De-escalation skills among the Caregivers of Persons with Severe Mental Illness

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Method Article

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Abstract

Abstract

Background and Purpose: Aggressive behaviour and mental illness are inextricably linked though all the persons with severe mental illness (SMI) do not show aggressive behaviour at any point of time during the illness. Most often the family members are helpless to manage the aggressive behaviour. De-escalation skills are regarded as the immediate healthy response to aggressive behaviour in health care settings. The current study attempts to identify how the caregivers are managing the aggressive behaviour and the relationship between de-escalation skills and expressed emotion through using the behavioural theory framework.

Method: The caregivers of Persons with SMI will be recruited for the study based on the diagnosis by a consultant psychiatrist according to the criteria of ICD-10. The standardised tools will be administered to 194 caregivers of a person with SMI depending on the inclusion criteria. Qualitative data will be analysed by using content analysis and quantitative data will be analysed by testing for normality and accordingly using parametric and non-parametric tests.

Implication : The study would help to understand the caregivers' response to the aggressive behaviour of the persons and the attitude towards a person with SMI and its relationship with each other. The development of a leaflet would help in equipping the caregivers to manage potential aggressive behaviour among the person with SMI. Therefore, it would help to reduce the discrimination and isolation experienced by the person with SMI due to their aggressive behaviour as well as the burden of the caregiver who provides care to the person with SMI.

Introduction

Introduction

Severe mental illness can be defined based on the duration, diagnosis, as well as disability, produces by the illness. Psychiatric disorders such as schizophrenic spectrum and bipolar spectrum disorders comprise severe mental illness with a minimum duration of two years (Wiersma, 2006). One of the major symptoms, that is obvious in severe mental illness is aggressive behaviour. However, all individuals with mental illness do not always show aggressive behaviour. It is heterogeneous and often seen as both destructive and maladaptive. It represents a clinical challenge for the mental healthcare provider.

Aggression is often a reason for psychiatric hospitalisation, and it often leads to prolonged hospital stays and increased stigmatisation (Pompili et al., 2017). Over several years the researchers suggest that the risk of aggressive behaviour in severe mental illness is nearly twofold compared to the general population (Volavka, 2014). The research in the area suggests that the major reason for aggressive behaviour is not only the personal factors but there are associated with situational factors as well (Joyal et al., 2011).

The commonest probable precipitants of aggressive behaviour include hallucinations, demanding discharge from the hospital, attempting to abscond, reaction to a confrontational interview, impulsivity, and reaction to unmet demands. Mental health practitioners, as well as caregivers, should be equipped with the necessary skills in managing aggressive and potentially aggressive patients (Amoo & Fatoye, 2010). One of the preventive strategies for aggressive behaviour is considered mastery over de-escalation. De-escalation is the recommended first-line response to potential violence and aggression in healthcare settings. Mental health settings were the most commonly reported environment in which de-escalation occurs and it is a collective term for a range of interwoven components comprising communication, self-regulation, actions, and safety maintenance which aims to extinguish or reduce patient aggression/agitation irrespective of its cause and improve caregiver-patient relationships while eliminating or minimizing coercion or restriction (Hallett & Dickens, 2017). To minimize the potential for harm, an episode of escalating aggression needs to be promptly defused using de-escalation techniques as the first resort intervention measure (Spencer & Johnson, 2016).

The attitude of the family members can also affect the maladaptive responses of the person with severe mental illness. The attitude of the family members towards persons with mental illness can be best explained using expressed emotion. Expressed Emotion (EE) is one of the key factors while arriving at the prognosis of a patient with mental illness, it reflects a family's general attitudes towards a patient (King et al., 2003). One of the studies conducted among the caregivers of patients with mental illness found that aggressive behaviour is one of the predictor variables for the caregivers' negative attitude towards mental illness (Gabra et al., 2020). Besides the area of abnormal behaviours (non-restrained aggressive behaviour, weak cognitive control, and bizarre behaviour) showed a worsening of negative attitudes towards mental illness (Mehrotra et al.,2018). Most studies found that if a relative of an individual with schizophrenia had a high level of EE and was in close contact with that person, then the patient was at greater risk for experiencing an increase in symptomatology (Hall & Docherty, 2000). A survey conducted on families of patients with schizophrenia reported that offensive behaviour, rudeness, and violence were most distressing for the caregivers (Haque Nizamie et al., 2006).

Therefore, in the current study researcher is trying to find out the association between aggressive behaviour, de-escalation skills and expressed emotion. Thus, to develop information material for

assisting the caregivers in managing the aggressive behaviour.

