

## **Conceptualisation of the Nature of Abnormal Behaviour among Residents of Kibera Informal Settlement In Nairobi County, Kenya: Implications For Mental Health Interventions**

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**Abstract:** Abnormal behaviour (i.e. behaviour symptomatic of mental illness) is on the increase globally, with one in every four persons in the world expected to be afflicted by one form of a mental or neurological disorder at some point in their lives. Although great advancements have been made in its understanding, abnormal behaviour is still misconceptualised by many individuals, sub-cultures and cultures world-wide. This study investigated how abnormal behaviour is conceptualised by residents of Kibera informal settlement in Nairobi County, Kenya; and the impact this conceptualisation was likely to have on the mental health intervention outcomes. The study adopted a cross-sectional survey design employing a concurrent mixed (triangulation) method of data collection. Purposive, stratified, simple random and snowball sampling techniques were used to select 433 study participants. A questionnaire and a focus group discussion (FGD) guide were used to gather quantitative and qualitative data respectively. Biopsychosocial (BPS) model and the 4<sup>th</sup> edition of Diagnostic & Statistical Manual of Mental Disorders (DSM-IV) informed formulation of study tools. Quantitative data were descriptively analysed using percentages, frequencies and mean scores while qualitative data were thematically analysed. Qualitative findings were corroborated with quantitative findings. The study established a misconception of the nature of abnormal behaviour among residents of Kibera informal settlement.

**Key words:** *Conceptualisation, Abnormal behaviour, Informal settlement, mental health interventions.*

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### **I. INTRODUCTION**

Across history and cultures, people have attempted for years to explain abnormal behaviour (Berrios, 1996; Roy, 2002; Sue & Sue 2004). This natural trend has resulted to multifaceted culture-specific beliefs and assumptions about what constitutes abnormal behaviour (Berrios, 1996; Roy, 2002; Sue & Sue 2004). For example, behaviour predominantly conceptualised as abnormal by ancient Egyptians included hysteria, disordered attention and melancholia (Mohit, 2001; Millon, 2004), and treatment interventions adopted for such behaviour included drugs, applying of bodily fluid, therapeutic retreats, music and exorcism. Behaviour predominantly conceptualised as abnormal by ancient Greeks on the other hand included aimless wondering, delusions and violence (Mohit, 2001; Millon, 2004) and treatment interventions adopted included drugs, talking therapy, blood-letting, incubation, exorcism and torture methods such as stoning, starvation and beatings. While these culture-specific views and assumptions on the nature of abnormal behaviour were and are still important in helping societies to deal with the problem of mental illness, they do not reflect a holistic (scientific) understanding of abnormal behaviour (Berrios, 1996; Roy, 2002; Sue & Sue, 2004), hence they could contribute to misconception of the concept.

Though abnormal behaviour still remains a contentious issue even in modern abnormal psychology great scientific advancement has been made in understanding of its nature and in treating it (Bennett, 2003; Comer, 2006; Davison, 2008; Hansell & Lisa 2005; Sue & Sue, 2004). Thus, proper conceptualisation of abnormal behaviour entails an understanding informed by an established scientific criterion; while misconception entails an understanding that deviates from the criterion (Bennett, 2003; David & Vincent, 2004; Hansell & Lisa 2005; Sue & Sue, 2004).

Due to lack of knowledge on the scientific explanation of abnormal behaviour and deeply-rooted cultural beliefs, misconception of the nature of abnormal behaviour is common in many cultures across the world especially in the low and middle income countries (LMICs) (WHO, 2005). Regrettably, misconception of the concept is associated with seeking of improper treatment intervention, belated scientific intervention and non-intervention for mental illness (Aino, 2004; Deribew & Tamirat, 2005; Martin, Andreoli, Pinto, Hourneaux,

Barreira, 2011; Nsereko, Kizza, Kigozi, Ssebunnya, Flisher, Cooper, 2011; Sorsdahl, Flisher, Wilson & Stein, 2000) which heightens the suffering for victims of mental illness.

