

## PRAGMATIC ACTS USED AS DIAGNOSTIC STRATEGIES IN MEDICAL ENCOUNTERS WITH MENTAL HEALTH PATIENTS IN NIGERIA

Seun AKINTARO

[osakintaro30@lautech.edu.ng](mailto:osakintaro30@lautech.edu.ng)

Department of English and Literary Studies  
Ladoke Akintola University of Technology, Ogbomoso, Nigeria

### ABSTRACT

*The therapeutic outcomes for mental health patients in Nigeria are significantly improved when healthcare providers employ clear, empathetic, and culturally sensitive language in their diagnostic and treatment approaches. Existing linguistic studies on mental health discourse have examined mental illness detection through language and mental illness manifestation as portrayed on social media. Little attention has however been paid to the pragmatic language acts deployed by mental health practitioners during diagnosis and treatment processes of mental health patients (MHPs) in Nigeria. This study was therefore designed to investigate pragmatic acts used as diagnostic strategies in medical encounters with MHPs in Nigeria. Jacob Mey's Pragmatic Act Theory served as the framework. A qualitative research design was adopted. Medical encounters with mental health conditions at the Neuropsychiatric Hospital, Aro, Abeokuta, Nigeria were purposively selected. Seven medical encounters were audio-taped. Data were subjected to pragmatic analysis. Findings show that mental health practitioners deploy six preponderant pragmatic acts as strategies that aid diagnosis and treatment processes of MHPs in Nigeria. The pragmatic acts are – counselling, interjectory, suggesting, inquiring, re-assessing and promising. Respectively, these acts are used by doctors/psychiatrists to perform the pragmatic function of encouraging, prompting responses, tracking mental health history, showing medical concern, confirming and assuring. These acts/functions are realised through pragmatic cues entailed by REL, SSK, REF, INF, prosody and indirect speech act. The identified acts/functions therefore emphasise Nigerian mental health workers' readiness to positively respond to patients' medical needs.*

**Keywords:** Mental health, Medical encounters, Pragmatic acts

### 1. INTRODUCTION

Effective communication has a pivotal role in enhancing mental health diagnosis and treatment in Nigeria. Mental health is a state of complete physical, mental and social well-being that enables individuals to cope with the stresses of life and realize their abilities to contribute meaningfully to their community (WHO, 2022). Explicitly, the term 'mental health' does not adequately mean the absence of disease or sickness. It however encapsulates a dynamic state of internal equilibrium which enables individuals to use their abilities in harmony with universal values of society. In essence, the state of human mental health is contingent upon an individual's capacity to establish and sustain meaningful relationships, perform social functions, regulate emotional responses, and convey positive thoughts and actions.

Against this backdrop, it is evident that the effective communicative tool through which individuals form and maintain affectionate relationships with one another is language (verbal and/or non-verbal). In other words, language serves as a major determinant of human mental status. Through linguistic modes, one could easily determine whether an individual is mentally stable or unstable. By extension, St Clair et al. (2011) opine that social relationships are facilitated by verbal interactions and may therefore be more difficult to navigate for adolescents with language disorder. This thus, emphasises the relevance of language to human mental health as Miteva et al. (2022:2) also aver that 'language is more than a medium for communication; it shapes and structures cognition (reasoning), consciousness, experience, identity, society and culture'. Expatiating further, language, speech and narrative are to large extent major diagnostic and therapeutic tools if used properly (in the field of Psychiatry studies). Veryan (2018) posits that within the context of mental illness, mental health and wellbeing, negative words can be experienced as condescending, isolating and stigmatising while positive words can convey dignity, empathy and hope. This therefore justifies the extent to which language could be



therapeutic and at the same time toxic to human mental health, based on the pragmatic entailment of its usage.

To this end, it therefore suffices to investigate language use in medical encounters with mental health patients in Nigeria; as reports by World Health Organisation (2006, 2018) has indicated that there is considerable neglect of mental health in Nigeria and that one in four people in the world are likely to have mental illness in their lifetime of which Nigeria is categorised among countries with the greatest burden of diseases for mental disorders (Erubami, et al., 2023). This alarming report has therefore necessitated more research works on mental health in Nigeria across different fields of study. Nonetheless, in Nigeria, there are scant research studies on mental health within the ambits of Linguistics, Pragmatics and/or Discourse studies. Many of the available studies such as Deacon (2013), Stein et al. (2022), and Wanying (2023) often revolve around medical-based strategies of diagnosing and treating mental health-related diseases without giving much attention to how language use affects (positively or negatively) diagnosis and treatment of mental health patients in Nigeria.

The available linguistic studies (Coppersmith et al., 2015 and Hollingshead, 2016) classified mental illness based on language use in social media as part of diagnostic resources for mental health treatment. A couple others categorise mental distress based on other instances of language use: Roark et al (2007, 2011), De Zulueta (2007), O' Reilly and Lester (2017) and Welton-Mitchell et al (2023). What is common with these works is their focus on language in classifying mental disorder, but overlook pragmatic functions of language use in mental health discourse as strategies by which mental health patients get diagnosed and treated in Nigeria. Therefore, this study has been designed to investigate pragmatic acts deployed (by doctors) in medical encounters with mental health patients in Nigeria with a view to determining how these acts are used as pragmatic strategies of diagnosing and treating mental health patients in Nigeria.

## 2.0. CONCEPTUAL REVIEW

Considering the technicality of this study, it is pertinent to briefly review a few concepts – pragmatic act, mental patient, and diagnostic strategy, pivotal to this study. As opined by Mey (2001), pragmatic act can be conceptualised from two different purviews. On the one hand, pragmatic act is the specific action(s) that is actualised through the use of language. On the other hand (a broader view), pragmatic act is the condition (context(s)) created to necessitate the actualisation of specific action(s). This therefore implies that a research study on pragmatic acts becomes insufficient without identifying and analysing specific act(ions), goal/function of the act(ions), and the contexts necessitating the realisation of the act(ions). It, therefore, suffice to opine that this study is within socio-medical context upon which the pragmatic acts and functions (investigated) are premised.

Moving on, a mental patient is one who is made ill by their mental condition (Gosselin, 2022:18). A mental disorder is a diagnostic category used to identify a set of experiences and behaviors (symptoms) that are considered abnormal, pathological, impairing, and/or distressing (Stein, et al., 2022). In the *Diagnostic and Statistical Manual (DSM)* of the American Psychiatric Association (2013), mental disorder is defined as a syndrome characterised by clinically significant disturbance in an individual's cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological, or developmental process underlying mental functioning. The *DSM* goes on to say that mental disorders are usually associated with significant distress or disability in social, occupational, or other important activities (American Psychiatric Association, 2013). A mental illness, in contrast, is a state of being made "ill" or sick by one's mental disorder. All mental illnesses are triggered by having a mental disorder; not all mental disorders make an individual ill. For instance, deficient focus and attention capacity can be impairing enough to be diagnosed as a mental disorder (attention deficit/hyperactivity disorder), but they do not usually make a person *sick* (Gosselin, 2022). A mental disorder is a deviation from the norm in some



area(s) of mental functioning, such as cognition, perception, affect/mood, volition/will, social functioning, or behavior; a mental illness, in contrast, is a gross deviation that causes major functional impairments. A person who has a mental illness has major impairments that affect functioning in various life domains such as work, school, family life, friendships, interactions with others, and personal hygiene (Gosselin, 2022).