Aggressive Behavior in Severe mental illness

Prevalence

Most of the studies focused on the prevalence of aggressive behaviour, however, the prevalence was found to be slightly different due to the various parameters such as sample size, type of aggression, symptom severity, and time frame. Patients who have severe mental illness are found two to three times more likely to be assaultive compared to people without such illness (Fazel et al., 2009). While comparing the prevalence of aggressive behaviour among the persons with mental illness in different countries: there was a study conducted in China showed that the prevalence of aggressive behaviour in the patients who were staying in psychiatric wards ranged between 15.3% and 53.2% with a pooled prevalence of aggression 35.4% and the major risk factors for aggression reported were positive psychotic symptoms and involuntary admission (Zhou et al., 2016). A study, which was conducted in Canada showed that the occurrence of aggression for the year was 14.8% (Bobes et al., 2009) whereas, in a cross-sectional study which had been conducted in the United States, the rate of aggression was 40.9% in persons with schizophrenia. Similarly, in persons with schizophrenia, the prevalence of aggressive behaviour was 40.9% (Noffsinger & Resnick, 1999). Most of the studies showed a weak association between gender and violence (Pescosolido et al., 1999; Vevera et al., 2005). However, some studies threw light on the fact that aggressive behaviour among patients with mental illness was higher among males than females (Araya et al., 2020). There was also a study that reported that among the females the aggressive behaviour was more in the form of verbal aggression (Krakowski & Czobor, 2004). Aggression is a disposition, a willingness to inflict harm, regardless of whether this is behaviourally or verbally expressed and regardless of whether physical harm is sustained.

Factors associated with aggressive behaviour among the patients with severe mental illness

A study conducted at Columbia shows that the risk of aggressive behaviour increases with medication noncompliance, alcohol use, previous aggressive behaviour, being single, low social support, residents of urban areas, and delusion of persecution. A cross-sectional study has been conducted in Ethiopia among the patients with schizophrenia about the factors influencing aggressive behaviour and it found that being a male person, unemployed, previous history of aggression, psychotic symptoms, drug non-adherence poor social support and alcohol use were significantly associated with aggressive behaviour (Araya et al., 2020). A retrospective cross-sectional study conducted among persons with cognitive impairments found that the factors influencing aggression tend to have cognitive, communication, and mobility difficulties (Schnelli et al., 2021). A retrospective study happened in England and Wales based on secondary data that was funded by the National Institute of Health Research has found that the economic impact of violence perpetrated by individuals with severe mental illness is potentially important. The largest contributors to the cost of violent crime perpetrated by

individuals with severe mental illness were the cost of physical and emotional harm to victims followed by lost productivity of victims. So, preventing violence, through services for individuals with co-morbid substance use and reducing recidivism might lead to cost savings at a governmental and individual level, in addition to the clinical and societal benefits (Senior et al., 2020).

De-escalation skills

De-escalation refers to a psychosocial intervention for managing people with disturbed or aggressive behaviour (Du et al., 2017). These are the skills used for managing aggressive or agitated persons. De-escalation is a first-line response to potential violence and aggression in health care settings. Janet et.al in 2012 conducted a study and suggested that verbal de-escalation should follow certain objectives while managing an aggressive patient (1) ensure the safety of the patient, staff, and others in the area; (2) help the patient manage his /her emotions and distress and maintain or regain control of his/her behaviour; (3) avoid the use of restraint when at all possible, and (4) avoid coercive interventions that escalate agitation. But most of the time clinicians tend to follow seclusion and restraint (Holloman & Zeller, 2012; Richmond et al., 2012). Some studies that exploring the de-escalation skills among the nursing staff mostly in developed countries. A study has been conducted among nurses to find out the effectiveness of de-escalation training in acute care settings and by using the paired 't-test found that there is a significant difference in their confidence in coping with aggressive patients regardless of their age, education, and years of experience (Ferrara et al., 2017).

Concept analysis has been done based on Rodgers' evolutionary approach to clarify the concept of de-escalation of violence and aggression as described within the healthcare literature. Multiple nursing and healthcare databases were searched using relevant terms and 79 studies were included. Mental health settings were the most commonly reported environment in which de-escalation occurs as per the nursing research (Hallett & Dickens, 2017). The use of seclusion is considered to be an encroachment on human rights and dignity which can cause psychological trauma and physical injury to patients in the psychiatric setting. Hence the team STEPPS (Team strategies and tools to enhance performance and patient safety) adopted a quasi-experimental design to train the nurses about verbal de-escalation to reduce patient aggressive behaviour that can lead to patient seclusion. After the implementation of the training program, there was a statistically significant difference in the rate of charting aggressive behaviour ($p = 0.024$). The pre rate was 17.3%, and the posted rate was 11.4%. While there was not a statistically significant difference in the rate of seclusion events, ($p = 0.349$) there was a clinically significant reduction. The pre rate was 5.9%, and the posted rate was 4.4%. The results of this study support the importance of training psychiatric nurses on verbal de-escalation to reduce patients placed in seclusion and decrease patients' aggressive behaviour in psychiatric settings (Haefner et al., 2021).