Many definitions of abnormal behaviour including conceptual, practical and integrated do have been projected (Sue & Sue, 2004); however in view of abnormal psychologists, not provide a holistic basis for conceptualising the nature of abnormal behaviour (Sue & Sue, 2004; Comer, 2006; Davidson, 2008). Yet, a holistic conceptualisation of the nature of abnormal behaviour is essential in curbing non-intervention for mental illness (WHO, 2008).

Consequently, abnormal psychologists support the definition that conceptualises abnormal behaviour as ‘a behaviour that departs from some norm and that harms the affected individual or others,’ (Sue & Sue, 2004, p. 11); a definition that tallies with that of the 4<sup>th</sup> edition of the Diagnostic and Statistical Manual of Mental Disorders (*DSM*) which defines abnormal behaviour as “a clinically significant behavioural or psychological syndrome or pattern that occurs in an individual that is associated with present distress (for example, a painful symptom) or a disability (that is, impairment in one or more important areas of functioning) or with a significantly increased risk of suffering death, pain or disability, or an important loss of freedom” (4th ed., text rev.; *DSM-IV-TR*; American Psychiatric Association (APA), 2000).

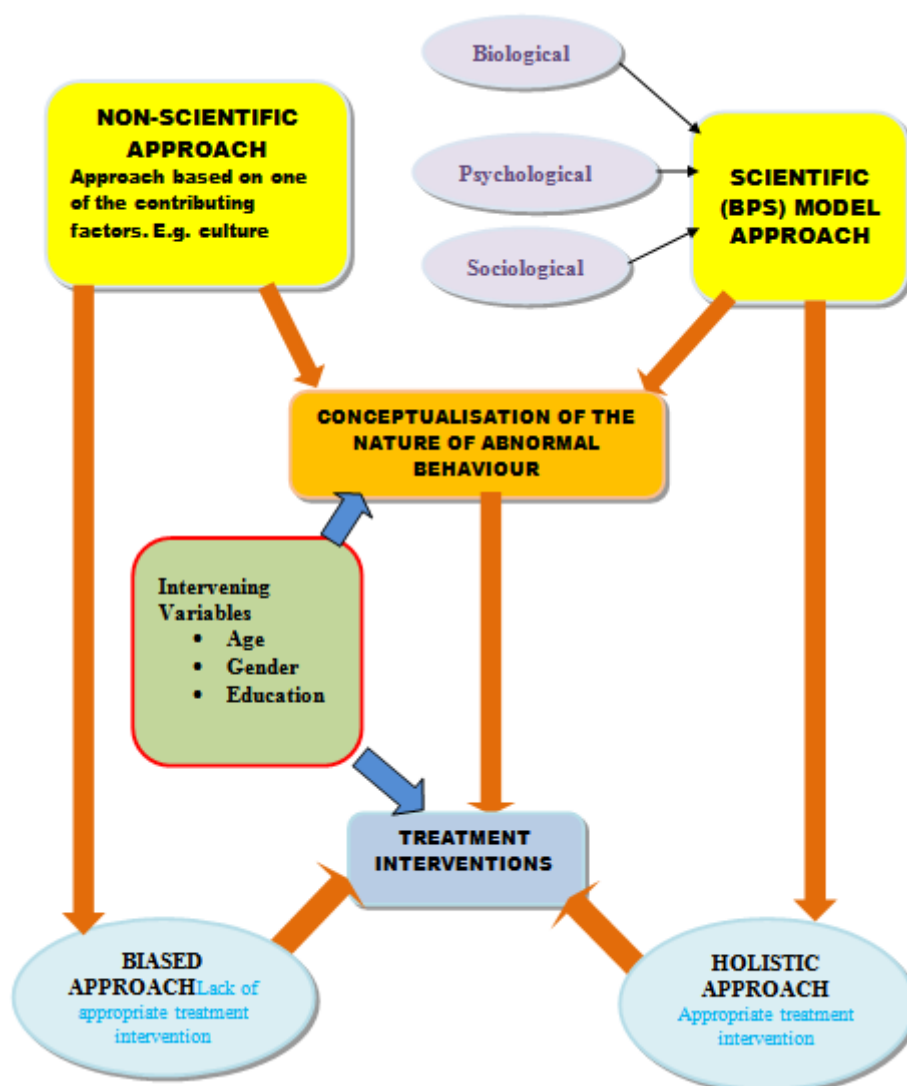
*DSM*, in view of abnormal psychologists, offers the most holistic criterion for conceptualising abnormal behaviour (Bennett, 2003; Davidson, 2008; David & Vincent; Hansell & Lisa 2005; Sue & Sue, 2004). *DSM* lists various mental disorders and the abnormal behaviour that characterise each of them. For example, key (psychotic) abnormal behaviours symptomatic of schizophrenia disorder are listed as delusions, hallucinations, disorganised speech and grossly disorganised behaviour in *DSM-IV-TR*. Regrettably, many cultures and sub-cultures do not view all abnormal behaviours listed in *DSM* as abnormal (Roy, 2002; Sue & Sue, 2004); implying that misconception of the nature of abnormal behaviour is still prevalent worldwide.