Finally, diagnostic strategy is technically referred to as 'diagnostic guidelines' by the World Health Organization (2000:1). Therefore, diagnostic strategies or guidelines are the methods deployed by health workers to determine the nature and cause of an illness. These strategies include (among others) routine diagnosis, principal diagnosis, differential diagnosis, multiple diagnoses etc. This study basically focused on routine diagnosis; hence, it is a diagnostic practice in mental health services which typically involves an interview known as mental status examination, where evaluations are made of appearance and behaviour, self-reported symptoms, mental health history, and current life circumstances.

### **2.1 Studies on mental illness detection through language**

This segment is devoted to the review of literature on the detection of mental illness through language. Studies by Odebunmi (2008), Roark et al (2011), Ahmed et al (2013), and Gernsbacher, Morson and Grace (2016) are reviewed. Odebunmi (2008) examined pragmatic strategies of diagnostic news delivery in Nigerian hospital as against this study which focuses pragmatic diagnostic strategies. Roark et al (2011) looked into spoken language as measures of detecting mild cognitive impairment (MCI). The study presents Natural Language Processing (NLP) that automatically measures speech characteristics and the complexity of the elderly, and how these measures discriminate between healthy elderly subjects and those with MCI. Mild cognitive impairment is taken to mean earliest clinical stages of incipient dementia. The data set were obtained from clinically elicited samples through neuropsychological tests. The study identifies linguistic signals such as pause frequency and duration, and linguistic complexity; and demonstrates how automatic syntactic annotation is used in calculating linguistic complexity, and how forced alignment is used in speech-based measures to accurately classify speech and pause regions. The results indicate that the multiple measures derived from spoken language aid in the automatic detection of MCI; however, the study has unable to examine how pragmatic use of language aids diagnosis and treatment of mental health illness.

Similarly, Ahmed et al (2013) probed into the prosodic aspect of language – precisely, connected speech – in order to monitor disease progression in autopsy-proven Alzheimer. The paper aimed to identify connected speech features that could be used to profile the impairment of the disease. Connected speech samples were taken from ageing and dementia subjects, who had been diagnosed of Alzheimer while living and confirmed at post-mortem. Thereafter, the measures of syntactic complexity, lexical content, speech production, fluency and semantic content were used to analyse the samples. The analysis of the study at the individual cases revealed evident subtle changes in language during the prodromal stages of the disease; and two-third of the cases showed significant changes in connected speech. The study further discovered significant linear trends in syntactic complexity, lexical and semantic content. The paper has further contributed to literature on diagnosing mental illness, albeit this goes deeper in monitoring disease progression through linguistic measures. Nevertheless, it overlooks pragmatic use of language in mental illness prevention.

In the same vein, Gernbacher, et al.'s (2016) paper on language in autism examined the empirical status of three communication phenomena germane to autism: pronoun reversal, echolalia and a reduced or reversal of production-comprehension lag. The authors note that later versions expunged echolalia as language impairment, only considered as one of several restricted and repeated behaviours. Pronoun reversal, which entails using you in place of I, was later excluded in the diagnostic criteria. This communicative behaviour has also been identified with adults living



with aphasia and apraxia. The paper also highlights positions on the third criterion, production-comprehension, while noting that language production or expressive language has always lagged behind language comprehension or receptive language. The study states that autism follows that language development in autism follows, and opines that an abnormal lag should not be diagnostic of the health condition. The paper concludes that identifying these three communication phenomena as unique to autism is psychoanalytical and behaviourist interpretations of pronoun reversal/echolalia and clinical assumption of production-comprehension lag. Thus, this paper adds to other works that negotiate the potential of language as diagnostic criteria of mental distress; however, this neglects the preventive aspect, which is very crucial to mental health.

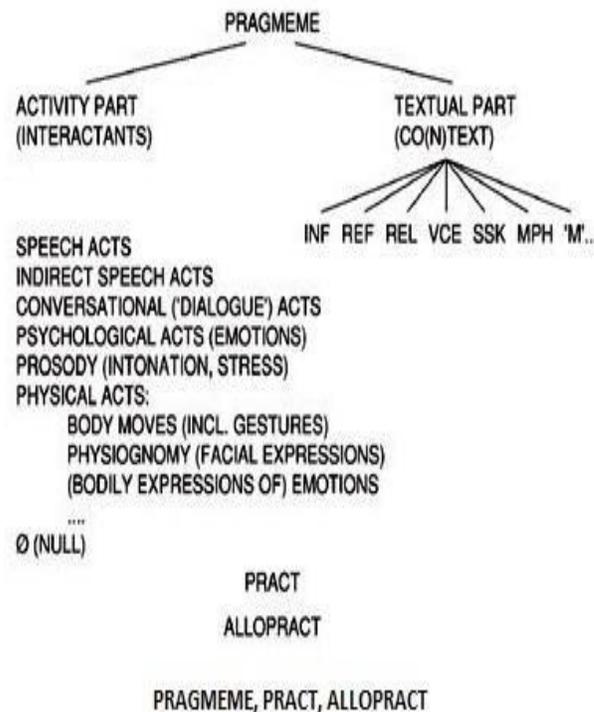
## **2.2 Studies on mental illness manifestation on social media**

One of the extant linguistic studies on the manifestation of mental distress on social media is Coppersmith et al (2015). The paper classifies Twitter users with mental illness based on the language of their tweets. The classification includes Twitter users with ten mental health conditions. These conditions are attention deficit hyperactivity disorder (ADHD), generalised anxiety disorder, bipolar disorder, borderline personality disorder, depression, eating disorders, post-traumatic stress disorder (PTSD), schizophrenia, obsessive compulsive disorder (OCD), and seasonal affective disorder (SAD). The study extends to measure the similarities and differences in the language of the Twitter users with various conditions, with hierarchical clustering between pairs and clusters of conditions to illustrate the degree of similarity of users' language. The findings suggest that there are sub-categories of language use that may indicate an existing mental illness, and comparison of language use across these conditions produces consistent groupings with other works. This led Coppersmith et al to conclude that investigating mental illness through language advances research in mental health. However, the study only centres on the diagnostic aspect, while it overlooks the prevention and treatment of the identified mental illnesses through pragmatic strategies.