The consensus statement from the American Association for Emergency Psychiatry Project BETA de-escalation workgroup estimates that effective de-escalation of an aggressive episode, to return the agitated person to a calm state, should take approximately five to ten minutes. De-escalation, therefore, is intended to ameliorate the immediate aggressive episode and is not associated with longer-term benefits (Richmond et al., 2012). There is a cluster randomized control trial conducted in China to evaluate the effectiveness of de-escalation training. It is a 6-month follow-up study after the end of the intervention, participants in the control group will be assigned to routine workplace violence management training, and participants of the intervention group will undergo the same training while additionally receiving de-escalation training. The de-escalation training consisted of the following five modules: communication, response, solution, care, and environment (CRSCE). Primary outcomes are objective clinical indicators, which are planned to extract from the information systems of the enrolled hospitals. Secondary outcomes aim at evaluating the effects of DE training on nurses, including the capacity for de-escalation, de-escalation confidence, level of job burnout, and professional quality of life. Data is planned to collect at baseline, at 3 months, and at 6 months after intervention (Ye et al., 2020). The results of the study are not available since the study is not yet completed. There are very few studies that examined the effectiveness of DE training that too for psychiatric nurses.

Expressed Emotion

Expressed emotion (EE) refers to an adverse family environment, especially the quality of interaction patterns and nature of family relationships among the family caregivers and patients of schizophrenia and other psychiatric disorders. It has been popularised by George Brown and his colleagues, that EE reflects the extent to which the primary caregivers of an identified patient express critical, hostile, or emotionally over-involved attitudes toward the patient (*PsycNET*, n.d.). One of the meta-analyses by considering 27 studies of the Expressed emotions' outcome relationship in schizophrenia revealed that the EE is a significant and robust predictor of relapse in schizophrenia and also the EE-relapse relationship was strongest for patients with more chronic schizophrenic illness (Butzlaff & Hooley, n.d.). A review of EE in a different culture has proven that it has different significance for families from different cultural backgrounds and had differential power in predicting the outcome of schizophrenia (Hashemi & Cochrane, 1999). The studies from India also report that the EE is modulated by multiple factors such as personality profile, attribution factors by caregivers toward patient symptoms, and patient's vulnerability to stress, etc. The studies highlight the fact that psychosocial assessment and interventions specifically focused on family psychoeducation can potentially reduce high EE and relapse of symptoms as well (Amaresha & Venkatasubramanian, 2012). A meta-analysis has been conducted on the EE, and it is found that there is high expressed emotion in the families but the relationship between EE and relapse has not been studied and explored further (Sadath et al., 2019). Hence it is necessary to have an idea about how expressed emotion plays a role in determining the behaviour of the person with mental illness and in the worsening of the symptoms.

Knowledge Gap and Need for the study

Aggressive behaviour is considered to be one of the reasons for seeking acute and emergency care, which is estimated to occur in three to ten per cent of psychiatric patients (Amoo & Fatoye, 2010). Indeed, studies reporting the contributing factors to the prevalence of aggressive behaviour in mental health settings other than the symptomatology are still known little. The social and contextual/familial factors are not emphasized whereas studies focused more on symptomatology as the reason for aggressive behaviour. However, some studies attempted to assess the antecedent social factors in in-patient treatment units and highlighted social/structural antecedents such as ward atmosphere, lack of clinical leadership, overcrowding, ward restrictions, lack of activities, and poorly structured activity transitions (Stuart, 2003). The increased aggressive behaviour often results in stigma and institutionalisation of the person with mental illness. Most family caregivers lack the skills for managing the patient with aggressive behaviour. Nevertheless, the caregivers' immediate management of the aggressive behaviour is understudied. The studies related to de-escalation training for mental health professionals and its effectiveness have been conducted in developed countries, but not in developing countries like India. Considering our socio-cultural context, the duty of caregiving is solely embedded in family caregivers. So it is the need of the hour to study the caregiver's skills in the immediate management of aggressive behaviour and the other family factors which contribute to the aggressive behaviour of the person with SMI. There is a scarcity of information material available exclusively for the caregivers for improving the de-escalation skills or immediate management of a person with aggressive behaviour.

