Kaburuan, and E. Lusia, "Application of Knowledge Management System for Information Literacy Knowledge Sharing in News Service," 2021. doi: 10.1109/ICORIS52787.2021.9649510.
- [11] M. R. Islam *et al.*, "MHIVis: Visual Analytics for Exploring Mental Illness of Policyholders in Life Insurance Industry," 2020. doi: 10.1109/BESC51023.2020.9348301.
- [12] A. Bedaso, B. Duko, and T. Yeneabat, "Predictors of mental distress among undergraduate health science students of Hawassa University, College of Medicine and Health Sciences, Hawassa, SNNPR, Ethiopia: a cross-sectional study," *Ann. Gen. Psychiatry*, vol. 19, no. 1, p. 6, Dec. 2020, doi: 10.1186/s12991-020-0258-y.
- [13] S. Hong and H. Kim, "Analysis of Bitcoin Exchange Using Relationship of Transactions and Addresses," in *International Conference on Advanced Communication Technology, ICACT*, 2019, vol. 2019-February. doi: 10.23919/ICACT.2019.8701992.
- [14] D. R. Dwiki Putri, M. R. Fahlevi, R. Utami, F. P. Nasution, R. Doni, and L. Sipahutar, "Identification of Dysmorphic Body Disorders Using the Bayes Theorem Method," 2021. doi: 10.1109/CITSM52892.2021.9588802.
- [15] P. Kumar, S. Ashtekar, S. S. Jayakrishna, K. P. Bharath, P. T. Vanathi, and M. Rajesh Kumar, "Classification of Mango Leaves Infected by Fungal Disease Anthracnose Using Deep Learning," 2021. doi: 10.1109/ICCMC51019.2021.9418383.
- [16] T. Zebin, N. Peek, and A. J. Casson, "Physical activity based classification of serious mental illness group participants in the UK Biobank using ensemble dense neural networks," 2019. doi: 10.1109/EMBC.2019.8857532.
- [17] F. Fareesha, Y. K. Chandanashree, V. Gowthami, R. Jayachandran, and S. Kalathil, "Real-Time Artificial Mood-tracking and Health-monitoring System (RAMAHS) for people with mental illness and their Caregivers," 2023. doi: 10.1109/ICRTEC56977.2023.10111897.
- [18] H. Bramham *et al.*, "Linkages between Community Mental Health Services, Homelessness, and Inmates and Probationers with Severe Mental Illness: An Evidence-Based Assessment," 2020. doi: 10.1109/SIEDS49339.2020.9106666.
- P. Sugumaran and A. B. B. K. Uma, "Real-time twitter data analytics of mental illness in COVID-19: sentiment analysis using deep neural network," *Indones. J. Electr. Eng. Comput. Sci.*, vol. 26, no. 1, 2022, doi: 10.11591/ijeecs.v26.i1.pp560-567.
- [20] K. R. Saradha, M. Reenu Sivadarshini, R. Saranya, and R. Sandhya, "Sentimental Analysis to Detect Mental Illness," 2022. doi: 10.1109/ICCST55948.2022.10040460.
- [21] C. H. Lin, K. Y. Chen, W. C. Wang, Y. R. Lin, and M. H. Xie, "Mass Media Member's Discussion in the Data Science by Advanced Analytics for Reverse Mortgage*," 2023. doi: 10.1109/ICTC57116.2023.10154666.
- [22] Y. Sokolovskyy, V. Yarkun, and M. Levkovych, "Parallel Algorithm for Numerical Modeling of Anisotropic Heat and Mass Transfer in Fractal Media," 2023. doi: 10.1109/CADSM58174.2023.10076515.
- [23] C. D. Yilmaz, S. N. A. Kaan, S. Agac, and D. Gundogdu, "Effect of Social Network and Mass Media on Turnout Rates in Italy," 2022. doi: 10.1109/SIU55565.2022.9864757.
- [24] Z. Deng, X. Zheng, Z. Ye, Z. Cai, and D. D. Zeng, "Credible Influence Analysis in Mass Media Using Causal Inference," 2021. doi: 10.1109/ISI53945.2021.9624679.