Another related study is by Seitz (2016), who examined language use as measure of mental health. The study takes off by highlighting that language, though qualitative, provides quantifiable signal that comes handy in automatically assessing mental health status. The quantification is done through Natural Language Processing (NLP), which measures language properties like topic change, increase in the use of pronouns, elongated pauses between words, and situation of use. The study was further motivated by the capacity of language to model and provide understanding of text and talk with the assistance of machine learning techniques; and how that potential can serve to measure mental health on social media. Seitz's preference for language on social media was informed by the conceptualisation of the study it naturally signals of our cognitive state. The study also focused on the ten mental health conditions mentioned above, in Coppersmith et al (2015), as signalled by the language of Twitter users. The study identifies linguistic and modal features through language models and sentiment analysis, with focus on lexicons with associated psychological meaning, pronouns, emotions and functional words. The study further reveal that language models account for presence of much more signals of mental illness; the lexicons were associated with trauma; and patients with depression used the singular personal pronoun "I" more than control users. This study, like Coppersmith et al (2005), focuses on how language, through the hybrid systems of human and machine learning, assist with the diagnosis of mental illness; but solely focused on social media and excludes other aspects of mental healthcare. The gaps in these studies have therefore necessitated this research study which is premised on examining pragmatic strategies in medical encounters with mental health patients in Nigeria with an arching goal of determining how pragmatic use of language aids diagnosis and treatment processes of mental health patients in Nigeria.

### 3. THEORETICAL FRAMEWORK

This study takes into cognizance all linguistic cues deployed in medical encounters with mental health patients in selected live sessions of doctor-patient encounters in Nigeria. It is therefore against this backdrop that this study adopts Jacob Mey’s (2001) Pragmatic Act Theory as its framework. The Pragmatic act theory is a linguistic analytical framework that attempts to explain what the speaker means by performing linguistic, extra-linguistic and psychological acts in discourse (Emike, 2015:21). In other words, it is a theoretical framework that is used to investigate what a speaker means which transcends sentence meaning. The theory is a context-based theory which emphasises the priority of cultural and social factors in meaning construction and comprehension (Odebunmi and Unuabonah, 2014). The theory which caters for both verbal and non-verbal linguistic acts is divided into two parts as shown in figure 1 below:



**Figure 1: Mey’s Pragmatic Acts Model**

Source: Mey (2001:222)

The activity component includes various types of linguistic acts, such as speech acts, indirect speech acts, conversational acts, psychological acts, prosodic acts, and physical acts. This framework serves as a linguistic tool to help interpret the speaker's intended meaning, as Capone (2005) argues that comprehending pragmeme depends on the societal dimension of utterance interpretation. This extends beyond the literal meaning of the context and considers how society construes utterances in a general situation that the participants understand. The activity component pertains to the roles of the discourse participants, while the textual component pertains to the contextual variables that affect discourse situations. The textual part of Mey’s Pragmatic Act Theory is considered relevant to this study because its components – Inference (INF), Reference (REF), Relevance (REL), Voice (VCE), Shared Situation Knowledge (SSK), Metaphor (MPH) and Metapragmatics ('M') are what Mey (2001:222) refers to as 'contextual features that influence communication'. These components are therefore suitable to account for

pragmatic meanings (as enhanced by contextual usage) derived from doctor-patients encounters premised on diagnosing and treating mental health patients.

#### 4. METHODOLOGY

Qualitative method was employed to gain an in-depth understanding of the pragmatic strategies in selected medical encounters with mental health conditions at the Neuropsychiatric Hospital, Aro, Abeokuta, Nigeria. The adequate relevance of this Neuropsychiatric Hospital to this study and their timely research approval necessitate the choice of selection. With participants' informed consent, seven medical encounters were audio-taped. Five research assistants were engaged to conduct four activities: data collection, translation, data cleaning and categorisation. The data categorisation was done using individual turns within the exchanges in the medical encounters as the unit of analysis. The data were subjected to pragmatic analysis.

#### 5. DATA ANALYSIS

Findings from the medical encounters show that mental health practitioners deploy six preponderant pragmatic acts as linguistic strategies that aid diagnosis and treatment processes of mental health patients in Nigeria. The pragmatic acts are – counselling, interjectory, suggesting, inquiring, re-assessing and promising. Respectively, these acts are used by doctors/psychiatrists to perform the pragmatic function of encouraging, prompting responses, tracking mental health history, showing medical concern, confirming and assuring. These acts/functions are realised through pragmatic cues entailed by REL, SSK, REF, INF, prosody and indirect speech act. The acts constitute dominant pragmatic strategies through which diagnosis and treatment of mental health patients in Nigeria are enriched. The identified acts/functions therefore emphasise Nigerian mental health workers' readiness to positively respond to patients' medical needs.

##### 5.1 Counseling pract used by doctor to encourage patient/caregiver

In mental health discourse, doctors deploy counseling pract as a pragmatic strategy aimed at encouraging their patient(s). The essence of this pragmatic strategy is to enable mental health patients realise that they can still get much better and that they need not to lose hope. This strategy is mostly enhanced by REF and indirect speech act as shown in the excerpt below:

##### Excerpt 1

Background: The conversation is between a doctor and a parent who is almost losing hope concerning her child's mental health issues. As an encouragement strategy, the doctor indirectly deploys counseling pract as explicated in the conversation that ensues between the doctor (D) and the patient's mother (PM).

1. D: As a parent do you know that your child needs your support to make progress in life? **(positive politeness: seeking agreement)**
2. PM: I know. **(positive politeness: showing agreement)**
3. D: You know that you child needs social support from you? **(positive politeness: seeking agreement)**
4. PM: Yes. **(positive politeness: showing agreement)**
5. D: So what kind of support do you think you can give to her as your child? **(negative politeness: questioning)**
6. PM: You see, concerning her progress. After we'd gone for scan... **(negative politeness: flouts Grice's maxims of quantity and relation)**
7. D: Okay. What character traits/behaviours can you have towards her that would make her to be at peace? **(positive politeness: simplifying question for PM to understand)**

8. PM: Well, I have noticed that she doesn't want someone to be irritated towards her. Because if you're irritated by her, it's whatever you tell her not to do that she would do.
9. D: Can you now see that you don't have to feel irritated by her? **(positive politeness: giving reason)**
10. PM: Yes. I know.
11. D: What negative words do you think one shouldn't speak concerning a child like this? **(positive politeness: asserting reciprocity)**
12. PM: Ah! I don't even like it.
13. D: But you know... do you think there are some words that shouldn't be spoken to her? **(positive politeness: raising a common ground)**
14. PM: Yes. **(positive politeness: asserting to show common ground)**
15. D: Okay. Okay. What do you think would be the outcomes/consequences of such words? **(positive politeness: intensifying PM's attention)**
16. PM: Such words may make her worse than the way she is. **(positive politeness: not flouting any of Gricean maxims)**
17. D: Okay.
18. D: What do you think abandoning her without speaking with her can cause? **(positive politeness: intensifying PM's attention)**
19. PM: I know it can't help. It can't help. Besides, there is no reason for me to abandon her. **(positive politeness: establishing a common ground)**
20. D: very good then. **(positive politeness: uses in-group identity marker)** Please, don't abandon her. **(positive politeness: seeking PM's cooperation)** She needs your support **(positive politeness: includes PM in activity)** and we will also do our best here. **(positive politeness: assuring).**

In excerpt 1, the doctor's use of indirect speech act (as information-elicitation strategy) and PM's dominant use of REF in her responses, enable the doctor to diagnose that the patient needs adequate social support. Thus, PM needs to be encouraged on issues relating to her child's mental health. To realise this, the doctor (in turn 1), through the pragmatic entailment of his utterances, counsels PM on the need for her to support her ailing child by indirectly telling the mother that it is her duty to support her child and that the child will only make progress in life when there is parental support – 'As a parent do you know that your child needs your support to make progress in life'? Subsequently, the doctor is able to convince PM through his polite ways of asking questions; this which PM infers (INF) to mean an act of showing concern and attending to their needs. This continues till the segment where the doctor makes further enquiry about the patient's medical history and social life. It is from all this that the doctor is able to discover that the patient has not been adequately engaged in social activities and feels neglected at some areas.