In many traditional cultures, only psychotic behaviour (where an individual is out of touch with reality) was viewed as abnormal (Berríos, 1996; Sue & Sue, 1990; Roy, 2002). This misconceptions still exists in many cultures. For example, Sorsdahl et al (2000) established that only psychotic behaviours were viewed as abnormal traditional healers in Mpumalanga, South Africa. Similar findings were also established by Aino (2004) in West Africa, Deribew & Tamirat (2005) in Ethiopia, Gureje, Lasebikan, Ephraim, Olley & Kola (2005) in Nigeria and Mburu (2007) in Kenya. In these studies, no treatment intervention was sought for people manifesting non-psychotic symptoms of mental illness. These findings raise a pertinent concern that there could be many individuals across cultures manifesting non-psychotic symptoms of mental illness, who are not helped to access any form of mental health intervention because they are not perceived as mentally ill.

Statistics indicate that a huge number of urban population worldwide is currently residing in informal settlements. For example, United Nations Human Settlements Program (UN-Habitat, 2008), estimates that about a third of the world’s estimated 6 billion people are urban residents who reside in informal settlements. Out of Nairobi’s estimated population of 3.5 million, more than 1.8 million (over 50% of the population) reside in informal settlements (UN-Habitat, 2006). Kibera informal settlement, where this study was conducted is the largest informal settlement in Kenya and one of the largest in Africa housing between 600,000 to 1.2 million people (UN-Habitat, 2006). Like any other informal settlement, Kibera manifests adverse characteristics of informal settlements across the world including overt poverty among residents; insecurity of tenure; poor structural housing conditions; deficient access to safe drinking water and sanitation; inaccessible, unavailable and unaffordable health care services; inadequate nutrition and severe overcrowding (Mutisya & Yarime, 2010; UN-Habitat, 2008; WHO, 2005). WHO (2005) observed that this adverse characterlogy of informal settlements makes residents of informal settlements more vulnerable to abnormal behaviour compared to other populations. This observation is supported by studies conducted in different informal settlements across the world (e.g. Ezpeleta, Guillaón, Granero, de la Osa, María & Moya, 2007; Martin et al., 2011; Puertas, Ríos & del Valle, 2006 & Ndeti & Aillon, 2010) which found a high prevalence of abnormal behaviour among residents of informal settlements in Columbia, Brazil, Spain and Kenya respectively. These outcomes informed the choice of the study location.

