PERSONALITY TRAITS AND EXPRESSED EMOTION IN SPOUSES OF PERSONS WITH SCHIZOPHRENIA

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Hereby, it is certified that the dissertation titled **"PERSONALITY TRAITS AND EXPRESSED EMOTION IN SPOUSES OF PERSONS WITH SCHIZOPHRENIA"** is the original research work done by **Saranya S (Register No. 154221104509)** submitted in partial fulfilment of requirements for the Degree of Master of Philosophy in Clinical Psychology and has not previously formed the basis of award for any other degree or diploma to the candidate.

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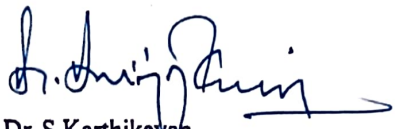

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SARANYA S

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ABSTRACT

Background: In India, family becomes an inevitable part in the rehabilitation of persons with any mental health condition. In case of married individuals with mental illness, spouse becomes the primary caregiver of the person. Previous researches show that the nature of expressed emotion in the caregiver was related to the rate of relapse in the client. Thus, the personality traits of the spouse in relation to their nature of expressed emotion need to be understood in order to know the pattern.

Objective: To analyze the personality traits and expressed emotion of the spouse of persons with schizophrenia.

Method: Sample included 81 individuals (including male and female), collected through purposive sampling. Big Five Inventory (BFI) and Attitude Questionnaire was used to assess the Personality traits and Expressed Emotion along with a socio-demographic data sheet. Data was analyzed using parametric methods such as ANOVA, Independent samples t-test, Pearson's correlation and descriptive analysis.

Results: The results showed statistically significant correlation between the Personality traits and Expressed Emotion of the spouse. The Personality traits of the spouse had significant differences based on the nature of Expressed Emotion (positive, negative or average). The Personality traits and Expressed Emotion of the spouse also had significant differences in terms of gender, socio-economic strata, domicile and there was a significant relationship with the age and years of marriage.

Implications: The findings can help in understanding the role of Expressed Emotion from the caregiver as a factor that need to be intervened and thereby introducing strategies appropriate for that person to understand and modify the Expressed Emotion.

Key words: Personality traits, Expressed Emotion & Schizophrenia

CHAPTER I

INTRODUCTION

INTRODUCTION

Mental illness refers to the condition where in the person's cognition, emotion and thoughts are disturbed and it affects the person's functioning domains (Manderscheid et al., 2010). Mental health conditions are predominant in India like any other country and it has been receiving increased attention in the recent years due to various awareness programs and schemes (Srivastava et al., 2016). Mental illness includes a wide range of disorders and the present study adopts the International Classification of Disorders (ICD) 10th edition to understand the categories and their diagnostic guidelines.

1. 1. Schizophrenia

The International Classification of Disorders (1CD) 10th edition codes this disorder as **F20 Schizophrenia** and the nature and subtypes are described in detail in accordance to ICD-10. Schizophrenic disorders are distinguished by fundamental and distinctive abnormalities of thinking and perception, as well as inaccurate or diminished affect. Clear consciousness and intellectual aptitude are usually preserved, though certain cognitive deficiencies may develop with time. Hallucinations, particularly auditory hallucinations, are widespread and may comment on an individual's behaviours or thinking (World Health Organization, 2004). Perception is regularly disrupted in different ways: colours or sounds may appear overly vivid or altered in quality, and insignificant elements of everyday objects may appear more essential than the entire object or scenario. Perplexity is also common, and it typically leads to the notion that daily occurrences have a special, usually malevolent, significance intended just for the individual. Thinking becomes hazy, ambiguous, and unclear, and its manifestation in speech might be difficult to understand (World Health Organization, 2004). Interpolations and breaks in the train of thought are common, and thoughts may appear to be withdrawn by some outside agent. The mood is typically superficial, arbitrary, or discordant. Ambivalence and volitional

disruption might manifest as inertia, negativism, or stupor. Catatonia is possible (World Health Organization, 2004).

The requirement for a diagnosis of schizophrenia is that a minimum of one very clear symptom and should have been clearly present for most of the time during a period of 1 month or more (World Health Organization, 2004).

F20.0 Paranoid schizophrenia: The general criteria for a schizophrenia diagnosis must be met. Furthermore, hallucinations and/or delusions must be prominent, but affective, volitional, and verbal abnormalities, as well as catatonic symptoms, must be relatively inconspicuous. Delusions can be of any type, but delusions of control, influence, or passivity, as well as persecutory beliefs, are the most common (World Health Organization, 2004).

F20.1 Hebephrenic schizophrenia: A type of schizophrenia characterised by strong mood shifts, transitory and fragmentary delusions and hallucinations, irresponsible and unpredictable behaviours, and mannerisms. The general criteria for a schizophrenia diagnosis must be met and is typically diagnosed in adolescents or young adults for the first time (World Health Organization, 2004).

F20.2 Catatonic schizophrenia: Prominent psychomotor abnormalities are crucial and dominant qualities that can range from hyperkinesis to stupor, or from instinctive compliance to negativism. The general criteria for a schizophrenia diagnosis must be met (World Health Organization, 2004). The clinical picture of this subtype include stupor or mutis, excitement, posturing, negativism, rigidity and waxy flexibility (World Health Organization, 2004).

F20.3 Undifferentiated schizophrenia: This category is reserved for disorders that meet the general criteria for schizophrenia; are either without sufficient symptoms to meet the criteria for only one of the subtypes or with so many symptoms that more than one (World Health Organization, 2004).

F20.4 Post-schizophrenic depression: This subtype is diagnosed when the patient has had a schizophrenic illness meeting the general criteria for schizophrenia within the last 12 months and some schizophrenic symptoms are still present with the depressive symptoms being prominent and distressing, fulfilling the criteria for a depressive episode (World Health Organization, 2004).

F20.5 Residual schizophrenia: To diagnose Residual schizophrenia, prominent "negative" schizophrenic symptoms and at least one clear-cut psychotic episode in the past should be present. It should include at least one year of minimal psychotic symptoms with significant negative symptoms (World Health Organization, 2004).

F20.6 Simple schizophrenia: Simple schizophrenia involves slowly progressive development of the characteristic "negative" symptoms of residual schizophrenia without any history of hallucinations, delusions, or other manifestations of an earlier psychotic episode, and with significant changes in personal behaviour, manifest as a marked loss of interest, idleness, and social withdrawal over a period of at least one year (World Health Organization, 2004)

The onset of this category of disorders may be acute, with seriously disturbed behaviour, or insidious, with a gradual development of odd ideas and conduct (World Health Organization, 2004). The course of the disorder shows equally great variation and is by no means inevitably chronic or deteriorating (World Health Organization, 2004). In a proportion of cases, which may vary in different cultures and populations, the outcome is complete, or nearly complete, recovery. The sexes are approximately equally affected but the onset tends to be later in women (World Health Organization, 2004).

In India, family members are the primary caregivers of people with mental illness and this increased caregiving chores, responsibilities may result in increased burden upon the primary caregiver (Amaresha & Venkatasubramanian, 2012).

In case of persons developing mental illness post-marriage, the spouse becomes the primary caregiver and their attitude and approach towards the patient might have an impact on the prognosis of the patient's condition.

Expressed Emotion (EE) has been found to be an important factor that increases the risk for relapse among persons with schizophrenia (Amaresha & Venkatasubramanian, 2012).

The personality traits of the person might play an important role in deciding the nature and extent of expressed emotion displayed.

Thus, studying the association between the personality and the nature of expressed emotion plays gains its importance in understanding the possible reason for relapse and in its prevention.

1. 2. Personality

Personality refers to the external and visible qualities, the aspects of ourselves that others can perceive. Personalities would then be determined by the impression that people make on others. It states that personality is the visible aspect of one's character that include many of an individual's features, a totality or collection of numerous characteristics that go beyond superficial physical aspects. The term also includes a variety of subjective social and emotional characteristics that we may not be able to perceive clearly, that a person may try to hide from us, or that we may try to hide from others. In sum, it can be defined as the distinct, relatively enduring internal and external characteristics of a person's character that impact behaviour in various settings (Schultz, 2009).

"Personality is the dynamic organization within the individual of those psychophysical systems that determine his characteristic behavior and thought" (Allport, 1961).

"The characteristics or blend of characteristics that make a person unique" (Weinberg & Gould, 1999).