Based on the information elicited by the doctor, the doctor is able to ascertain that PM needs some reorientation in order to fast track the treatment of the patient. Therefore, the doctor politely deploys the counselling pract from turn 13 downward in a strategy that will enable PM understand that it is a responsibility and not just necessity to support the ailing child. Even when PM flouts the maxims of quantity and relation in turn 6, (thereby derailing from what the doctor intends to achieve) the doctor, still, politely brings back PM to the theme of discourse in turn 7 – 'what character traits/behaviours can you have towards her that would make her to be at peace'? By so doing, PM gets the intention of the doctor and she is able to supply the doctor with the relevant response which enables the doctor to infer that PM has got the intended message as he (the doctor) says in turn 9 – 'can you now see that you don't have to feel irritated by her'?

At the latter part of the conversation, the doctor still maintains the politeness principle which he has used to begin the conversation by seeking PM's cooperation – 'she needs your support' and by assuring and encouraging that there would be positive improvement in as much as PM does what the doctor has suggested. This assurance-giving is enough to counter PM's prior belief that the child's problem cannot be resolved. This will thereof stimulate PM's support for the child.

## 5.2 Interjectory practs used by doctor to prompt patience response

Interjections are single word expressions which appear in conversations as emotion markers. In some contexts, interjectory expressions are conversational-interrupts. However, in doctor-patient conversation on mental health issues, interjections extend beyond mere emotion markers or conversational-interrupts. When a doctor deploys interjectory practs during conversation with a mental health patient, it is basically to prompt patient's response(s) (eliciting information) which is intended to intensify diagnosis and treatment processes. This is explicated in the excerpt below:

### Excerpt 2

Background: The conversation is between a doctor and a mental health patient who has once had an encounter with another doctor previously. Since the (new) doctor is meeting the patient for the first time, the doctor had to deploy some conversation interjections that will prompt the patient to give out necessary information relating to his mental health.

### 1.1 Diagnosing

#### Opening/Case Exposition

1. Doctor: okay, alright. So, what actually happened?
2. Patient: yesterday night, when I was asleep, I suddenly woke up. I noticed my heart was vibrating and I was shivering.
3. Doctor: okay/...hmm\ hmm/ (**intensifying interest**)
4. Patient: I quickly went to the toilet like two different times. Sometimes, I will be sweating. And I normally have the fear that I will die anytime I sleep. So, things like that. Also, my heart is always heavy anytime I have that fear.
5. Doctor: oh...okay\ okay/ (**positive politeness – intensifying interest**)
6. Patient: my head normally gets swelled up too.
7. Doctor: oh...okay. (0.2) any other complaint?
8. Patient: No

#### 1.2 Case Review

9. Doctor: okay...it's like you have once had similar complaint sometimes ago? (**positive politeness – raises common ground**)
10. Patient: (**positive nod**)
11. Doctor: okay... So, that time you came, what were the complaints you made?
12. Patient: similar to what I said now...then, I used to take substances but I have stopped it now.

#### 1.4 Treating

##### Counselling/Enlightening

13. Doctor: but...hmm, you may need to see a cardiologist because there was a finding here that one side of your heart...your heart has four chambers of which one is a bit bigger than normal... so...
14. Patient: (cuts in) and is that frightening?
15. Doctor: no no no...(smiles) it is not too frightening. I just feel it's something a cardiologist should look into. The first time you were here, you couldn't meet a cardiologist right?

16. Patient: no, we couldn't meet up with the cardiologist as at that time

### Referral

17. Doctor: today is Monday. Cardiologist should be around. I will write a referral for you to take there.

In excerpt 2, the pragmatic function of prompting patient's response is realised through the doctor's use of interjectory practs; as enhanced by prosodic features (stress and intonation as aspects of Mey's activity part) in turns 1, 3, 5, 7, 9, 11, 13 and 22. In turn 1, the doctor at first, interjects 'okay, alright' as an attention-seeking strategy before asking for a new information from the patient. The doctor is however not satisfied with the little information provided by the patient (in turn 2). This therefore necessitated the doctor's polite preponderant use of interjectory expressions in subsequent turns. The doctor does this politely by elongating each of the interjections (as a marker to show his attentiveness to the patient's complaints) and then, ending the following interjectories with a rising intonation tune to prompt the patient to continue talking. To avoid communication gaps, the patient easily infers (INF) that he is meant to say more as the doctor keeps prompting him through interjections. It is as a result of this that the doctor is able to make diagnoses and then switches to treatment processes in turn 13. Getting to turn 13, the doctor's use of interjectory practs 'but...hmmm...' stimulates the patient's fear; as he infers (INF) that the doctor intends to mean that his case is a very critical one – turn 13/14 'and is that frightening'? Consequently, the doctor's immediate interjection (complemented by a positive face saving and physiognomic act of smiling) necessitated the patient's a perlocutionary act of relief in subsequent turns.

### 5.3 Suggesting pract used by doctor to track patient's mental health history

Based on the data garnered, doctors deploy suggesting pract as pragmatic strategy aimed at tracking down patient's mental health history. This pragmatic strategy is used during diagnosis stage when the doctor observes that the patient is (naturally) unable to express himself/herself or the patient is deliberately unwilling to disclose some relevant health related information. Excerpt 3 further explicates this position.

#### Excerpt 3

Background: The conversation ensues between a doctor and a mental health patient who is somewhat reluctant to disclose information regarding his mental state.