Moreover, it’s widely conjectured that this adverse characterlogy of informal settlements makes residents of informal settlements to normalise abnormal behaviour. However, little empirical data was available at the time of this study to support or dispute this claim. Most studies conducted on abnormal behaviour among residents of informal settlements focused on its other aspects such as its prevalence and stigma rather than on conceptualisation of its symptomatology. Moreover, studies focusing on this aspect mostly targeted populations outside Africa. It’s against this background therefore that the researcher chose to conduct this study whose purpose was investigate how residents of Kibera informal settlement in Nairobi County, Kenya conceptualise abnormal behaviour; and to analyse the implications of this conceptualisation for mental health interventions.

Below is the conceptual framework that guided the study:



**Figure 1.1** Conceptual framework

The nature of abnormal behaviour was the independent variable while treatment interventions were the dependent variable. It was conjectured that how residents of Kibera conceptualised the nature of abnormal behaviour would influence their treatment intervention outcomes for mental illness. Treatment outcomes could either be scientific (biopsychosocial) or non-scientific (based on other contributing factors such as culture).

## II. RESEARCH METHODOLOGY

The study adopted a community based cross-sectional survey design employing a concurrent mixed (triangulation) method of data collection to gather data from 433 residents of Kibera informal settlement in Nairobi, County, Kenya. Permission to conduct the study was sought from the Kenya National Commission for Science Technology and Innovation (NACOSTI). Informed consent was sought from the participants. The respondents were aged between 13 to 65 years and they had a minimum of class 8 education. Kibera informal settlement was purposively selected based on its high population and a diverse multi-ethnic composition (UN-Habitat, 2008; Umande Trust, 2007). Stratified, simple random and snowball sampling techniques were used to select the study participants. Quantitative data was gathered using a questionnaire while qualitative data was gathered using a FGD guide. FGD sample size ( $n=48$ ) was arrived at based on proposal by Creswell (2003) who proposed 3-6 focus groups each having 6-12 participants to complement quantitative data in a mixed research design.

Questionnaire sample size (n=385) was arrived at using Kathuri&Pals (1993) formula of sample determination:

$$n = \frac{\chi^2 NP}{(1-P)}$$

$$\sigma^2 (N - 1) + \chi^2 P (1 - P)$$

Where:

n = required sample size

N = the given population size from the sampling frame which was assumed to be more than 100,000

P = Population proportion, assumed to be 0.50

$\sigma^2$  = the degree of accuracy whose value is 0.05

$\chi^2$  = Table value of chi-square for one degree of freedom, which is 3.841

Questionnaire participants were issued with abnormal behaviours indicative of five mental illnesses (schizophrenia/psychotic, mood, alcohol use, anxiety and neurodevelopmental disorders) and they were required to indicate (by ticking Yes/No) whether the behaviours were in their view normal or abnormal. Construction of the tool was informed by *DSM-IV-TR* and BPS model. Cronbach's Coefficient Alpha was used to determine the internal consistency of the items in each group. A correlation coefficient ranging from 0.764-0.871 (which indicated a high internal consistency among the measurement items) was established for all cluster of items indicative of various mental disorders as shown on table1:

**Table 1: Cronbach's Alpha Reliability Statistics**

Mental Disorder	Cronbach's Alpha	No. Of Items
Schizophrenia/Psychosis Disorder Index	.764	11
Alcohol Use Disorder Index	.767	3
Anxiety Disorders Index	.854	9
Mood Disorders Index	.870	12
Developmental Disorders Index	.814	8

FGD participants were requested to share behaviour that they perceived to be symptomatic of mental illness. The researcher self-administered the two instruments with the help of trained research assistants. Triangulation enhanced the validity of the findings. Quantitative data was analysed using frequencies, percentages and mean scores, while qualitative data was thematically analysed. Qualitative data was corroborated with quantitative data.