1.3. Trait Theory

The idiographic viewpoint holds that each individual has a unique psychological structure, that some traits are held by just one person, and comparing one person to others is impossible. Case studies are commonly used to obtain information.

The nomothetic viewpoint, on the other hand, emphasises individual comparison. According to this viewpoint, qualities have the same psychological meaning in everyone.

This method frequently employs self-report personality questions, factor analysis, and other techniques. People's places on a continuum in the same set of traits vary (Saul Mcleod & Olivia Guy Evans, 2023).

This approach holds that behaviour is determined by relatively constant trait, which serve as the core units of one's personality.

Regardless of the situation, traits incline one to act in a certain way. This indicates that features should be stable across settings and time, although they may differ amongst individuals. Individuals' qualities are said to differ due to genetic variances (Saul Mcleod & Olivia Guy Evans, 2023).

1.4. Five Factor Theory

The personality system is made up of components that are similar to FFT definitions and dynamic processes that show how these components are related — the basic FFT postulates. The basic tendencies, characteristic adaptations, and self-concept are the core components of the personality system (Paul T Costa & Robert R. McCrae, 1999).

The five-factor model of personality, known as the Big Five Personality Traits, consists of Openness to experience, Conscientiousness, Extraversion, Agreeableness and Neuroticism (Costa & McCrae, 1992).

Openness to experience: The willingness to explore new things and the ability to engage in abstract and complex thoughts are represented by Openness to experience. It is sometimes referred to as intellect or imagination, and it describes the depth and complexity of an individual's mental life. Insightfulness, imagination, diverse interests, curiosity, intellect, perceptiveness, willingness to try new things and a drive for exploration are common attributes associated with a high openness to experience trait. (Carolynn Bruce, 2023).

Conscientiousness refers to the tendency to be careful, on time for appointments, to follow rules and to be hardworking. A person with high conscientiousness may be organised, hardworking, neat, persevering, punctual and self-disciplining. A person with low score in this dimension may prefer the spur of the moment action to planning, unreliable, hedonistic, careless or lax (Richard E. Lucas et al., 2002).

Extraversion is defined as "a trait characterized by a keen interest in other people and external events, and venturing forth with confidence into the unknown" (Ewen, 2013). Surgency is another term for this. Extraversion as a whole contains specific characteristics such as talkativeness, energy, and assertiveness. These include traits like excitability, sociability, talkativeness, aggressiveness, and a high level of emotional expressiveness (Paul T Costa & Robert R. McCrae, 1992). Extraversion, often known as Extraversion, describes how a person interacts with others. It describes the person's emotional expression and how at ease they are in their surroundings. People with high extraversion tend to be more outgoing and talkative, thrive in social situations, have a large social circle and find it easy to make friends, like to start conversations, feel comfortable arguing and debating opinions, seek excitement, and may work in a supervisory position with others (John M. Grohol et al., 2022).

Agreeableness refers to the tendency to agree and go along with others rather than to assert one’s own opinions and choices. Agreeableness is a personality attribute that reflects how a

person approaches his or her interpersonal connections. It's how friendly and helpful they are to others. Overall, high agreeableness indicates that they want things to operate smoothly and appreciate social harmony (John M. Grohol et al., 2022). The trait comprises of these facets: compliance, altruistic, modest, tender minded, straightforward and trusting (Richard e. lucas et al., 2002).

Neuroticism is the expression of negative or fear-based emotions (Carolynn Bruce, 2023). The personality attribute neuroticism refers to emotional stability. Neuroticism is a personality dimension characterised by troubling thoughts and emotions of melancholy or moodiness. A high neuroticism score indicates that the individual frequently feels uneasy, gets agitated quickly, appears irritable or grumpy to others, worries a lot, and has mood swings or emotions of despair (John M. Grohol et al., 2022). The traits include the following facets- anxious, angry, depressed, self-conscious, impulsive and vulnerable (Richard e. lucas et al., 2002).

1.5. Expressed Emotion

Expressed emotion (EE) refers to a caregiver's attitude towards a person with a mental illness. It is a crucial feature of the family environment that has been demonstrated to predict symptom relapse in a variety of mental illnesses. The empirical results demonstrate that EE is a key psychosocial stressor and has a direct relationship with illness recurrence (Amaresha & Venkatasubramanian, 2012).

Expressed emotion comprises the following factors/ behavioural patterns- critical comments, hostility, dissatisfaction, warmth and emotional overinvolvement (Brown et al., 1972). It has been proven that high EE attitudes are reflected in actual interactions within mentally ill households (Miklowitz et al., 1989). According to the findings, communication patterns in families with high EE relatives are typically characterised by more intense and negative verbal

exchanges that are oppositional or conflictual in nature, and interaction patterns in high EE dyads are more likely to be rigid (Hahlweg et al., 1989).

Researchers have classified EE as an environmental stressor that can potentially precipitate/cause relapse of psychosis in persons with a genetic susceptibility, according to the diathesis-stress model of psychopathology (Hooley & Hiller, 2000).

It is widely recognised that high EE levels in the family are consistently connected with greater rates of relapse in schizophrenia persons. Brown et al were the first to analyse the EE measure and link it to the course of schizophrenia (Brown et al., 1972). The persons were followed up on for 9 months after they were discharged and sent home from the hospital. It was discovered that persons' continuous interaction with crucial carers determines schizophrenia relapse (Ng et al., 2020).

In India, family members are the primary caregivers and supporters for ill family members (Chadda, 2014). More than 90% of individuals with chronic mental illness live with their family (Sadath et al., 2014). Family members give much-needed care and support, such as taking care of the patient on a daily basis, supervising medications, taking the patient to the hospital, and looking after financial necessities (Jagannathan et al., 2011). This active involvement by family members may emerge as a result of a strong sense of family responsibility, a value system, and family integration, but it is often the result of an under-resourced mental health system (Chakrabarti, 2016). Because of the increased caregiving chores, roles, and responsibilities, family caregivers face tremendous stress and burden (Sadath et al., 2014), which may result in elevated EE, which may alter the illness outcome (Jagannathan et al., 2011).

The socio-cultural environment has a significant impact on EE. The concept of EE is fundamentally cultural in nature (Jenkins & Janis, 1992), and different cultural groups are more critical or emotionally involved as a result of their cultural background (López et al., 2009).

Many clinical and demographic variables of persons and caregivers (Sadath et al., 2017) are associated with EE, including persons' functioning (Gómez-de-Regil et al., 2014), employment status, cognitive functions, number of hospitalizations (Bentsen et al., 1998), premorbid adjustment, illness duration (Von Polier et al., 2014), duration of untreated psychosis (Sadath et al., 2017), number of people living with persons, and carers' relationship with persons (Nirmala et al., 2011). EE is also linked to stress (Sadath et al., 2017), psychological distress (Gómez-de-Regil et al., 2014), burden (Nirmala et al., 2011), coping, and unfavourable assessment among carers (Jansen et al., 2015). Criticality, anger, and emotional over-involvement are EE components that develop from many sources (Álvarez-Jiménez et al., 2010) and have diverse consequences on persons across cultures (Singh et al., 2013).

According to George Brown, Expressed Emotion can be explained using 5 factors. It includes,

Critical comments: Careful observation of direct conversations between persons and caregivers demonstrates that critical caregivers become embroiled in heated exchanges with the patient, which they appear unable to prevent or distance themselves from (Wearden et al., 2000). This becomes the nature of some families with high EE, and it has the potential to lead to physical violence. Persons who are unable to participate in household tasks are criticised as being lazy and selfish; unfortunately, caretakers fail to recognise that these could be potential manifestations of negative symptoms of schizophrenia or any other psychotic disorder. This is mirrored in the fact that 70% of critical remarks focused on negative symptoms of schizophrenia rather than the more florid symptoms of delusions and hallucinations (Vaughn & Leff, 1976). A caregiver may convey in a higher tone, speed, and volume that the patient

frustrates them, causes issues for them, that family members feel burdened by the patient, that living with them is more difficult, and that the patient ignores or does not follow their suggestions (Vaughn & Leff, 1976). Low EE caregivers are better able to identify features of the patient's behaviour that are a sign of the sickness (Wearden et al., 2000).

Hostility: Hostility manifests itself in broad remarks or attitudes that are hostile to the patient. Caregivers report that the patient is generating problems for them, wishing to live away from the patient, shouting at the patient, easily becoming upset and irritated, the patient can control himself, and he is acting (Hubschmid et al., 1989).