Though there are studies that assessed the general attitude of the caregivers towards mental illness and its relationship with caregiver burden. But there is a paucity of studies examining the relationship between the family members' attitudes and the aggressive behaviour of the persons with SMI. Thus there is a dearth of evidence in the areas such as skills needed for the management of aggressive behaviour, and familial or situational attitude towards persons with mental illness, especially in a developing country like India. Hence, the current study would try to uncover the above-mentioned factors which are being less explored.

Theoretical Framework

This study will mostly focus on exploring and developing a leaflet for the de-escalation skills in aggressive behaviour from the perspective of behaviour theory and attribution theory. For understanding and explaining the aggressive behaviour ABC approach or the Behaviour theory will be used. However, to change the antecedent or the consequence in the caregiver will be using attribution theory.

Behaviour Theory

The behavioural perspective is one of the prominent psychological approaches that try to understand development as an interaction between observable behaviour and external stimuli in the environment. Behaviourism emerged early in the 20th century and was championed by psychologists such as John B. Watson (1878–1958) and B. F. Skinner (1904–1990). Behaviourism rejected any reference to the mind and viewed overt and observable behaviour as the proper subject matter. Through the scientific study of behaviour, it was hoped that laws of learning could be derived that would promote the prediction and control of behaviour.

Skinner believed that behaviour is motivated by the consequences received for the behaviour: the reinforcements and punishments. His idea that learning is the result of consequences is based on the law of effect, which was first proposed by psychologist Edward Thorndike. According to the law of effect, behaviours that are followed by consequences that are satisfying to the organism are more likely to be repeated, and behaviours that are followed by unpleasant consequences are less likely to be repeated (Thorndike, 1911). Essentially, if an organism does something that brings about a desired result, the organism is more likely to do it again. If an organism does something that does not bring about the desired result, the organism is less likely to do it again.

Attribution Theory

Attribution theory is concerned with how individuals interpret events and how this relates to their thinking and behaviour. Heider (1958) was the first to propose a psychological theory of attribution, but Weiner and colleagues (e.g., Jones et al, 1972; Weiner, 1974, 1986) developed a theoretical framework that has become a major research paradigm of social psychology. Attribution theory assumes that people try to determine why people do what they do, i.e., attribute causes to behaviour. A person seeking to understand why another person did something may attribute one or more causes to that behaviour. A three-stage process underlies an attribution: (1) the person must perceive or observe the behaviour, (2) then the person must believe that the behaviour was intentionally performed, and (3) then the person must determine if they believe the other person was forced to perform the behaviour (in which case the cause is attributed to the situation) or not (in which case the cause is attributed to the other person). There were two main ideas that he put forward that became influential: dispositional (internal cause) vs situational (external cause) attributions. Dispositional attribution assigns the cause of behaviour to some internal characteristic of a person, rather than to outside forces. When we explain the behaviour of others we look for enduring internal attributions, such as personality traits. This is known as the fundamental attribution error. The process of assigning the cause of behaviour to some situation or event outside a person's control rather than to some internal characteristic.

In the current study, the researcher assumed that the aggressive behaviour of a person with SMI can be explained under psychopathology but the attitude of the family members towards them can be a maintaining factor too. Considering the perspective of de-escalation skills and expressed emotions, both can act as a differential reinforcement technique to modify the behaviour of a patient to a desirable one and also need to reattribute the response of the caregiver to a supportive one.

Reagents

Aim: To study the relationship between de-escalation skills, expressed emotion and aggressive behaviour among the caregivers of persons with severe mental illness.

Objectives :

· To assess the types and severity of aggressive behaviour among persons with severe mental illness.

· To study the de-escalation skills among the caregivers of persons with severe mental illness.

· To study the socio-demographic details of the caregivers of the persons with severe mental illness and the clinical profile of the persons with severe mental illness.

· To study the expressed emotion among caregivers towards persons with severe mental illness.

· To study the relationship between de-escalation skills, expressed emotion and aggressive behaviour among the caregivers of persons with severe mental illness.

· To develop an information leaflet for the caregivers to manage the aggressive behaviour based on the review of literature, findings of this study and interviews with experts.

Hypothesis

H0: There is no relationship between de-escalation skills and aggressive behaviour or expressed emotions.

Operational Definition of Study Variables

Aggressive Behaviour

Aggressive Behaviour refers to any instance of verbal and physical abuse by the person with SMI towards others, self and properties, reported by the family members during the intake session.