1. PATIENT: Eeh... I have a minor issue that *is before now*... [unclear] (negative politeness; hedge)
2. DOCTOR: Okay. What was the sickness? ...huh? (bald-on record negative politeness; be direct/question)
3. PATIENT: I later find out when I got here. (Off-record strategy; violating Grice's principle)
4. DOCTOR: Eeh, what was it? Tell me about it. (**bald-on negative politeness**; Imposition/be direct)
5. PATIENT: Huh? (**bald-on negative politeness**; Emphasise imposition)
6. DOCTOR: Maybe we should speak Yoruba; can you understand? (**positive politeness**; offer/seeking agreement/hedge)  
(A switch to Yoruba as the language of interaction henceforth)
7. PATIENT: Okay. I should speak Yoruba? (**positive politeness**; seek agreement/assert or presuppose S's knowledge of and concern for H's want)
8. DOCTOR: Yes. (**positive politeness**; seek agreement). So, why were you brought here? (assert or presuppose S's knowledge of and concern for H's want)

9. PATIENT: I noticed I was having some stomach ache one day. Then I went home where I was being treated, but I didn't know anything was wrong with me.
10. DOCTOR: Okay...
11. PATIENT: It's from home I was brought to this place where I got to know of my mental illness or something.
12. DOCTOR: But do you feel as if some people want to harm you or something like that? **(negative politeness; hedge)**
13. PATIENT: I don't feel like that anymore now, but when the sickness was serious, I used to feel that. **(positive politeness; seek agreement)**
14. DOCTOR: That's when you used to feel that way? **(positive politeness; assert or presuppose S's knowledge of and concern for H's want)**
15. PATIENT: Yes. Like one is about to be killed or something like that.
16. DOCTOR: But you don't feel like that anymore, right? **(positive politeness; seek agreement)**
17. PATIENT: Yes.
18. DOCTOR: So any complaints today? **(positive politeness; assert or presuppose S's knowledge of and concern for H's want)**
19. PATIENT: Aside the head...
20. DOCTOR: Is your head aching or what? **(positive politeness; intensifying interest)**
21. PATIENT: Yes, but it's little by little. I will feel it awhile, and be relieved after some time.
22. DOCTOR: All right. No problem. But do you sleep very well?
23. PATIENT: Yes, I do sleep but since a week now, I do wake up around 5a.m.
24. DOCTOR: Hmm hmm. **(positive politeness; seek agreement)** So when you wake, what do you do? **(negative politeness; question)**
25. PATIENT: At times, I will sleep again later or watch video.

#### **Medication review/counselling**

26. DOCTOR: Okay. How about the drugs? Are they suitable for you (your body)? **(positive politeness; presupposes common ground)**
27. PATIENT: Yes. They are suitable for me.
28. DOCTOR: So they are okay and need no adjustment? **(negative politeness; hedge)**
29. PATIENT: They are okay.
30. DOCTOR: Okay. But make sure you're using the drugs, and don't think that nothing is happening to you anymore. **(negative politeness; direct)**
31. PATIENT: Okay ma.
32. DOCTOR: So be using them.... So is one month okay? **(positive politeness; seek agreement)**
33. PATIENT: Yes. It's okay.
34. DOCTOR: All right.

From the conversation in excerpt 3, the doctor preponderantly deploys suggesting pract in order to gather information regarding the patient's mental health. This pract which is enhanced by contextual relevance (REL), prosody (intonation), shared situational knowledge (SSK) and indirect speech act is used in turns 6, 12, 16, 26 and 28. The contextual relevance of this pract in turn 6 is necessitated by the doctor's inference of communication gap between him and the patient within their first five conversation turns. This therefore makes the doctor to suggest an option of switching from the English Language to the Yoruba Language 'Maybe we should speak Yoruba...'. It is at that moment that the patient is able to give the required answer to the doctor's earlier asked question (in turn 2 – 'What was the sickness? ...huh?'). To further track down

information about the patient's mental state, it becomes relevant for the doctor to give suggestion on likely signs the patient must have been encountering – 'But do you feel as if some people want to harm you or something like that?' (turn 12). The response given by the patient in the subsequent turn (13) – 'I don't feel like that anymore now, but when the sickness was serious, I used to feel that' shows the medical importance of making suggestions for mental health patient during diagnosis process. Furthermore, with the use of a fall-rise intonation tune in turn 16 ('But you don't feel like that anymore, V right?'), the doctor's suggestion is meant to re-confirm if the patient is no longer feeling the way he usually feels. The doctor maintains this strategy in turns 26 and 28 by indirectly suggesting to the patient if he wants a change of his medication. This pract enhances the treatment stage of the conversation as the patient confirms that the medications are suitable for him – 'They are suitable for me' (turn 27). Hence, the doctor at that point, switches from a suggesting pract to a commanding pract in turn 32 – 'So be using them'.

#### 5.4 Inquiring pract used by doctor to show medical concern

An act of inquiry is usually deployed to request for information from someone. In mental health encounter (based on the data garnered for this study), inquiry act is not only to elicit information from patient but to also show medical concern regarding patient's mental state. Excerpt 4 below complements this.

##### Excerpt 4

Background: the conversation is mainly between the doctor and the patient's family member (PF) who has brought the patient for his periodic checkup.

##### Opening Exchange

1. DOCTOR: so, how is his health? (**Positive politeness – presupposes common ground**)
2. PF: He is okay
3. DOCTOR: why is he smiling? (**impoliteness strategy – bald on record and withhold politeness**) Has he behaved somehow lately?
4. PF: Well, I don't know...maybe it's about what you told us
5. DOCTOR: oh...okay/ (**positive politeness – presupposes common ground**)

##### Diagnosing/Medical Assessment

6. PF: that thing happened to him again during the Ramadan period (**positive politeness - in-group identity marker**)
7. DOCTOR: but...since then, he has not been having crisis right? (**negative politeness – hedge**) (0.8) Any other complaint?
8. PF: No, it is just only that.
9. DOCTOR: but has he used his medications that particular day (before the incident) (**positive politeness – showing concern and eagerness to know**)?
10. PF: Yes, that same day before the incident. It rained that day. Possibly, the crisis was triggered by cold (**Negative politeness – hedge**). Can it be caused by cold?
11. DOCTOR: hmm... not really (0.3) but you have been taking your medications often? (**Negative politeness – direct/conventionally indirect**) And no signs of side effects?
12. PATIENT: No (no sign of side effects)
13. PF: he has been sleeping very well.
14. DOCTOR: so, has he been doing any work? (**politeness strategy – eager to know**)
15. PF: I didn't allow him to do any work
16. DOCTOR: ah...why? (**positive politeness – ask for a reason**)
17. PF: I don't want that thing to do him (**positive politeness – seek agreement**)



### Counseling

18. Doctor: hmm, he can still be engaged (**positive politeness – encouraging**). You said the crisis only came up once right?
19. PF: Yes. I also want him to be going out...(**positive politeness – seek agreement**)
20. DOCTOR: let us give him a little time and be observant (**positive politeness – avoid disagreement**). If it doesn't come up again, then, we will know what next to do. Don't worry, everything will be okay ma (**impoliteness strategy – positive impoliteness**).