### III. RESULTS AND DISCUSSIONS

A total of 433 residents of Kibera informal settlement in Nairobi county, Kenya, of different demographic characteristics participated in this study: Questionnaires (n=385); and FGDs (n=48). Presented below are the participants' demographic characteristics:

**Table 2: Demographic Characteristics of the Participants**

Gender		
Frequency		%
Male	217	50.1
Female	216	49.9
<b>Total</b>	<b>433</b>	<b>100.0</b>
Age		
Frequency		%
13-18	56	13.0
19-35	211	48.7
36-50	149	34.4

<b>Gender</b>		
<b>Frequency</b>		<b>%</b>
51-65	17	3.9
<b>Total</b>	<b>433</b>	<b>100.0</b>
<b>Education</b>		
<b>Frequency</b>		<b>%</b>
Class 8	186	43.0
Form 4	133	30.7
College	58	13.4
University	56	12.9
<b>Total</b>	<b>433</b>	<b>100.0</b>

Of the 433 study participants 50.1% were male while 49.9% were female. Majority of the participants (61.7%) were aged 13-35 years, followed by those aged 36-50 (34.4%) and finally those aged 51-65 years (3.9%); implying that the informal settlement population is predominantly youthful as observed by UN-Habitat (2008). Majority of the participants (43.0%) had class eight education; followed by those with form four education(30.7%). Only 13.4% and 12.9% of the participants had college and University education respectively. Low levels of education often characterise informal settlement populations (UN-Habitat, 2008).

The participants were presented with various behaviours symptomatic of various mental illnesses ( $n=43$ ); and were requested to indicate whether in their view, these behaviours were abnormal (i.e. diagnostic symptoms of mental illness) or normal (i.e. not diagnostic symptoms of mental illness). The diagnostic symptoms were distributed as follows for each mental disorder category.

**Table 3: Distribution of Abnormal Behaviours per Mental Disorder Category**

<b>Mental Disorder Category</b>	<b>No. of Items</b>
Schizophrenia/Psychosis	11
Alcohol Use	3
Anxiety	9
Mood	12
Neurodevelopmental	8
<b>Total</b>	<b>43</b>

To further inform this objective, qualitative data were gathered using 6 focus group discussions. These findings are presented and discussed next.

**Table 4: Top 10 Behaviours Highly Conceptualised as Abnormal**

<b>Behaviour (n=43)</b>	<b>Abnormal</b>		<b>Normal</b>		<b>Total</b>		<b>Mental Disorder Category</b>
	<b>F</b>	<b>%</b>	<b>F</b>	<b>%</b>	<b>F</b>	<b>%</b>	
	Removing clothes in public	368	96.1	15	3.9	383	
Talk that does not make any sense at all	332	87.8	46	12.2	378	100.0	Schizophrenia/ Psychosis
Talking to oneself continuously	330	87.8	46	12.2	376	100.0	Schizophrenia/ Psychosis
Physically attacking people for no reason at all	334	87.7	47	12.3	381	100.0	Schizophrenia/ psychosis

A person believing that he/she is a messiah like Jesus or another popular personality (while this is not true)	325	86.7	50	13.3	375	100.0	Schizophrenia/ Psychosis
Having frequent thoughts of killing oneself	326	86.0	53	14.0	379	100.0	Mood Disorder
Loss of awareness of where one is	324	85.5	55	14.5	379	100.0	Schizophrenia/ psychosis
Wondering behaviour (Walking without a specific idea of where one is going)	314	83.5	62	16.5	376	100.0	Schizophrenia/ Psychosis
Hearing/Seeing/smelling things that are not there	313	82.2	68	17.8	381	100.0	Schizophrenia/ Psychosis
Killing oneself	312	81.9	69	18.1	381	100.0	Mood disorder

The study found that 80% of the behaviours that were highly conceptualised as abnormal were all psychotic behaviours (i.e. behaviours where an individual is out of touch with reality) usually predominantly symptomatic of full blown schizophrenia/psychotic disorders. Only 20% of the highly supported behaviours were non-psychotic in nature (symptomatic of mood disorders) and these were ‘having frequent thoughts of killing oneself’ and ‘killing oneself,’ both symptomatic of mood disorders. Non-psychotic behaviours symptomatic of alcohol use, anxiety and neurodevelopmental disorders were not among the top 10 highly supported behaviours.