De-escalation Skills

De-escalation skills are the set of skills that are required for the caregivers to prevent a crisis from the escalation phase of aggression in a person with severe mental illness. The verbal and non-verbal skills or cues used by a caregiver for the immediate management of aggressive behaviour for a person with severe mental illness.

Expressed Emotion

Expressed emotion refers to the intensity of expression of a range of emotions in the family context towards a person with severe mental illness which can be in terms of criticality and overinvolvement.

Definition of Key Concepts

Severe mental illness

Severe Mental illness (SMI) refers to major mental illnesses such as schizophrenia, schizoaffective disorder, bipolar affective disorder, Severe Depression, and Recurrent Depressive Disorder diagnosed by a psychiatrist according to ICD-10 criteria with a minimum duration of 2 years.

Caregiver of Person with SMI

The caregiver is operationally defined as the person from the family of origin or procreation who provides care and lives with the person with SMI for at least the last six months.

Research design

The research design adopted in the study is a cross-sectional descriptive research design, as this study aims to describe the caregivers' de-escalation skills and expressed emotions.

Study population

Caregivers of persons who have been diagnosed with schizophrenia, bipolar affective disorder, severe depression, schizoaffective disorder, and recurrent depressive disorder seek treatment from the outpatient department of NIMHANS.

Sampling technique

The study subjects satisfying the inclusion and exclusion criteria will be selected to participate in the study through purposive sampling. The caregivers of persons with severe mental illness will be recruited for the study.

Sample Size

On estimation through sample size calculation for clinical research, after considering r=0.2, α=0.05 and 80 per cent power, the total sample size of the study is estimated as 194 family caregivers (Hulley, 2007).

The standard normal deviate for α = Zα =1.9600

The standard normal deviate for β = Zβ =0.8416

C = 0.5*ln[(1+r)/1-r)] = 0.2027

Total Sample size(N)= $[(Z\alpha+Z\beta)/C]^2+3 = 194$

Inclusion Criteria:

· Caregivers of persons who have been diagnosed with schizophrenic spectrum or bipolar spectrum disorders for at least 2 years.

· The caregivers of persons with SMI who report aggressive behaviour during the intake session.

· The caregivers are within the age group of 18- 60 years.

· The caregivers who live with the person with severe mental illness for a minimum of the last 6 months.

Exclusion Criteria :

· Persons with SMI who have any co-morbid conditions of personality disorder Intellectual disability or substance use disorder except nicotine dependence syndrome.

· The primary caregivers who are living with severe disability secondary to neurological and/or, psychiatric conditions.

Equipment

Phases of the study

Phase I: The first phase of the study comprises administering the standardized tools to access the study variables such as de-escalation skills, expressed emotion and aggressive behaviour.

Tools of Data Collection in Phase I

Semi-Structured Interview Schedule (SSIS). The semi-structured interview schedule will be divided into the following part.

Part 1: Socio-demographic Data Sheet

It will have details such as age, education, occupation, gender, health status, socio-economic status, marital status, domicile, details about family of origin and if married then details about family of procreation.

Part 2: Clinical Profile

This section details illnesses like age at onset, duration of illness, current symptoms, duration of treatment, number of admission and number of relapses.

Part 3: Response of the caregiver towards aggressive behaviour

In the third part of the semi-structured interview schedule, three open-ended questions will be added to explore the challenges faced by the caregiver during the episode of aggression, the response of the caregiver and the possible ways to manage the aggression of the person with SMI.

Clinical Global Impression (CGI): CGI is a scale that is clinician-rated and developed in 1976 by the National Institute of Mental Health and it is one of the most widely used brief assessment tools in psychiatry. The CGI comprises two domains, severity of psychopathology from one to seven and change from the initiation of treatment on a similar seven-point scale. The CGI is rated on a seven-point scale, with the severity of illness scale using a range of responses from one (normal) through to seven (amongst the most severely ill patients). CGI-C scores range from one (very much improved) through to seven (very much worse)(Busner & Targum, 2007).

Modified Overt Aggression Scale (MOAS): MOAS is the psychometrically upgraded version of the overt aggression scale(Yudofsky,1986) developed to assess the aggression in the psychiatric population. It includes four domains and each domain has five items(Suris et al., 2002).

De-escalation of Aggressive Behaviour Scale (DABS): DABS is a six-item scale developed by Johannes Nau et al in 2009 for assessing de-escalation skills.