Emotional Over-Involvement: Over-emotionality, excessive self-sacrifice, over-identification, and extreme overprotective behaviour with the patient are all symptoms of Emotional Over Involvement. Caregivers blame themselves for everything, believing that everything is their fault; they express sympathy, refuse to let the patient to carry out his daily activities, ignore themselves, and prioritise less important personal needs over patient requirements (Wearden et al., 2000).

Warmth: It is based on the caregiver's kindness, concern, and empathy displayed while discussing the patient. It is heavily dependent on vocal qualities, with smiling being a common accompaniment that frequently expresses a sympathetic attitude by the relative. Warmth is an important feature of the low EE family (Amaresha & Venkatasubramanian, 2012).

Dissatisfaction: Dissatisfaction as expressed in terms of their tolerance towards the patient's habits and routine is considered, including their emotional reactions to such behaviours (Sethi et, al., 1985).

Several research findings indicate that there is a higher risk for relapse in persons with caregivers having higher levels of expressed emotion. Research has used stress coping model to identify predictors of high EE among caregivers of relatives with schizophre

nia. increasingly assumed greater responsibility for the care of their mentally ill relatives since the start of deinstitutionalization, with the resulting unpleasant caregiving experience a likely cause of stress shown in heightened EE (Potasznik & Nelson, 1984).

The chronic stress of caring for a schizophrenic patient is likely to elicit negative emotions (Smith et al., 1993). Many caregivers experience irritation, rage, loneliness, and despair (Smith et al., 1993).

Caring for people with psychosis has been linked to subjective burden and loss, depression, distress, decreased quality of life, and decreased social support (Foldemo et al., 2005). High EE relatives expressed higher subjective degrees of load and personal stress than low (Patterson et al., 2005).

Thus, the connection between the personality traits of a person and their expressed emotion is an area unexplored and the following chapter discusses the available literature in this particular area.

CHAPTER II

REVIEW OF LITERATURE

REVIEW OF LITERATURE

This chapter focusses on the important available literature that exist in discussing the role of spouse as a caregiver, effect of Expressed Emotion in causing relapse and the role of personality traits in influencing the person's attitude.

Ashish Srivastava (2013) published a detailed review on how marriage can have an impact of mental illness and the resulting consequences. Marriage can be stressful for vulnerable people, leading to the development of mental-health issues. Major mental illnesses may be the cause or result of marital conflicts (Nambi, 2005). Several studies have found that marital stress is linked to a variety of psychiatric disorders (Schless et al., 1977). Certain personality traits and disorders, such as dependence, passiveness, aggression, histrionicity, paranoia, and obsession, have a high frequency of serious marital conflict, especially when violence is a prominent component (Srivastava, 2013). Expressed emotions in the spouse's family may be strong, which might aggravate the course of the illness and make relapses more likely. The situation escalates for the woman in Indian society because she has left her previous social supports to join her husband's household. After childbirth, there is increased psychiatric morbidity, particularly in the areas of functional psychoses and depressive disease (Kendell et al., 1976).

Understanding the importance of addressing the mental health correlated in primary caregivers, Hooker, K., Monahan, D., Shifren, K., & Hutchinson, C. (1992) conducted research to investigate the relationship between neuroticism and dispositional optimism and mental and physical health outcomes. Personality was anticipated to have direct implications on health outcomes as well as indirect consequences through perceived stress. Participants were spouses of persons of Mentally ill. Neuroticism and optimism were found to be substantially associated to mental and physical health. Furthermore, neuroticism found strong direct effects on all physical outcomes and significant indirect effects on mental health outcomes via

perceived stress. Optimism had a greater indirect influence than a direct effect on all health outcomes. These findings highlight the significance of adding the caregiver's personality in theoretical and empirical models of the caring process (Hooker et al., 1992).

Anne Maria Möller-Leimkühler & Felix Mädger (2010) conducted the study that uses mediational model to assess the impact of personality variables on the trajectory of subjective burden and psychological well-being in a sample of caretakers of first hospitalised persons with schizophrenia or depression over a 2-year period. At initial registration, 83 caretakers could be registered in the study; at the 2-year follow-up, the drop-out rate was around 23%. Only at baseline does the German version of the NEO-FFI (Borstenau and Costa 1993) examine personality characteristics. The FBQ was used to assess subjective burden, and the SCL-90 R was used to assess psychological well-being. Among the personality characteristics studied, neuroticism was found to be the most significant predictor of subjective burden and self-rated symptoms, with both direct and indirect effects. Subjective load moderated the direct consequences on caretakers' mental health significantly. The mediational model remained constant over time and even demonstrated rising indirect neuroticism effects. The neuroticism of caretakers as a dispositional feature plays an important role in the stress process. Because neuroticism is connected with perceptual distortion, the latter should be targeted by long-term family interventions to reduce subjective load and improve caretaker mental health (Möller-Leimkühler & Mädger, 2011).

D Hell (1982) conducted research on the personality structures and well-being of the partners of 103 married depressive or schizophrenic inpatient persons. They employed a semi-structured interview, the Giessen-test (Beckmann and Richter 1972, 1979), and the Eigen schafts wörter liste (Janke and Debus 1978) to assess participants. In terms of personality, the comparison of the partners' self-images with the patient's evaluation of his or her spouse resulted in good mutual agreement. The spouses of schizophrenia and depressed persons varied neither in terms

of average profiles nor of cluster-analysis findings. Furthermore, both groups deviated only little from a typical sample of the general population. Personality and well-being of the spouses connected with the course of the illness, although personal attitude and well-being of the marriage partners were mostly independent of the depressed or schizophrenic type of illness. The wives were more ugly, self-controlled, and uncommunicative while the patient was hospitalised, and less annoyed and sensitive when the patient was hospitalised (Hell, 1982).

Expressed emotion (EE) is a term that reflects the emotional climate of the household. Criticism, animosity, and emotional over-involvement have all been demonstrated to be key predictors of relapse in schizophrenia persons. A. Nuray Karanci & Hicran İnandılar (2002) conducted a study to investigate the predictive power of patient and caretaker characteristics, as well as caretaker perceptions of frequency, coping, distress/discomfort, patient control of symptom behaviours, and attributions on locus of causality for the development of the illness on two components of EE (criticism/hostility and emotional over-involvement) in a sample of major caretakers of Turkish schizophrenic persons. The findings revealed that caretakers' judgements of coping with specific symptom behaviours decreased criticism/hostility (C/H), however perceptions of symptom behaviour frequency increased C/H. The number of people living in the household, whether they were the mother, father, or husband, views of coping with symptom behaviours, and reported distress/discomfort concerning symptom behaviours were all significant predictors of emotional over-involvement (EOI). Caretakers' judgements of their ability to manage with symptom behaviours, as well as their reported distress as a result of these behaviours, are crucial variables connected to EE components that should be studied (Karanci & İnandılar, 2002).

K. Vaughan, Mary Doyle, N. McConaghy, A. Blaszczynski, A. Fox & N. Tarrier (1992) reported a predictive study, carried out in Sydney Australia, investigating the association between the Expressed Emotion (EE) status of the household to which the patient is discharged

and schizophrenic relapse. Expressed Emotion was not related to illness severity either at admission or discharge, but was related to variables reflecting chronicity and employment history. There was a significant association between returning to a high EE household and both re-hospitalisation and relapse. The significant association between EE and relapse held only for: persons not on medication, males, and those persons in high contact with their relatives. A discriminant function analysis found that decline in occupational status and the number of critical comments expressed by the relative were the strongest predictors of relapse (Vaughan et al., 1992).

J. Leff et al (2018) conducted research and have found the same associations between the individual components of EE and relapse of schizophrenia as in previous Anglo-American studies, but only the association between hostility and relapse was statistically significant. Applying the same criteria as in the Anglo-American studies for 'high EE', they found a significant relationship between high EE and relapse. This relationship was not explained by other factors often associated with higher relapse rates. They concluded that significantly better outcome of Chandigarh first-contact persons compared with a London sample is largely due to the significantly lower proportion of high-EE relatives in the North Indian sample (Leff et al., 1987).