To obtain more inclusive results, further descriptive analysis based on mean scores of the five mental disorder categories was done using all the abnormal behaviours ( $n=43$ ). Since all behaviours presented to the respondents were abnormal, the higher the mean score a mental disorder category recorded, the more the behaviours presented under that mental disorder category were conceptualised ‘abnormal’ (i.e. as being symptomatic of mental illness). The reverse also applied for ‘normal’ category. These findings are presented on table 5.

**Table 5: Conceptualisation of the Nature of A.B. by Mean Scores (n=385)**

Mental Disorder Category	Maximum	Normal Index Mean	Maximum	Abnormal Index Mean	Std Deviation
Schizophrenia/Psychotic Disorders	100.00	15.67	100.00	84.33	19.30
Mood Disorders	100.00	30.78	100.00	69.22	28.53
Alcohol Use Disorder	100.00	30.98	100.00	69.02	38.08
neurodevelopmental Disorders	100.00	34.66	100.00	65.34	30.55
Anxiety Disorders	100.00	34.69	100.00	65.31	31.66
<b>Combined mean scores</b>	<b>100.00</b>	<b>29.36</b>	<b>100.00</b>	<b>70.64</b>	<b>27.60</b>

Schizophrenia/psychotic disorders got the highest ‘abnormal’ mean score of 84.33; implying that behaviours in that category were predominantly conceptualised as symptomatic of mental illness by the respondents. This implied that predominantly, residents of Kibera understood mental illness on the basis of its psychotic nature. Surprisingly a substantial number of respondents (mean=15.56), perceived psychotic behaviours as normal. Psychotic behaviours are often the most advanced and overt diagnostic symptoms of mental illness (Bennett, 2003; Sue & Sue); hence this outcome raises a pertinent concern. The outcome could either mean that the respondents didn’t understand the items presented or that they lacked basic understanding of the concept of mental illness. The mental disorder categories (mood, alcohol use, neurodevelopmental and anxiety disorders) often characterised by non-psychotic abnormal behaviour recorded substantially high ‘normal’ mean scores (mood: mean=30.78; alcohol use: mean=30.98; neurodevelopmental: mean=34.66;

anxiety: mean=34.69); which was an indication that a substantial number of respondents lacked a proper understanding of the non-psychotic nature of abnormal behaviour.

Qualitative findings from FGDs corroborated these findings. All the top 10 behaviours cited by the FGD respondents were psychotic behaviours, with the most frequently cited behaviours being: 'talking to oneself,' 'walking naked' and 'wondering around.' For example, below are some verbatim responses in reference to a question that required FGD respondents to cite behaviours that they had witnessed in Kibera and that were in their opinion symptomatic of mental illness. The verbatim response contained only psychotic behaviours:

'The behaviours that I see here in Kibera that in my opinion show that a person has a mental problem are [pause].....let me say...walking around aimlessly, walking naked, talking and laughing alone, beating people, eating dirty food.....and sometimes stealing food and running away with it while laughing loudly....on my side those are mostly the behaviours that show that a person has a sick mind.' [Female, 49 years].

FGD respondents, even when prompted, found it difficult to cite non-psychotic behaviours as being symptomatic of mental illness. For example when prompted to give other behaviours indicative of mental illness not mentioned in the above excerpt a respondent gave this verbatim response:

'I will also say that these behaviours that my colleagues have mentioned are the ones that I had in mind. But...eeh....I have seen some people who just sit somewhere looking at one place for a long time without moving and without attacking anyone. Many people here in Kibera don't think this is a sign that a person is mentally sick. But in my opinion, I think such people are not okay in the mind. This is the only other behaviour I can think of apart from those already mentioned.' [Male, 26 years].