Family Questionnaire (FQ): FQ is developed by Wiedemann et al in 2002 and includes two domains and 20 items. It is a brief self-report measure of relatives' perceptions of the behaviours and symptoms of the patient with mental illness(Wiedemann et al., 2002).

Phase II - Semi-structured interview schedule for Key informant interview: The interview schedule will be prepared by the researcher for KII with experts and that will be face and content validated. The experts for KII include psychiatric social workers, psychiatrists, clinical psychologists, psychiatric nurses and the representatives of NGOs who have a minimum experience of five years in the field of mental health. Tentatively 15-20 interviews will be conducted till data saturation is attained.

Phase III: Development and Validation of Information leaflet for caregivers

An information leaflet will be developed for the caregivers of persons with SMI for improving their de-escalation skills by using an extensive literature review, main study findings and recommendations from the key informant interview with the experts. The final educational content will be further validated by the experts such as psychiatrists, psychiatric nurses, psychiatric social workers, clinical psychologists and NGO representatives who have been working in the field of adult mental health care settings for a minimum of 10 years.

Procedure

Data Analysis

Descriptive statistics, as well as inferential statistics, will be carried out during the quantitative data analysis. Descriptive statistics such as frequency, percentages, mean, median, standard deviation, and range will be calculated to present the characteristics of the collected data. Data would be tested for normality by using the Shapiro-Wilk test. Based on the normality assumption, data would be further analyzed by using parametric or non-parametric tests. The inferential statistical tests such as chi-square, correlation, and regression analysis tests will be carried out.

The qualitative data will be translated and transcribed by the researcher and the quantitative content analysis will be carried out.

Ethical Consideration

Institute Review Board (IRB) clearance has been obtained from the National Institute of Mental Health and Neuro Sciences, (NIMHANS) Bengaluru. Written informed consent will be obtained from the participants. The study procedure and the voluntary nature of participation will be clearly explained to the participants. The participants' confidentiality will be ensured and maintained in all stages of the study. There would be no financial benefits, traveling allowances, or gifts for participation in the study. The participants will have the freedom to withdraw from the study at any point in time and reassurance the participants that the withdrawal will not create a problem in their treatment process. If any participants are found to be having any kind of psychological distress or any other psycho-social or legal issues, which are noticed or reported during the interview, appropriate referrals will be done for the same.

Troubleshooting

Time Taken

The study duration will be 2 years.

Anticipated Results

The study would help to understand the caregivers' response to the aggressive behaviour of the persons and the attitude towards a person with SMI and its relationship with each other. The development of a leaflet would help in equipping the caregivers to manage potential aggressive behaviour among the person with SMI. Therefore, it would help to reduce the discrimination and isolation experienced by the person with SMI due to their aggressive behaviour as well as the burden of the caregiver who provides care to the person with SMI.