From excerpt 4, the doctor's conversation turns are preponderantly dominated by pragmatic act of inquiry aimed at eliciting patient's health information and to show his concern towards the patient's recovery. At the opening exchange segment of the conversation, the inquiry pract (used by doctor to show medical concern) is enhanced by SSK and REF. In turn 1, the doctor's question – 'so, how is his health?' (directed to the patient's family) shows an existing shared situational knowledge between the interlocutors. The doctor's use of this act presupposes that he is not oblivious of the patient's health records; hence, a professional concern to patient's mental state is upheld. To buttress further, the doctor's inquisitiveness lingers through subsequent turns – 'why is he smiling...has he behaved somehow lately?' (turn 3). PF's response ('...maybe it's about what you told us' turn 4) to the doctor's question also shows an existing common ground between the interlocutors. Likewise, the assertive response given by the doctor in turn 5 – 'oh...okay' shows how the doctor assures the patient's family member about his awareness (concern) of what could have triggered the patient's emotive behaviour (smiles). The doctor's concern about his patient's wellbeing is as well apparent in turn 14 when the doctor enquires to know if his patient has become socially active – 'so, has he been doing any work?' As the diagnosing session continues, the patient's family member makes some hedges (negative politeness strategy) in form of suggestive expressions but the doctor counters through the same strategy by making an inference that the patient's family doesn't need to teach him his work (turn 10 and 11 respectively). Through this, the doctor is able to track how the patient has been responding to treatment.

### 5.5 Re-assessing pract used by psychiatrist to confirm patient's response to treatment

Based on the data garnered, re-assessing pract is a pragmatic strategy used by mental health workers to determine and confirm the state of patient's response to treatment. This is done by engaging the patient in a pep talk which is premised on issues familiar to both the patient and the mental health worker (to sustain common ground). Excerpt 5 buttresses this:

#### Excerpt 5

#### Background: Psychiatrist-Patient interaction

##### PHATIC EXCHANGE

1. Psychiatrist: okay, mummy, (**Positive politeness: use of in-group identity marker to make the patient view the Psychiatrist as child**) good morning ma. (Positive politeness: polite greeting) How is your health condition?
2. Patient: We thank God. (Mock politeness: the patient avoids giving a direct answer that the health is good or bad)
3. Psychiatrist: Please, don't be offended that we could not meet last Thursday. And that is why we had to postpone it to this day (**negative politeness: apology and regret for missing the last meeting**)...yes...okay... what about your children? Hope you have been hearing from them? (Positive politeness: concern for the patient's children)

##### FAMILY AND SOCIAL LIFE ASSESSMENT

4. Patient: I was with them a week ago
5. Psychiatrist: Oh, you went to Lagos? Oh, that's good, that's good. (Positive politeness: approval of the patient's journey and respect for the patient's decision) So, how is Lagos?

6. Patient: I want to go back to Lagos.
7. Psychiatrist: Oh, you want to go back to Lagos? Why? (Positive politeness: the doctor tries to avoid disagreement)
8. Patient: I really don't like where I'm currently living
9. Psychiatrist: So, have you explained to your children?
10. Patient: I only told one of them
11. Psychiatrist: So, what did the person say?
12. Patient: He said I should still stay here for awhile
13. Psychiatrist: Oh...okay. (Positive politeness: the doctor tries to avoid disagreement. There is affirmation of the patient's feelings)
14. Psychiatrist: So, how often do they come here to check on you?
15. Patient: One of them is even here with me
16. Psychiatrist: Oh...okay. Do their children often come to spend the holiday with you? (Positive politeness: interest in the patient's children)
17. Patient: Only one of them has a child for now
18. Psychiatrist: Oh, okay. Okay. So, how many of your children did you pay a visit when you travelled to Lagos?
19. Patient: Just a few of them. Like, I used two days with one, and two with another
20. Psychiatrist: that's good. (Positive politeness: Psychiatrist shows understanding in acknowledging the patient's perspective) So, what did they say about your health when they saw you?
21. Patient: They were happy

#### **Medical assessment**

22. Psychiatrist: Oh, they were happy. That's good. So, they are aware of the things you complained about from the onset...Glory be to God. Hope you have no complaint today? (Positive politeness: )
23. Patient: no problem. I only want to show you some of my medications maybe...
24. Psychiatrist: let me have a look...(0.9). (Negative politeness: Hedge - conversation control through interruption of the patient) okay, do you normally get these (drugs) at Precious Pharmacy?
25. Patient: yes sir
26. Psychiatrist: that's good. That's very good. How do you normally use it?
27. Patient: this in the morning, this at night
28. Psychiatrist: very good.
29. Patient: but you see this particular one, I have stopped it. It has been giving me some problems. **(Positive politeness: gives feedback on drug use)**

#### **Symptom assessment**

30. Psychiatrist: okay...okay...what's your reaction to the drugs?
31. Patient: sometimes, I will feel dizzy
32. Psychiatrist: hmmm **(positive politeness: intensify interest in the patient's response; back channeling)**
33. Patient: sometimes, I will be staggering
34. Psychiatrist: hmmm... how many of it do you take per day?
35. Patient: it is just one
36. Psychiatrist: but the dizziness has gone since you stopped it?
37. Patient: yes sir
38. Psychiatrist: hmmm...that's very good. (Positive politeness: approval of the improvement) What about the things you said you usually see? Do you still see them?

39. Patient: yes, but not that frequent as before
40. Psychiatrist: hmmm... did you see them when you woke up this morning?
41. Patient: not really?
42. Psychiatrist: that's good. (Positive politeness: approval of the improvement) Very good. What about the feelings that something is moving in your body parts?
43. Patient: that one has stopped

#### **Follow-up care**

44. Psychiatrist: very good. (Positive politeness: approval of the improvement) Do you remember that it didn't just stop in a day? It was gradual. So, don't worry, the strange images you have been seeing will as well stop. (Showing optimism and providing reassurance).

From excerpt 5, the psychiatrist, through an indirect speech act enhanced by contextual relevance (REL), deploys a re-assessing pract to confirm patient's response to treatment. The psychiatrist indirectly does this by engaging the patient in an interactive discourse since the patient is not giving a definite answer to the (direct) question asked by the psychiatrist in turn 1 – 'How is your health condition'? The re-assessing pract therefore becomes relevant as seen in the responses given by the patient in subsequent turns. To buttress further, the psychiatrist uses psychological acts in form of emotion markers – 'Oh...' (turns 5, 7, 13, 16, 18, 22) and conversational cue – 'So...' (turns 9, 11, 14, 18, 20) to stimulate the re-assessment process. These psychological acts are prompters for the patient to speak more on the topic of discourse. The use of these pragmatic strategies presupposes that the psychiatrist is aware of the introvert nature of the patient who is only ready to talk at length when prompted to do so. The psychiatrist's statement in turn 44 – 'very good... do you remember that it didn't just stop in a day? It was gradual... so, don't worry' presupposes that the re-assessing pract has been able to help him confirm patient's state of response to the treatment received so far.

#### **5.6 Promising pract used by doctor to assure patient of quick recovery**

Based on the data for this study, the pragmatic act of promising is another strategy used by mental health workers in medical encounters with mental health patients in Nigeria. This strategy is used intermittently during diagnosis and treatment processes to assure patient of quick recovery as explicated in excerpts 6, 7 and 8 below:

#### **Excerpt 6**

Background: Exchanges between a (mental health) doctor and patient's mother (PM).