These findings overall revealed that residents of Kibera lacked a proper understanding of non-psychotic nature of abnormal behaviour. Literature in abnormal psychology reveals that because symptoms of mental disorders often overlap, most mental disorders are often characterised by non-psychotic symptoms at the onset (Comer, 2006; Davidson, 2008; Hansell & Lisa; 2005; Roy, 2002, Sue & Sue, 2004). For example, at the onset, schizophrenia and psychotic disorders are often characterised by non-psychotic symptoms such as social withdrawal, depressed mood, sleep disturbances, anxiety, decline in functioning at school, work or self-care, reduced emotional expression and hostility or suspiciousness (Harrigan, McGorry & Krstev, 2003; Smith et al., 2010). Psychotic symptoms more often than not, only manifest at the later stages of progression of these disorders (Ndeti, 2008; Smith et al., 2010). Thus, ability of respondents to conceptualise psychotic behaviours as abnormal does not necessarily imply a proper understanding of the nature of abnormal behaviour. In view of abnormal psychologists, proper understanding of the nature of abnormal behaviour entails the ability to properly identify early (non-psychotic) symptoms of mental illness (Harrigan et al., 2003; Smith et al., 2010). Past studies established a misconception of non-psychotic nature of abnormal behaviour in other cultures and sub-cultures (Aino, 2003; Deribew & Tamirat, 2005; Mburu, 2007; Nsereko, et al., 2011; Sorsdahl, et al., 2000).

Research has found that misconception of the nature of abnormal behaviour often results from lack of scientific knowledge on the concept of mental illness (Martin et al., 2011; Ndeti et al., 2009) and negative cultural influences (Kapungwe et al., 2010; Ssebunnya et al., 2009). The two factors could account for the misconception established in this study. Low levels of education, which characterise informal settlements, could have limited the residents of Kibera from accessing scientific knowledge on the concept of mental illness hence the misconception. Moreover, there is a possibility that the adverse informal settlement sub-culture (highlighted earlier) often characterised by over exposure to abnormal behaviour could have influenced the residents of Kibera to normalise abnormal behaviour.

Ndeti (2008) & Harrigan et al (2003) observed that ability to detect early symptoms of mental illness is associated with seeking of early (scientific) intervention; which is a positive mental health outcome because it is associated with a positive prognosis for mental illness. Past studies have associated misconception of non-psychotic nature of abnormal behaviour with several mental health outcomes including seeking of non-scientific intervention, late (scientific) intervention and non-intervention for mental illness altogether (Deribew & Tamirat, 2005; Kapungwe et al., 2010; Martin, et al., 2011; Sorsdahl et al., 2000; Ssebunnya et al., 2009). For example, Martin et al (2011) found that the people of Santos informal settlement in Southeastern Brazil did not treat people who manifested abnormal behaviour any differently from people with normal behaviour as they did not perceive these people as different from themselves; implying that the residents of Santos had normalised abnormal behaviour; an outcome that hindered them from seeking treatment for victims of mental illness. Thus, based on the findings of this study, victims of mental illness in Kibera maybe subjected to all the aforementioned negative mental health outcomes. Suffice to say these negative outcomes have been associated with intense physical and emotional suffering, disability and even death for victims of mental illness (Nsekero et al., 2011; Ssebunnya et al., 2009; WHO 2008).

#### IV. CONCLUSIONS AND RECOMMENDATIONS

The study has established crucial findings that there is a misconception of the nature of abnormal behaviour among residents of Kibera informal settlement. This implies that victims of mental illness in Kibera are likely to undergo intense suffering associated with improper, late or non-treatment for mental illness. The misconception established by this study is thus a pertinent mental health concern that requires redress. This study recommends structured educational program on mental health for the residents of Kibera informal settlement aimed at correcting this misconception. The program should help the residents to understand the non-psychotic nature of abnormal in order to enhance seeking of early intervention behaviour among residents of Kibera. Comparative studies are suggested to establish if differences exist in how residents of informal and formal settlements conceptualise abnormal behaviour.

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