- [25] A. Costache, D. Popescu, S. Mocanu, and L. Ichim, "Target Audience Response Analysis in Out-of-home Advertising Using Computer Vision," 2020. doi: 10.1109/ECAI50035.2020.9223134.
- [26] S. Hu, P. Wang, and Z. Shi, "Estimation on Audience Status in Teaching Scene Based on Improved SSD Algorithm," 2022. doi: 10.1109/TOCS56154.2022.10015985.
- [27] A. Rizkiyanto and I. G. Anugrah, "Implementasi Metode Simple Multy Attribute Rating Technique Exploiting Ranks (Smarter) Dan Forward Chaining Pada Penentuan Posisi Karyawan Baru PT. Langgeng Buana Jaya, Gresik," *J. Nas. Komputasi dan Teknol. Inf.*, vol. 2, no. 2, p. 149, Oct. 2019, doi: 10.32672/jnkti.v2i2.1565.
- [28] K. Nadiya and V. P. Gopi, "Dorsal Hand Vein Biometric Recognition Based on Orientation of Local Binary Pattern," 2020. doi: 10.1109/HYDCON48903.2020.9242879.
- [29] S. Hurayn, A. M. Shetty, S. V. Deshpande, V. Gupta, and U. Ananthanagu, "Analysis of Mental Illness using Twitter Data," 2021. doi: 10.1109/FABS52071.2021.9702565.
- [30] T. Olson, I. Vodenska, G. Zhang, M. Nishijima, and L. Chitkushev, "Examining Mental Illness Trends in the United States from 2006 to 2019," 2021. doi: 10.1109/BIBM52615.2021.9669764.
- [31] J. Chung and J. Teo, "Single classifier vs. ensemble machine learning approaches for mental health prediction," *Brain Informatics*, vol. 10, no. 1, 2023, doi: 10.1186/s40708-022-00180-6.
- [32] T. Abbasi, K. H. Lim, N. S. Rosli, I. Ismail, and R. Ibrahim, "Development of Predictive Maintenance Interface Using Multiple Linear Regression," 2018. doi: 10.1109/ICIAS.2018.8540602.
- [33] M. Varnfield, K. Rajesh, C. Redd, S. Gibson, L. Gwillim, and S. Polkinghorne, "Health-e Minds: A Participatory Personalised and Gamified mHealth Platform to Support Healthy Living Behaviours for People with Mental Illness," 2019. doi: 10.1109/EMBC.2019.8857286.
- [34] A. Röhm, A. Schnöring, and M. R. Hastall, "Impact of Single-case Pupil Descriptions on Student Teacher Attitudes Towards Inclusive Education," *Learn. Disabil.*, vol. 16, no. 1, pp. 37–58, 2018.
- [35] W. Wang and Y. Liu, "Discussing mental illness in Chinese social media: the impact of influential sources on

- P ISSN <u>2828-3864</u>; E ISSN: <u>2828-2973</u>
- stigmatization and support among their followers," *Health Commun.*, vol. 31, no. 3, pp. 355–363, Mar. 2016, doi: 10.1080/10410236.2014.957376.
- [36] M. Pratiwi, L. Mayola, V. Kris Hiburan Laoli, U. Ilhami Arsyah, and N. Pratiwi, "Medical Record Information System with Rapid Application Development (RAD) Method," *J. Inf. Syst. Technol. Res.*, vol. 1, no. 2, pp. 124–130, May 2022, doi: 10.55537/jistr.v1i2.170.
- [37] I. A. Bykov and A. N. Chernova, "Gender as a Communication Issue in Mass Media and Politics," 2023. doi: 10.1109/ComSDS58064.2023.10130364.
- [38] P. Singh, K. K. Srinivas, A. Peddi, B. Shabarinath, I. Neelima, and K. A. Bhagavathi, "Artificial Intelligence based Early Detection and Timely Diagnosis of Mental Illness A Review," 2022. doi: 10.1109/MECON53876.2022.9752219.