1. D: What do you think abandoning her without speaking with her can cause? (**positive politeness: intensifying PM's attention**)
2. PM: I know it can't help. It can't help. Besides, there is no reason for me to abandon her. (**positive politeness: establishing a common ground**)

#### **Closing/follow-up instruction**

3. D: very good then. (**positive politeness: uses in-group identity marker**) Please, don't abandon her. (**positive politeness: seeking PM's cooperation**) She needs your support (**positive politeness: includes PM in activity**) and we will also do our best here. (**positive politeness: assuring**).

#### **Excerpt 7**

Background: Exchanges between a psychiatrist and a patient.

1. Psychiatrist: that's good. (Positive politeness: approval of the improvement) Very good. What about the feelings that something is moving in your body parts?

2. Patient: that one has stopped

### **Follow-up care**

3. Psychiatrist: very good. (Positive politeness: approval of the improvement) Do you remember that it didn't just stop in a day? It was gradual. So, don't worry, the strange images you have been seeing will as well stop. (Showing optimism and providing reassurance)

### **Excerpt 8**

Background: Exchanges between a (mental health) doctor and a patient.

1. Doctor: The first time you were here, you couldn't meet a cardiologist right?
2. Patient: no, we couldn't meet up with the cardiologist as at that time

### **Referral**

3. Doctor: today is Monday. Cardiologist should be around. I will write a referral for you to take there.

### **(Patient) Eliciting information**

4. Patient: please, can I ask a question? (**positive politeness – seek agreement**)
5. Doctor: yes, please go ahead (**positive politeness – avoid disagreement**)
6. Patient: what exactly is the cause of my illness? (**positive politeness – optimistic**)
7. Doctor: if you were still using drugs, we could say it's because of the drugs taken. But then, the ones you have taken before could be manifesting its effects now and that is why we are carrying out all necessary tests (**positive politeness – giving reason**).
8. Patient: I observed that the situation has worsened now that I'm no longer using drugs

### **(Doctor) Giving assurance**

9. Doctor: don't worry, everything will be better. Okay? (**positive politeness – giving sympathy**)

### **Medication Prescription**

10. Doctor: (0.9) I will add some medications to the ones prescribed to you already. (**positive politeness – attending to patient's need**).
11. Patient: sorry, is it anxiety
12. Doctor: yes, something like that (0.7) most of the complaints are related to issues of the mind. I will give you this medication to allow you have sound sleep. It should be taken at night.
13. Patient: ehm...
14. Doctor: (interjects) oh..I'm so sorry. Sorry please (**positive politeness – avoid disagreement**). Do you have the previous result with you?
15. Patient: yes, it is inside the one given by the NHIS
16. DOCTOR: Oh, okay...ehh ehn, your question (**positive politeness – notice (attending to patient's want)**)
17. Patient: is there no medication I can be using during the daytime that will enhance my mood? (**positive politeness – seeking agreement**)
18. Doctor: for now, let's start with the night first. The one I asked you to be using is enough to take you through the hours of the day. If it however has no effect, we will know what next to do (**positive politeness – offer promise**).
19. Patient: for how long will I use the medications?

**Follow-up instruction**

20. Doctor: until when we ask you to stop. Don't stop any of it until we ask you to do so  
**(impoliteness strategy – negative impoliteness strategy)**
21. Patient: okay.

Conversations in excerpt 6, 7 and 8 show the reoccurrence of promising pract as used by mental health workers to assure their patients of quick recovery. It is a pract deployed to stimulate patient's hopes of quick recovery and that the treatment given at their psychiatric hospital is sufficient to hasten patients' recovery. In excerpt 6, turn 3, the doctor uses a promising pract through an indirect speech act – 'we will also do our best here' to assure the patient's mother (PM) that the responsibility of giving social support to the patient will not only be the duty of the mother but a collective effort. This is a strategy aimed at giving a sigh of relief to PM as she has been told assured that mental health workers will join in assisting the patient. Similarly, in excerpt 7, turn 3, the relevance (REL) of a promising pract aimed at assuring patient becomes expedient as the psychiatrist infers (INF) from their preceding turns that the patient is about losing hope concerning strange images he has been complaining of. This therefore makes the psychiatrist to assure that the patient needs not to worry and (indirectly) promises that the patient will no longer see strange images – 'So, don't worry, the strange images you have been seeing will as well stop'(turn 3). In excerpt 8, the doctor repeatedly uses promising pract in turns 3, 9, 10, 12 and 18. At the first instance ('Cardiologist should be around. I will write a referral for you to take there'), the pract is used to assure the patient that a cardiologist will attend to him following a failed attempt by the patient to see a cardiologist in his previous visit. Furthermore, a promising pract aimed at assuring patient of quick recovery also becomes relevant in turn 9 (Doctor: 'don't worry, everything will be better. Okay?') having inferred that the patient is being skeptical about his health recovery. The doctor follows this pract up with another more pragmatic promise to add some medications which will fast-track his recovery – 'I will add some medications to the ones prescribed to you already' (turn 10). The dominant use of this pragmatic act explicates the strategy used by mental health workers to help their patient suspend their worrisome belief that their mental health issues cannot be resolved.

**6. Analytical model**

This study on mental health patient-doctor discourse can be applied as a diagnostic and treatment model based on the following 4 stage-based linguistic communicative strategies:



Establishment of common ground: The doctor (mental health worker) should firstly establish a common ground between the doctor and the mental health patient. Common ground is a pragmatic linguistic term which means mutual opinion shared by interlocutors. The doctor's ability to achieve this with their patient would fast-track diagnostic and treatment processes.

Common ground can be realised through polite inquiring and informing pragmatic acts (accompanied with unthreatened facial expression).

## STAGE 2

Tracking mental health history: Following the establishment of common ground, mental health worker is required to track down the mental health history of their patient to help avoid making wrong inferential diagnosis. This can be achieved by politely using eliciting-declarative acts such as – “You have...”, “You know...”, “Okay...” (with a rising intonation) etc. to intensify patient’s attention. With this, it becomes easy for the patient to freely share their mental health history as they infer that the health worker is showing readiness to attend to their needs. Hence, the health worker finds it easy to validate diagnosis.

## STAGE 3

Counselling/Treatment: Once diagnosis has been validated, health worker should deploy polite warning, promising and (re)assuring pragmatic language acts as counseling/treatment strategy. The use of polite warning would enable mental health patient see the danger in taking some substances triggering mental health diseases and as well see the need to adhere to medications prescribed by health workers. With promising and (re)assuring acts, the patient’s hope is raised for an assured solution to their mental problem.

## STAGE 4

Reassessing: This is the final stage. Mental health workers are to deploy encouraging pragmatic language act to inspire mental health patients (undergoing treatment) to check-back for reassessment.