Disha Geriani (2015) conducted a study to investigate the relationship between the caregiver burden among schizophrenic persons and several psychological criteria such as coping techniques, personality type, general quality of life, and socio-demographic information. The study's 110 participants were given a socio-demographic data sheet and questionnaires to assess their personality type, burden, quality of life, and coping mechanisms with a schizophrenic in the family. These questionnaires were given to people one at a time. The majority of the caretakers were women. Caretakers were found to be burdened to varying degrees. Care givers' burden was found to be significantly related to their psychoticism and general quality of life.

There was a substantial association between caretakers' levels of coping and their extrovert personality type, as well as their environmental health. Caretakers from nuclear families performed better than those from combined households. The study suggests that certain personality qualities, such as psychoticism, and social characteristics, such as living in joint families, can increase the risk of caretaker load while caring for family members with schizophrenia. There is a need for vulnerable caretakers to receive psychological support in order to minimise their burden levels and utilise good coping mechanisms (Geriani, 2015).

Need and Significance of the Study:

Limited research has been done focussing on the personality traits of the spouse/primary caregiver of persons with schizophrenia. Understanding the relationship between personality traits and the nature of expressed emotion might act as framework to work in handling the expressed emotion involved. Being an important factor causing relapse (Amaresha & Venkatasubramanian, 2012), working on EE might help in prevention of relapse and better prognosis in the patient.

Studies available have established the importance of expressed emotion in the caregivers and the effect on relapse. This study explores the personality traits of the spouse in particular and their nature of expressed emotion, thereby understanding the pattern existing. Exploration of this pattern can help in understanding the proneness of relapse due to expressed emotion.

CHAPTER III

METHODOLOGY

METHODOLOGY

3.1. Objective of the study

To analyze the personality traits and expressed emotion of the spouse of persons with schizophrenia.

3.2. Hypotheses

H1. There will be a significant relationship between personality traits and expressed emotion in spouses of persons with schizophrenia.

H2. There will be a significant relationship between age of the client and the personality traits of their spouse.

H3. There will be a significant relationship between age of the spouse of person with schizophrenia and their personality traits.

H4. There will be a significant relationship between age of the client and the expressed emotion of their spouse.

H5. There will be a significant relationship between age of the spouse of person with schizophrenia and their expressed emotion.

H6. There will be a significant relationship between gender of the client and the personality traits of their spouse.

H7. There will be a significant relationship between gender of the spouse of persons with schizophrenia and their personality traits.

H8. There will be a significant relationship between gender of the client and the expressed emotion of their spouse.

H9. There will be a significant relationship between gender of the spouse of person with schizophrenia and their expressed emotion.

H10. There will be a significant difference in the socioeconomic strata and the personality traits of the spouse of persons with schizophrenia.

H11. There will be a significant difference in the socioeconomic strata and the expressed emotion of the spouse of persons with schizophrenia.

H12. There will be a significant relationship between years of married life and the personality traits of the spouse of persons with schizophrenia.

H13. There will be a significant relationship between years of married life and the expressed emotion of the spouse of persons with schizophrenia.

3.3. Research design

Correlational research design

3.4. Participants

Spouse of persons with Schizophrenia

3.5. Sampling method

Purposive sampling

3.6. Inclusion Criteria:

- Spouse of persons with Schizophrenia who act as their caregivers
- Spouse of persons who are diagnosed by a qualified professional as per ICD/DSM
- Persons diagnosed under any of the subtypes of schizophrenia
- Onset of the illness is at least after 5 years of married life
- Both Male and Female

3.7. Exclusion Criteria:

- Spouse currently not living with the patient
- Spouse with any known chronic psychiatric/physical conditions
- Spouse of persons with schizophrenia before marriage

3.8. Sample Size: 81

Estimated Sample Size: 75

Calculated using G power software with effect size = 0.50, $\alpha = 0.05$, $1-\beta = 0.95$,

3.9. Tools used

3.9.1. Big Five Inventory- John, O. P., & Srivastava, S. (1999)

It is a 44-item inventory that measures an individual on the Big Five Factors of personality.

- Openness
- Conscientiousness
- Extraversion
- Agreeableness
- Neuroticism

Each of the factors is then further divided into personality facets. The reliability coefficient of the tool was found to be 0.70. The Big Five Inventory was standardized in an Indian population.

3.9.2. Attitude Questionnaire- Sethi BB, Chatruvedi PK, Trivedi JK, Saxena NK; 1985.

Attitude questionnaire is based on the methodological background as taken by Brown et. al., (1972) in his study. This consists of 30 questions relating to number of critical comments, hostility, dissatisfaction, warmth, emotional overinvolvement by a key relative towards the patient. The questions were so arranged that those relating to a positive attitude were signed

even numbers and scored +2, +1 and 0 for answers “yes”, “indefinite” and “no” and those questions relating to a negative attitude were assigned odd number and scores -2, -1 and 0 for three answers respectively.

These scores were totaled for each answer sheet and assigned into the following categories.

- Positive Attitude: Highly and moderately positive attitude (scores +11 to +30)
- Average Attitude: Mildly positive and mildly negative attitude (scores -10 to +10)
- Negative Attitude: Highly and moderately negative attitude (scores -11 to -30) (Sethi et, al., 1985).

3.10. Procedure

The sample was collected using purposive sampling method. Informed consent form was provided to the participants who were matching the criteria and who were willing to participate in the study. The participants were briefed about confidentiality and debriefing would be given if any distress is faced by the participants. The client should have been diagnosed by a qualified psychiatrist/ clinical psychologist. The questionnaires will be administered in person to each participant in person. The data sheet consisted of sociodemographic details and of the two tools used. Data was collected in-person using paper pencil tests. The collected data was analysed using SPSS Version 20.

3.11. Ethical consideration:

- Informed consent was taken from all participants.
- Participation in the study was voluntary
- Debriefing was given whenever required
- Anonymity of the participants and the confidentiality of the data was maintained.
- The participants were not subjected to any physical or psychological harm.

- Tools used in the study were all either open source made publicly available for research under creative commons license.

3.12. Data analysis

The data collected was analyzed in SPSS Version 20.0. The descriptive statistics were obtained for all the possible study measures and reported in the subsequent chapters. For inferential statistics, the data was tested for any outliers and normality analysis was done using Shapiro-Wilk statistic to meet the requirements of parametric statistics. The results showed that all the variables entered in the analysis was not significant indicating that the normality of the data was present. Consequently, Pearson correlation was performed to find the relationship between the two variables in the study. Additionally, the homogeneity of variances was tested using Levene's test for equality if variances, in order to perform Independent Samples t-test. T-test was then used to compare the differences of scores within the group based on socio-demographic variables. For variables having more than two groups, One-way ANOVA was used to check the significance of differences between the groups. Finally, Tukey's HSD was performed as the post-hoc analysis to understand particular group has significant difference in comparison with other groups.

CHAPTER IV
RESULTS & DISCUSSION

RESULTS

Table 1: Pearson correlation for personality traits and components of Expressed Emotion.

	Openness	Conscientiousness	Extraversion	Agreeableness	Neuroticism	Critical comments	Hostility	Warmth	Dissatisfaction	Over-Involvement
Openness	-									
Conscientiousness	-.788**	-								
Extraversion	-.978**	.848**	-							
Agreeableness	-.975**	.813**	-.989**	-						
Neuroticism	.989**	-.794**	-.985**	-.969**	-					
Critical comments	-.759**	.691**	.804**	.799**	-.773**	-				
Hostility	-.670**	.672**	.715**	.703**	-.687**	.872**	-			
Warmth	-.258*	.336**	.334**	.350**	-.263*	.463**	.415**	-		
Dissatisfaction	-.443**	.227*	.451**	.451**	-.466**	.366**	.172	.172	-	
Over-Involvement	-.455**	.401**	.491**	.488**	-.471**	.631**	.518**	.518**	.281*	-