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Acknowledgements

Figures

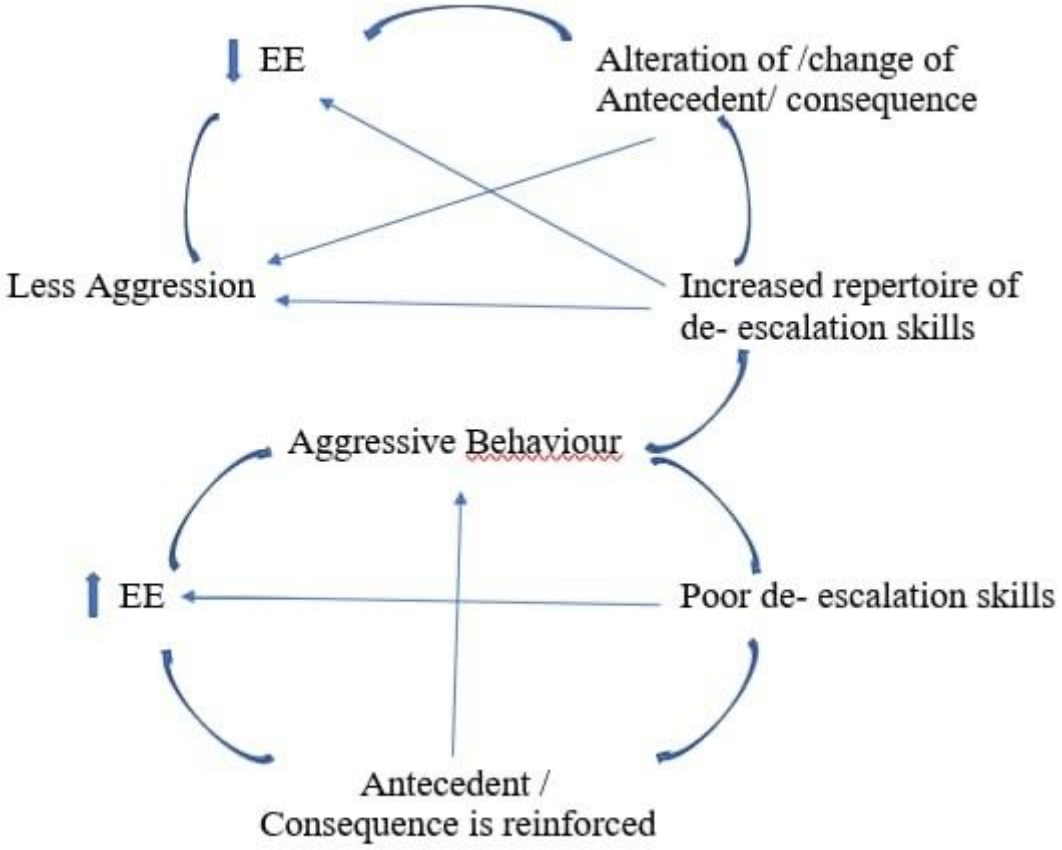

Figure 1

Conceptualization of the study