## 7. Conclusion

There is considerable neglect of mental health in Nigeria (WHO, 2006), in spite of the global indicators on mental illness. In that light, the UN advises countries to make the mental impact of COVID-19 a priority to be urgently addressed; and join the WHO to call on the world to show compassion and kindness towards the mental well-being of others. In response to this call, extant linguistic studies have focused much attention on mental illness detection through language and mental illness manifestation on social media with little attention however paid to the pragmatic strategies deployed by mental health medical practitioners during diagnosis and treatment processes of mental health patients in Nigeria. Adopting a qualitative research design, data garnered from Neuropsychiatric Hospital, Aro, Abeokuta, Nigeria were subjected to a pragmatic analysis. Findings from this studies show that pragmatic acts – counselling, interjectory, suggesting, inquiring, re-assessing and promising, are relevant pragmatic strategies that effectively function to aid diagnosis and treatment of mental health patients in Nigeria. These findings extend Coppersmith et al (2015) and Seitz’s (2016) positions that investigating mental illness through language advances research in mental health. The identified pragmatic acts/functions therefore emphasise the importance of language use in mental health discourse and the readiness Nigerian mental health workers’ to positively respond to (mental health) patients’ medical needs. By extension, this study has therefore been able to (re)emphasised that diagnosis and treatment of mental health patients dealing with other major diseases, such as cancer and Alzheimer’s can be enhanced through appropriate positive use of pragmatic language acts such as – counselling, inquiring, re-assessing, encouraging, showing medical concern, promising and assuring.

**Abbreviations**

MHPs	Mental health patients
REL	Relevance
SSK	Shared situational knowledge
REF	Reference
INF	Inference
WHO	World Health Organization
DSM	Diagnostic and Statistical Manual
MCI	Mild cognitive impairment
NLP	Natural Language Processing
ADHD	Attention deficit hyperactivity disorder
PTSD	Post-traumatic stress disorder
OCD	Obsessive compulsive disorder
SAD	Seasonal affective disorder
VCE	Voice
MPH	Metaphor
D	Doctor
PM	Patient' s mother

**REFERENCES**

- Ahmed, Y.A., Ahmad, M.N., Ahmad, N. & Zakaria, N.H. (2019). Social media for knowledge-sharing: a systematic literature review. *Telematics and informatics*, 37.72-112. doi: 10.1016/J.TELE.2018.01.015
- American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders: DSM-5*. Washington, DC: American Psychiatric Association.
- Coppersmith, G., Dredze, M., Harman, C. & Hollingshead, K. (2015). *Proceedings of the 2<sup>nd</sup> Workshop on Computational Linguistics and Clinical Psychology: From Linguistic Signal to Clinical Reality*, pg.1-10. Denver: Association for Computational Linguistics.
- De Zulueta, C.F. (2007). Mass violence and mental health: attachment and trauma. *International Reviews of Psychiatry*, 19.221-233.
- Deacon, B. (2013). The biomedical model of mental disorder: a critical analysis of its validity, utility, and effects on psychotherapy research. *Clinical Psychology Review*. 33.846-861
- Emike, J. (2015). I am an ex-service man: towards defending Nigerian English pragma-lexico-semantic corpora. *American Research Journal of English and Literature*. 1.3:20-25.
- Erubami, J., Bebenimibo, P., Ezeah, G. & Muobike, O. (2023). Newspaper depiction of mental illness in Nigeria. *Journal of Public Health in Africa*. 14.11:15-27
- Gernsbacher, M.A., Morson, E.M. & Grace, E.J. (2016). Language and speech in autism. *Annual Review of Linguistics*, 2(1):73-93
- Gosselin, A. (2022). *Mental patient*. Massachusetts Institute of Technology Press: London.
- Hollingshead, K. & Hwang, J.D. (2016). Crazy mad nutters: the language of mental health. *Proceedings of the Third Workshop on Computational Linguistics and Clinical Psychology*, pg.52-62. San Diego: California.
- Mey, J. (2001). *Pragmatics: an introduction*. US: Blackwell.
- Miteva, D., Georgiadis, F., McBroom, L., Noboa, V., Quednow, Boris B. & Egger, S.T. (2022). Impact of language proficiency on mental health service use, treatment and outcomes: 'Lost in Translation'. *Comprehensive Psychiatry*. 114.1-9
- Odebunmi, A. 2008. Pragmatic Strategies of Diagnostic News Delivery in Nigerian Hospitals. *Linguistik Online*, 36.4
- Odebunmi, A. and Unuabonah, F. 2014. Defensive acts in a quasi-judicial public hearing. *Ibadan Journal of English Studies*. 10.105-128
- O' Reilly, M. & Lester, J.N. (2017). *Examining mental health through social constructionism: the language of mental health*. Palgrave Macmillan: London
- Roark, B., Mitchell, M. & Hollingshead, K. (2007). Syntactic complexity measures for detecting mild cognitive impairment. *Proceedings of the Workshop on BioNLP 2007*, pg.1-8. Omnipress: USA.
- Roark, B., Mitchell, M., Hosom, J. & Kaye, J. (2011). Spoken language derived measures for detecting mild cognitive impairment. In IEEE transactions on audio, speech, and language processing. U.S National Library of Medicine.
- Seitz, H. K. (2016). *Language as a measure of mental health*. Florida Institute for Human & Machine Cognition: U.S
- St Clair, M. C., Forrest, C. L., Yew, S. G. K., & Gibson, J. L. (2019). Early risk factors and emotional difficulties in children at risk of developmental language disorder: A population cohort study. *Journal of Speech, Language, and Hearing Research*, 62(8), 2750–2771.
- Stein, D.J., Shoptaw, S., Vigo, D., Lund, C., Cuijpers, P. & Maj, M. (2022). Psychiatric diagnosis and treatment in the 21st century: paradigm shifts versus incremental integration. *World Psychiatry*. 21(3):393-414.



- Stein, D. J., Palk A. C. & Kendler K. S. (2021). What is a mental disorder? An exemplar-focused approach. *Psychological Medicine*. 51, 894–901.
- Veryan, R. (2018). The importance of language in mental health care. *Lancet Psychiatry*, 5(6):460-461
- Wanying, G. (2023). Evolution and impact of psychological medicine: a holistic approach to mental health. *Journal of Medicine and Medical Sciences*. 14(3):1-3
- Welton-Mitchell, C., Dally, M., Dickinson, K., Morris-Neuberger, L., Roberts, J. & Blanch-Hartigan, D. (2023). Influence of mental health on information seeking, risk perception and mask wearing self-efficacy during the early months of the COVID-19 pandemic: a longitudinal panel study across 6 U.S. States. *BMC Psychology*. <https://doi.org/10.1186/s40359-023-01241-z>
- World Health Organization. (2000). *The ICD-10 classification of mental and behavioural disorders: Clinical descriptions and diagnostic guidelines*. World Health Organization: Geneva.
- World Health Organization. (2006). WHO-AIMS Report on Mental Health System in Nigeria, WHO and Ministry of Health, Ibadan, Nigeria. Geneva: WHO Press.
- World Health Organization. (2022). Mental health. Retrieved: <https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response>