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 1 shows the Pearson correlation values for the personality traits and the components of Expressed Emotion. The results indicate significant negative correlation between Openness and Conscientiousness (r=-0.788), Extraversion (r=-0.978), Agreeableness (r=-0.975), Critical comments (r=-0.759), hostility (r=-0.670), dissatisfaction (r=-0.443) and Over-involvement (r=-0.455) significant at the 0.01 level (2-tailed). There is a negative correlation between Openness and Warmth (r=-0.258) which is significant at the 0.05 level (2-tailed). There is a significant positive correlation between Conscientiousness and Extraversion (r=0.848), Agreeableness (r=0.813), Critical comments (r=0.691), Hostility (r=0.672), Warmth (r=0.336) and Over-involvement (r=0.401) at 0.01 level (2-tailed). There is a negative correlation between Conscientiousness and Neuroticism (r=-0.794) significant at 0.01 level (2-tailed). There is a positive correlation between Conscientiousness and Dissatisfaction (r=0.227) at 0.05 level (2-tailed). The results indicate a significant positive correlation between Extraversion and Critical comments (r=0.804), Hostility (r=0.715), Warmth (r=), Dissatisfaction (r= 0.451) and Over-involvement (r=0.491) at 0.01 significance level. There was a negative correlation between Extraversion and Agreeableness (r= -0.989) & Neuroticism (r=-0.985) at 0.01 significance level. The results indicated significant positive correlations between Agreeableness and Neuroticism (r=0.969), Critical comments (r=0.799), Hostility (r=0.703), Warmth (r=0.350), Dissatisfaction (r=0.451) and Over-involvement (r=0.488) at 0.01 significance level (2-tailed). There is a significant negative correlation between Neuroticism and Critical comments (r=-0.773), Hostility (r=-0.687), Dissatisfaction (r=-0.466), Over-involvement (r=-0.471) at 0.01 significance level and with Warmth (r=-0.263) at 0.05 significance level (2-tailed). There was significant positive correlation between Critical comments and Hostility (r=0.872), Warmth (r=0.463), Dissatisfaction (r=0.366) and Emotion over-involvement (r=0.631) at 0.01 significance levels. There was a significant positive correlation between Hostility and Warmth (r=0.415) & Over-involvement (r=0.518)

at 0.01 significance level. There was a significant positive correlation between Warmth and Over-involvement (r=0.518) at 0.01 significance level. The results indicated a positive correlation between Dissatisfaction and Over-involvement (r=0.281) at 0.05 significance (2-tailed).

Table 2: ANOVA for Expressed Emotion

		Sum of Squares	df	Mean Square	F	Sig.
OPENNESS	Between Groups	3702.612	2	1851.306	50.797	.000*
	Within Groups	2842.747	78	36.445		
	Total	6545.358	80			
CONSCIENTIOUSNESS	Between Groups	720.603	2	360.302	36.265	.000*
	Within Groups	774.952	78	9.935		
	Total	1495.556	80			
EXTRAVERSION	Between Groups	5534.907	2	2767.453	66.059	.000*
	Within Groups	3267.710	78	41.894		
	Total	8802.617	80			
AGREEABLENESS	Between Groups	5362.982	2	2681.491	61.592	.000*
	Within Groups	3395.858	78	43.537		
	Total	8758.840	80			
NEUROTICISM	Between Groups	5941.521	2	2970.760	58.917	.000*
	Within Groups	3932.949	78	50.422		
	Total	9874.469	80			

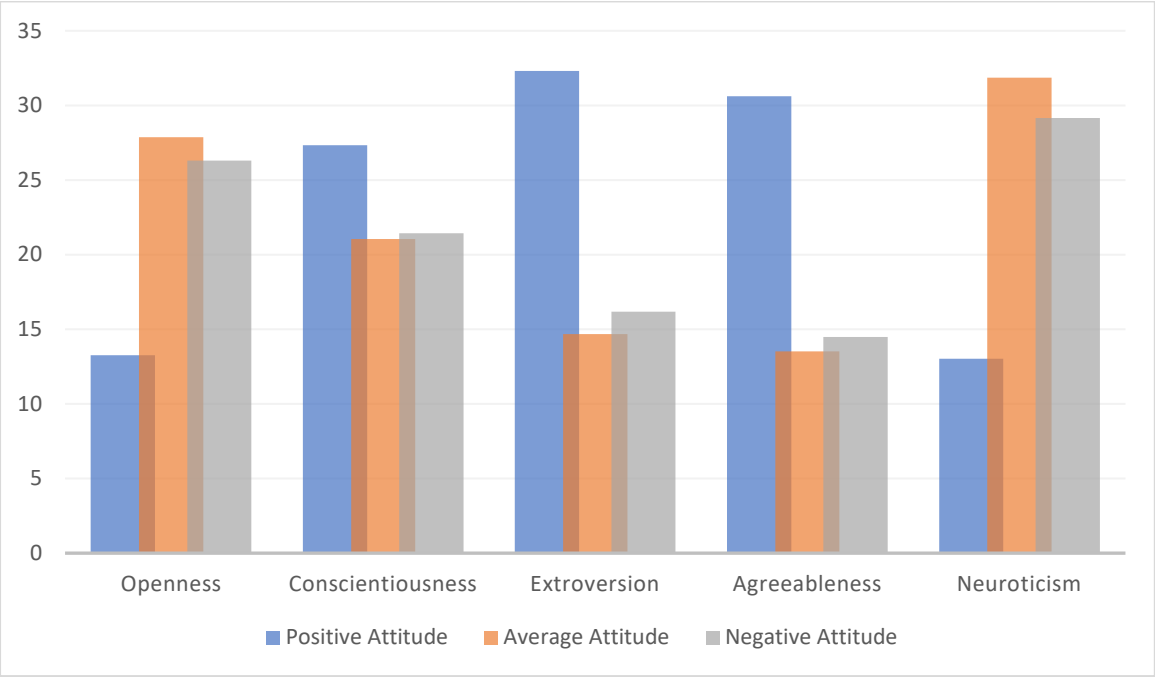
* Indicates significance at 0.05 level.

Table 2 shows the ANOVA for total score of Expressed Emotion with the personality traits. The overall score of total score for Expressed Emotion includes positive attitude, average and negative attitude. The results indicate that there is a significant difference in the scores of Openness (F=50.797; p=0.000), Conscientiousness (F=36.265; p=0.000), Extraversion

(F=66.059; p=0.000), Agreeableness (F=61.592; p=0.000) and Neuroticism (F=58.917; p=0.000).

Tukey's post-hoc analysis showed a significant mean difference in the scores of Openness where in the group with Average Expressed Emotion (14.584) and Negative attitude (13.024) have a higher mean score than the group with Positive Expressed Emotion with a mean difference of 14.584 and 13.204 respectively; The results showed higher mean score in Conscientiousness in the group with Positive Expressed Emotion when compared the groups with Average and Negative Expressed Emotion with a mean difference of 6.286 and 5.889 respectively. The results showed higher mean score in Extraversion in the group with Positive Expressed Emotion when compared the groups with Average and Negative Expressed Emotion with a mean difference of 17.636 and 16.118 respectively. The results showed higher mean score in Agreeableness in the group with Positive Expressed Emotion when compared the groups with Average and Negative Expressed Emotion with a mean difference of 17.082 and 16.125 respectively. It also showed higher mean score in Neuroticism in the group with Average and Negative Expressed Emotion than in the group with positive Expressed Emotion with a mean difference of 18.827 and 16.118 respectively.

Figure 1: Mean of the five personality traits among three groups in Expressed Emotion.



Graph 1 shows the mean distribution of the personality traits across the three groups of Expressed Emotion including positive, average and negative attitude.

Table 3: Descriptive Statistics for the age of the client and the spouse

	N	Minimum	Maximum	Mean	Std. Deviation
AGE OF THE CLIENT	81	29	59	38.16	7.381
AGE OF THE SPOUSE	81	26	54	37.11	5.931

The table shows that the age range of the client is between 29 years and 59 years and those of the spouse ranges from 26 years to 54 years. The mean age for the clients was 38.16 and 37.11 for the spouses.

Table 4: Pearson Correlation statistic for the age of the client and the age of the spouse with the study variables.

	Openness	Conscientiousness	Extraversion	Agreeableness	Neuroticism	Critical comments	Hostility	Warmth	Dissatisfaction	Emotional Overinvolvement	Total EE
Age of the Client	-.780**	.735**	.793**	.787**	-.774**	.561**	.491**	.209	.301**	.291**	.486**
Age of the Spouse	-.770**	.731**	.789**	.771**	-.776**	.678**	.604**	.336**	.384**	.363**	.614**

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The results indicate that the age of the client and that of the the spouse has a significant negative correlation with Openness (r= -0.780) and Neuroticism (r= -0.774) significant at the 0.01 level (2-tailed). It is positively correlated with Conscientiousness (r= 0.735), Extraversion (0.793), Agreeableness (r= 0.787), Critical comments (r= 0.561), Hostility (0.491), Dissatisfaction (r= 0.301), Over-involvement(r=0.291) and the overall total EE(r= 0.486) significant at the 0.01 level (2-tailed).