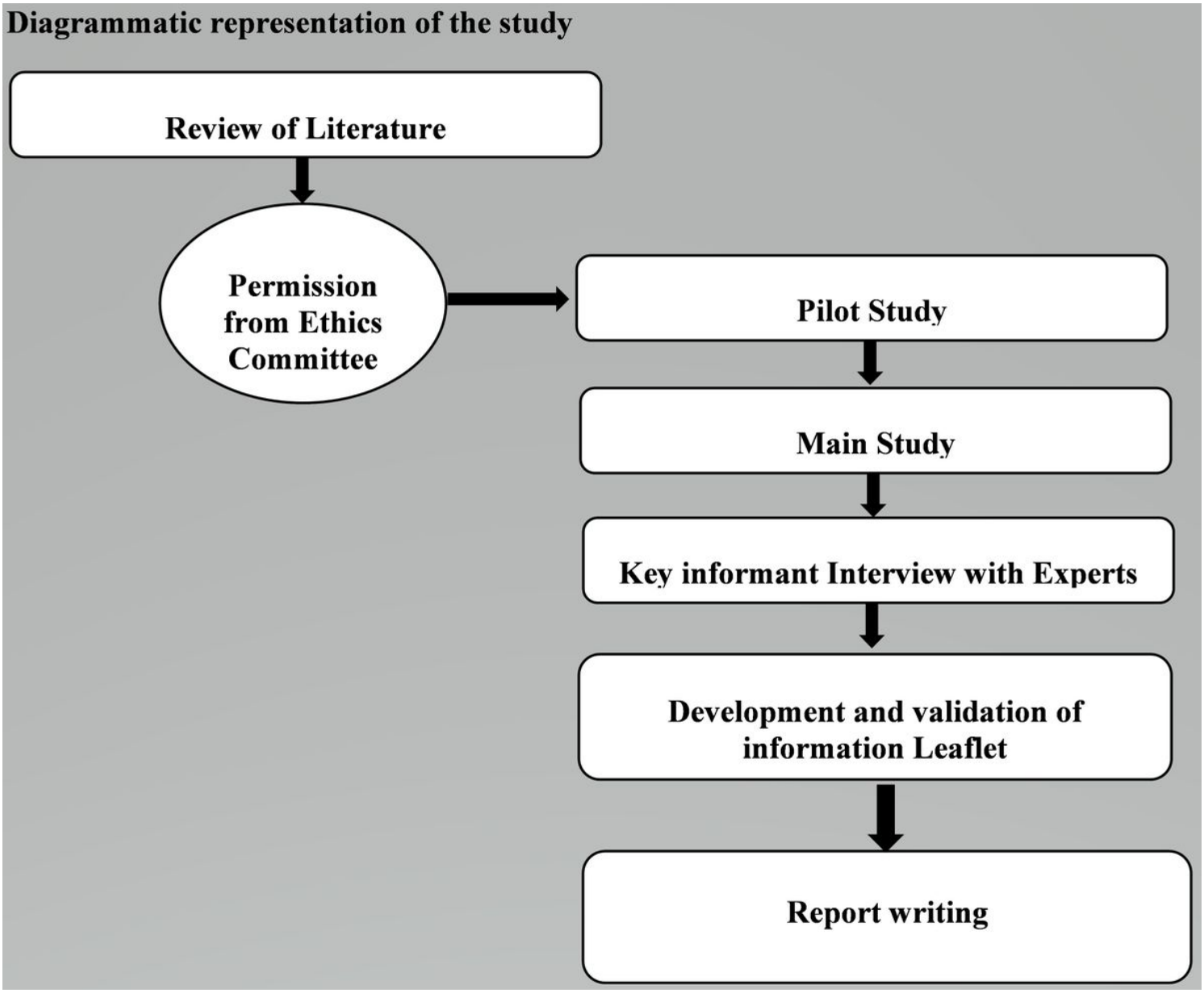

Figure 2

Diagrammatic representation of the study

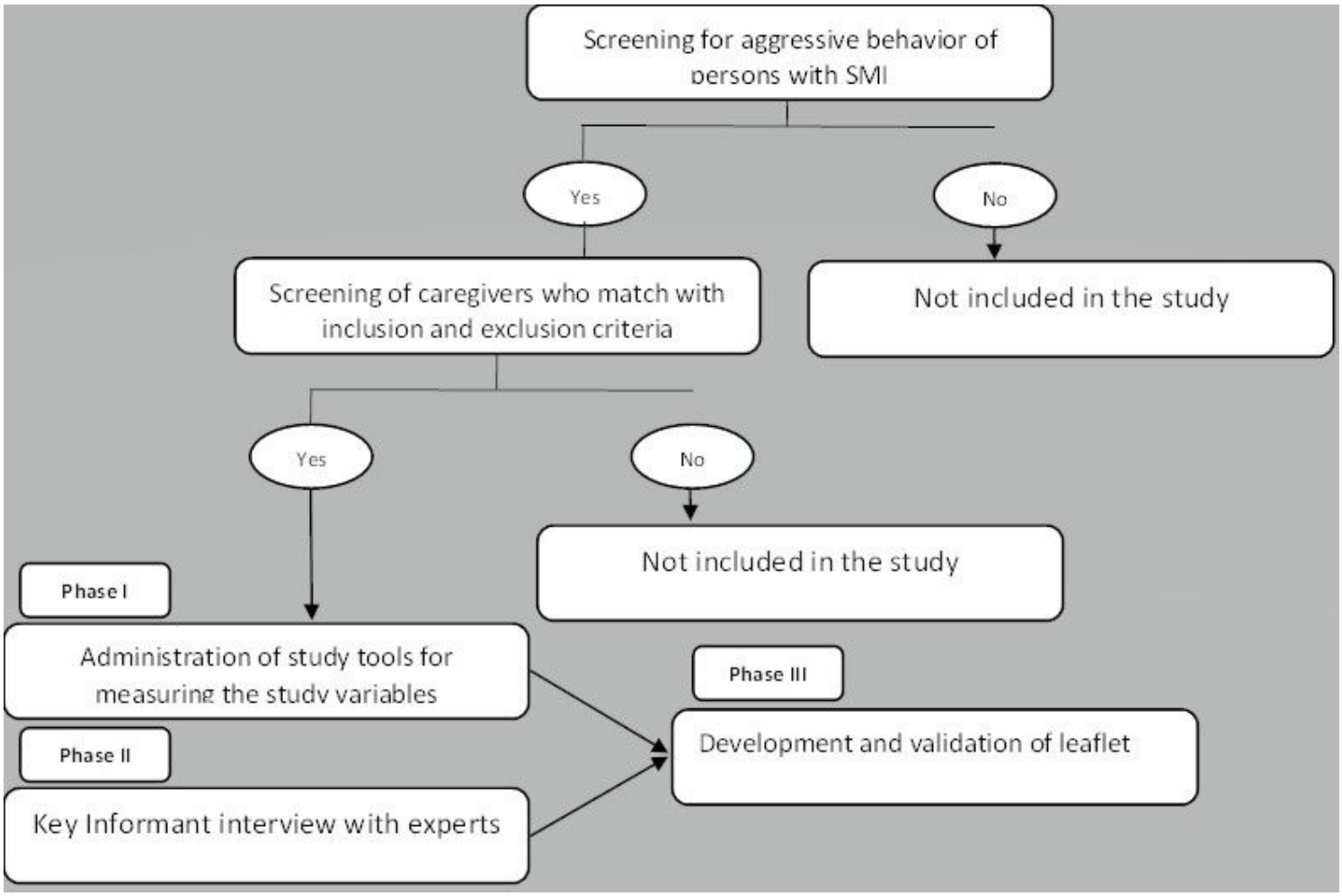

Figure 3

Study Process