Table 5: Group statistics for gender of the client

	GENDER OF THE CLIENT	N	Mean	Std. Deviation
OPENNESS	M	50	19.90	9.060
	F	31	23.81	8.623
CONSCIENTIOUSNESS	M	50	24.52	4.752
	F	31	22.48	3.213
EXTRAVERSION	M	50	24.08	10.800
	F	31	19.58	9.486
AGREEABLENESS	M	50	22.46	10.788
	F	31	18.13	9.482
NEUROTICISM	M	50	21.50	11.169
	F	31	26.16	10.561
CRITICAL COMMENTS	M	50	-.80	4.585
	F	31	-.65	4.528
HOSTILITY	M	50	.08	4.159
	F	31	.26	4.099
WARMTH	M	50	1.32	3.335
	F	31	2.06	2.220
DISSATISFACTION	M	50	-.14	3.580
	F	31	.29	3.227
OVER-INVOLVEMENT	M	50	1.16	5.797
	F	31	1.52	6.717
Total EE	M	50	1.62	16.940
	F	31	3.45	15.859

Table 5 shows that the total number N of Male and Female was 50 and 31 respectively among the clients. The results indicate differences in mean based on the gender of the client in each of the personality traits and the components of Expressed Emotion. The mean value of Openness and Neuroticism is found to be slightly higher in females than males. The mean values of Extraversion and Agreeableness is slightly higher in males than in females.

Table 6: Independent Samples t-test based on gender of the client

		t	df	Sig. (2-tailed)	Mean Difference
OPENNESS	Equal variances assumed	-1.921	79	.058	-3.906
CONSCIENTIOUSNESS	Equal variances not assumed	2.299	78.335	.024*	2.036
EXTRAVERSION	Equal variances assumed	1.907	79	.060	4.499
AGREEABLENESS	Equal variances assumed	1.837	79	.070	4.331
NEUROTICISM	Equal variances assumed	-1.863	79	.066	-4.661
CRITICAL COMMENTS	Equal variances assumed	-.148	79	.882	-.155
HOSTILITY	Equal variances assumed	-.188	79	.851	-.178
WARMTH	Equal variances assumed	-1.100	79	.275	-.745
DISSATISFACTION	Equal variances assumed	-.546	79	.587	-.430
OVER-INVOLVEMENT	Equal variances assumed	-.253	79	.801	-.356
TOTAL EE	Equal variances assumed	-.484	79	.629	-1.832

***** Indicates significance at 0.05 level.

The results of the Independent Sample t-test indicated that there is a significant difference in the scores of Conscientiousness (p= 0.024) based on the gender of the client. There are no other statistically significant differences in any other components based on the gender of the client.

Table 7: Group statistics for gender of the spouse

	GENDER OF SPOUSE	N	Mean	Std. Deviation
OPENNESS	M	33	24.06	8.411
	F	48	19.56	9.093
CONSCIENTIOUSNESS	M	33	22.39	3.132
	F	48	24.67	4.795
EXTRAVERSION	M	33	19.24	9.284
	F	48	24.50	10.822
AGREEABLENESS	M	33	17.76	9.301
	F	48	22.90	10.793
NEUROTICISM	M	33	26.52	10.323
	F	48	21.06	11.188
CRITICAL COMMENTS	M	33	-.88	4.484
	F	48	-.65	4.615
HOSTILITY	M	33	.03	4.073
	F	48	.23	4.178
WARMTH	M	33	1.94	2.263
	F	48	1.38	3.368
DISSATISFACTION	M	33	.15	3.173
	F	48	-.06	3.634
OVER-INVOLVEMENT	M	33	1.18	6.640
	F	48	1.38	5.819
Total EE	M	33	2.39	15.935
	F	48	2.27	16.977

Table 7 shows that the total number of Males and Females were 48 and 33 respectively among the spouses of persons with schizophrenia. The results indicate differences in mean based on the gender of the spouse in each of the personality traits and the components of Expressed Emotion. The mean values did not show a marked difference, however there is a slightly higher mean value for Females in scores of Agreeableness & Extraversion. There is a slightly higher mean for Male in the scores of Neuroticism & Openness.

Table 8: Independent Samples t-test based on gender of the spouse

		t	df	Sig. (2-tailed)	Mean Difference
OPENNESS	Equal variances not assumed	2.288	72.301	.025*	4.498
CONSCIENTIOUSNESS	Equal variances not assumed	-2.580	78.839	.012*	-2.273
EXTRAVERSION	Equal variances not assumed	-2.339	75.093	.022*	-5.258
AGREEABLENESS	Equal variances not assumed	-2.287	74.943	.025*	-5.138
NEUROTICISM	Equal variances not assumed	2.257	72.402	.027*	5.453
CRITICAL COMMENTS	Equal variances assumed	-.226	79	.822	-.233
HOSTILITY	Equal variances assumed	-.213	79	.832	-.199
WARMTH	Equal variances assumed	.840	79	.403	.564
DISSATISFACTION	Equal variances assumed	.274	79	.785	.214
OVER-INVOLVEMENT	Equal variances assumed	-.139	79	.890	-.193
Total EE	Equal variances assumed	.033	79	.974	.123

* Indicates significance at 0.05 level.

The results of the Independent Sample t-test indicated that there is a significant difference in the scores of Openness (p=0.025), Conscientiousness (p=0.012), Extraversion (p= 0.022), Agreeableness (p= 0.025) & Neuroticism (p= 0.027) based on the gender of the spouse. There are no other statistically significant differences in any of the components of Expressed Emotion based on the gender of the spouse.

Table 9: ANOVA for Socio-economic status

		Sum of Squares	df	Mean Square	F	Sig.
OPENNESS	Between Groups	2203.810	3	734.603	13.029	.000*
	Within Groups	4341.548	77	56.384		
	Total	6545.358	80			
CONSCIENTIOUSNESS	Between Groups	320.659	3	106.886	7.005	.000*
	Within Groups	1174.896	77	15.258		
	Total	1495.556	80			
EXTRAVERSION	Between Groups	3102.520	3	1034.173	13.970	.000*
	Within Groups	5700.097	77	74.027		
	Total	8802.617	80			
AGREEABLENESS	Between Groups	3298.183	3	1099.394	15.502	.000*
	Within Groups	5460.656	77	70.918		
	Total	8758.840	80			
NEUROTICISM	Between Groups	3397.838	3	1132.613	13.466	.000*
	Within Groups	6476.632	77	84.112		
	Total	9874.469	80			
CRITICAL COMMENTS	Between Groups	415.114	3	138.371	8.659	.000*
	Within Groups	1230.441	77	15.980		
	Total	1645.556	80			
HOSTILITY	Between Groups	279.483	3	93.161	6.687	.000*
	Within Groups	1072.739	77	13.932		
	Total	1352.222	80			
WARMTH	Between Groups	51.549	3	17.183	2.030	.117
	Within Groups	651.809	77	8.465		
	Total	703.358	80			
DISSATISFACTION	Between Groups	133.503	3	44.501	4.228	.008*
	Within Groups	810.448	77	10.525		
	Total	943.951	80			
OVER-INVOLVEMENT	Between Groups	621.080	3	207.027	6.693	.000*
	Within Groups	2381.809	77	30.933		
	Total	3002.889	80			
Total EE	Between Groups	5642.662	3	1880.887	9.035	.000*
	Within Groups	16028.993	77	208.169		
	Total	21671.654	80			

* Indicates significance at 0.05 level.

Table 9 indicates the ANOVA for socio-economic status with respect to the personality traits and components of Expressed Emotion. The socio-economic status of the sample is divided into four groups including lower, lower middle, upper middle and upper class. The results indicated that there is a significant difference in the scores of Openness (F=13.029; p=0.000), Conscientiousness (F=7.005; p=0.000), Extraversion (F=13.970; p=0.000), Agreeableness (F=15.502; p=0.000), Neuroticism (F=13.466; p=0.000), Critical comments (F=8.659; p=0.000), Hostility (F=6.687; p=0.000), Dissatisfaction (F=4.228; p=0.008), Over-involvement (F=6.693; p=0.000) and the overall Expressed emotion score (F=9.035; p=0.000).

Tukey's post-hoc analysis showed that there was a higher mean score in Openness in the lower middle, upper middle and upper class than in the lower class with the mean difference of 7.931, 15.601 and 18.708 respectively. The results showed a higher score in Conscientiousness in lower socio-economic strata than in the lower middle, upper middle and upper class with a mean difference of 5.097, 6.684 and 8.458 respectively. There was a higher score in Extraversion lower class than in in the lower middle, upper middle and upper class with a mean difference of 11.264, 19.375 and 23.708 respectively. There was a higher score in Agreeableness in the lower class than in the lower middle, upper middle and the upper class with a mean difference of 11.764, 20.169 and 23.708 respectively. The analysis showed that there was a higher mean score in Neuroticism in the lower middle, upper middle and upper class than in the lower class with the mean difference of 9.569, 19.110 and 23.875 respectively.

Tukey's post-hoc analysis for the components Expressed Emotion with a score of Critical comments higher in Lower class than in lower middle, upper middle and upper class with a mean difference of 5.167, 7.324 and 10.000 respectively. There was a score of Hostility higher in Lower class than in lower middle, upper middle and upper class with a mean

difference of 4.236, 6.081 and 7.875 respectively. The post-hoc analysis showed that the scores of Dissatisfaction was higher in lower middle class than in Upper middle class with a mean difference of 2.350. There was a higher score in Over-involvement in lower class than in lower middle and upper middle with a mean difference of 8.206 and 4.456 respectively. The analysis showed significant higher score in the total score of Expressed Emotion in the lower class than in lower middle, upper middle and upper class with a mean difference of 16.458m 27.360 and 27.125 respectively.

Figure 2: ANOVA for socio-economic strata

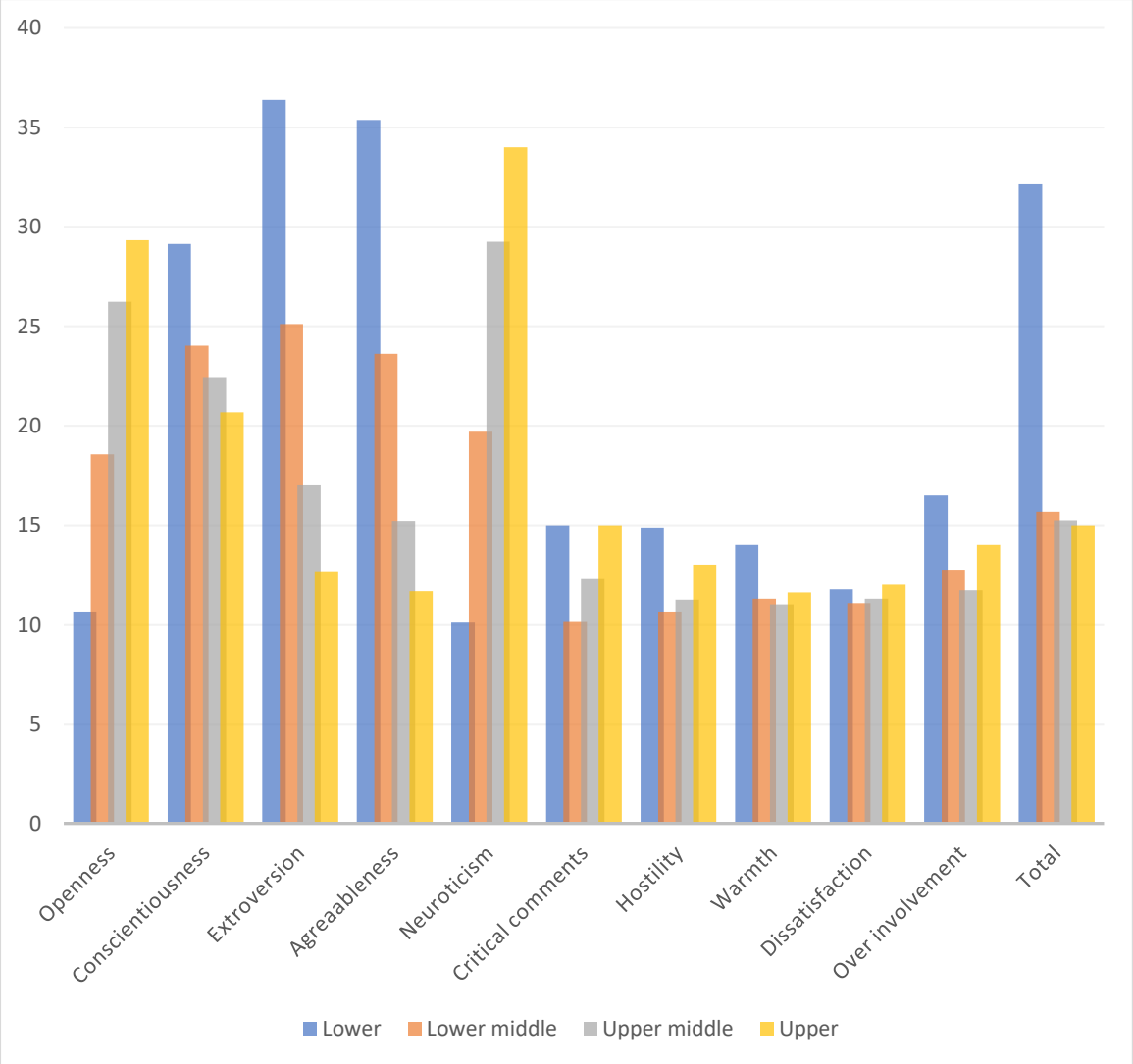


Table 10: Pearson Correlation for the years of marriage

	Openness	Conscientiousness	Extraversion	Agreeableness	Neuroticism	Critical comments	Hostility	Warmth	Dissatisfaction	Emotional Over involvement	Total EE
Years of Marriage	-.904**	.868**	.921**	.902**	-.911**	.716**	.657**	.263*	.393**	.364**	.627**

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 10 shows the Person correlation between the years of married life in the sample and the study variables. The number of years of marriage had a strong negative correlation with Openness (r=-0.904), Neuroticism (r=-0.911) significant at the 0.01 level (2-tailed). There was found to be a positive correlation with the personality traits of Conscientiousness (r=0.868), Extraversion (r=0.921) and Agreeableness (r=0.902) significant at the 0.01 level (2-tailed). Number of years of marriage was also positively correlated to components of Expressed emotion (r=0.627) including Critical comments (r=0.716), Hostility (0.657), Dissatisfaction (r=0.393) and Over-involvement (r=0.364) significant at the 0.01 level (2-tailed). The years of marriage was found to have positive correlation with Warmth (r=0.263) significant at the 0.05 level (2-tailed).

DISCUSSION

The study aimed at analysing the relationship between personality traits and the components of Expressed Emotion among the spouses of persons with schizophrenia. The primary hypothesis of the study is to compare and understand the nature of relationship between the five personality traits (Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism) and the components of Expressed Emotion (Critical comments, Hostility, Warmth, Dissatisfaction and Over-involvement).

The results (Table 1) indicate that there is a significant negative correlation between Openness and Critical comments, Hostility, Warmth, Dissatisfaction and Over-involvement. This might be explained in terms of the possible negative attitude attached to the components of expressed emotion and the personality trait being expressed as open to experience and is more creative and exploratory in nature. The significant positive correlation between Conscientiousness and Dissatisfaction might be because a person with high conscientiousness might prefer an organised and planned way of carrying out things, but a person with schizophrenia might lack such organisation and this might induce Dissatisfaction in the primary caregiver.

The results showed a significant positive correlation between Extraversion and all the components of Expressed Emotion. This significant relationship has been explained in terms of its predictive power in relapse and the nature of the trait was significantly correlated with the Expressed Emotion of the caregiver (Roseliza-Murni et al., 2014). The trait being expressed as a keen interest in other and increased talkativeness and expressiveness might explain the increased scores in the components of Expressed Emotion.

There is positive correlation between Agreeableness and components of Expressed Emotion. This might be explained in terms of pervious research which indicated that agreeableness was

positively related to emotional disclosure which is moderated by the person's self-esteem (McCarthy et al., 2017).

The results indicated a significant negative correlation between Neuroticism and the components of Expressed Emotion. Previous research conducted among the mothers of persons with schizophrenia revealed that there is increased caregiver burden among the mothers with lower neuroticism and they also had higher scores in critical comments (King et al., 2003). The possible explanation might be because of the emotional instability of the spouse, there is a higher negative attitude towards the person with schizophrenia resulting in the significant negative correlation between both.

Statistical analysis was done to understand the difference in the scores of the personality traits in comparison to the three levels of Expressed Emotion. The three levels include positive attitude, average attitude and negative attitude. The results of ANOVA (Table 2) indicate that there is a difference in personality traits considering the three levels of Expressed Emotion.

Tukey's post hoc analysis reveal that there is a significant mean difference in the group consisting of positive and average attitude and not with the group consisting of negative attitude. This significant difference is found in each of the five personality traits measured and it might explain the influence of the personality traits on the Expressed Emotion.

It was hypothesized that age of the sample group will have a relationship with both the personality traits and Expressed Emotion of the spouse. Considering the sample chosen for the study, the age ranged from 26 to 59 among both the clients and the spouse. The results (Table 4) showed that there was a strong negative correlation between age and two personality traits- Openness to experience and Neuroticism. The reduction in scores of Neuroticism with age is explained by researches that people tend to improve self-regulatory strategies and thereby there is reduction in negative affect (Helson & Soto, 2005) (Soto et al.,

2011) and many might establish relatively stable and satisfying marital relationship which reduces predominant conflicts that act as life stressors (Schumm & Bugaighis, 1986) (Soto et al., 2011). Scores in openness decrease with increase in age as with age, they experience a lot of transitions and hardships so their levels of openness become an ongoing process rather than a state (Roberts et al., 2006) (Soto et al., 2011). The significant positive correlations in Extraversion, Conscientiousness and Agreeableness can be explained in terms of the cultural contexts. Conscientiousness as a trait is develops with age as they internalize abstract moral and social principles that promote prosocial and responsible behaviours (Eisenberg et al., 2010) (Soto et al., 2011). As establishing a career and forming satisfying relationships becomes the ultimate goals of adulthood, these two traits Agreeableness and Conscientiousness have been found to have higher scores with age (Roberts & Mroczek, 2008) (Soto et al., 2011).

The components of Expressed Emotion and the overall EE score had a significant positive correlation with age. The increase in score of Expressed Emotion can be explained in terms of increased co-dependence among partners with years and the reduced opportunities to engage in other activities, thus increasing the interaction among family members more (Cole & Kazarian, 1988).

The scores in the study variables were hypothesized to have significant differences based on the gender of the client and the spouse. The group statistics for the gender of the client indicate that there was a total of 50 male and 31 female. The results of Independent Sample t-test indicate there is a significant difference in scores of conscientiousness with respect to gender and there is no statistically significant difference in the other four traits. Previous research has shown a higher score in females (Feingold, 1994) as the facet in itself measures the quality of self-control and dutifulness. However, there are no consistent research findings and it was also shown to have no difference in levels of conscientiousness considering the

gender (Costa et al., 2001). The scores in the components of Expressed Emotion did not have a statistically significant difference between males and females.

The group statistics for the gender of the spouse indicate that there was a total of 48 male and 33 female. The Independent Sample t-test (Table 6 & Table 8) indicated there was a significant difference between the two groups in all five personality traits and no difference between the groups in the components of Expressed Emotion.

The mean value of Conscientiousness, Extraversion and Agreeableness is found to be higher in females than males. Research indicate that women tend to have a higher score in Agreeableness which is explained in the evolutionary perspective where in women who had higher levels of nurturing and who were more agreeable survived and gained the evolutionary advantage (Costa et al., 2001) The cultural context of the current study might have also had an added influence over this trait seen predominantly more in women than in men. Research show inconsistences in the scores of Extraversion with respect to gender, but there are findings that indicate the scores are higher in males than in females (Shokri et al., 2007). This higher score is explained by the nature of facet scores in each domain.

The mean values of Neuroticism and Openness is slightly higher in males than in females. Research show inconsistences in the scores of Openness to experience with respect to gender, but there are findings that indicate the scores are higher in males than in females (Shokri et al., 2007). This higher score in male is explained by the nature of facet scores in each domain. Previous research indicated that there is an increased levels of Neuroticism among females were explained by the cultural norms and their tendencies to express themselves more than men (Katz & McGuffin, 1987) (Costa et al., 2001). The higher score in Neuroticism among males in the particular study might be because of the role that they have adopted as a primary

care taker of a person with schizophrenia. This significant mean difference was not observed in the gender of the client.

The study variables were hypothesised to have significant difference on the basis of domicile. The results of Independent Sample t-test indicated a significant difference in scores of personality traits in Urban and Rural sample. This might be explained in terms of the cultural context that has an influence over various morals that individuals adopt (Triandis & Suh, 2002). The differences seen in the scores of Expressed Emotion between the two groups might also explain the nature of interaction in the family. The results indicate that the scores of the components of Expressed Emotion was more in the Rural group than the Urban. This might be because of the stronger social ties in the Rural (White & Guest, 2003), which in turn has an influence on the reactions displayed by the members of the family.

It was hypothesized that there is a significant difference in the scores among the four classes based on their socio-economic strata. The ANOVA (Table 9) of the study variables based on the socio-economic strata show that there is a significant difference in scores of all the components except Warmth between the four groups divided based on socio-economic strata. The post hoc analysis showed that there was a significant difference in most of the groups on most of the study variables.

Studies show that there is increase in Neuroticism scores in the lower Socio-economic strata which is explained in terms of higher levels of anxiety and depression due to the financial uncertainty (Lahey, 2009) (Luo et al., 2022). But the results of the present study show an increasing trend in the scores of Neuroticism as there in increase in the social class. The finding might be reflected by considering the nature of the sample with caregivers for persons with Mental Illness. The Study by Damian also showed a positive correlation between the social class and the scores in Conscientiousness (Damian et al., 2015) (Luo et al., 2022).

However, the analysis of the present study did not correlate with the previous findings where in there is a decrease in the score of Conscientiousness with increase in the social class.

Considering the relationship between the socio-economic strata and the levels of Expressed Emotion, there was very less difference in the scores of the five components between the four classes. However, there was a significant higher score in the overall EE score in the lower class than in the other three classes. Research studies show that there is a predominant mood component that is evidently seen among lower socio-economic strata that is influenced by their living standards (Hao & Farah, 2020).

The years of marriage was hypothesised to have a relationship with both the variables. The correlation analysis (Table 10) of the study variables and the number of years of married life showed similar results as with the age of the sample. There was a negative correlation with Openness and Neuroticism and a significant positive correlation with the other variables. As there are no previous research to explain the relationship, the factors that was considered with age might also explain this relationship with the study variables.

The type of family and the number of persons in the family was hypothesised to have an impact on the study variables. The ANOVA of family type and the study variables showed no significant mean differences among the groups except in Conscientiousness. However, the post hoc analysis showed no significant differences in the mean scores of Conscientiousness between the groups. Thus, the type of family might have little or no effect on the nature of the personality traits or the Expressed Emotion. ANOVA was performed to understand the difference in the scores based on the diagnosis received- Paranoid, Hebephrenic, Schizoaffective, Residual or Catatonic Schizophrenia. The results showed no significant difference between the groups compared.

The overall analysis of the data reveal that there is a significant relationship between the Personality traits and Expressed Emotion of a person who acts as a caregiver for the spouse with schizophrenia. The Personality traits and the Expressed Emotion of the person is influenced by various factors as discussed and there are much more cultural factors that play a major role, particularly in deciding the nature of Expressed Emotion.

CHAPTER V

SUMMARY & CONCLUSION

SUMMARY & CONCLUSION

Expressed Emotion which refers to the caregiver's response to a person with mental illnesses. Expressed Emotion has been found to be an important factor in the occurrence of relapse among persons with mental illness. The present study aimed at understanding the relationship between the Personality traits and Expressed Emotion of the spouses of persons with Schizophrenia. The study hypothesised that the big five personality traits (Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism) are correlated with the 5 components including Critical comments, Hostility, Warmth, Dissatisfaction and Over-involvement. It was also hypothesised that socio-demographic variables such as age, gender, socio-economic strata and the number of years of married life has its influence on the study variables.

The sample was chosen based on availability and the sample size was 81 which included both male and female participants, from various socio-economic strata. The results indicated that there was a significant correlation between the personality factors and the Expressed Emotion. The findings include:

- Negative correlation between Openness and Conscientiousness, Extraversion Agreeableness, Critical comments, hostility, dissatisfaction and Over-involvement.
- Negative correlation between Openness and Warmth.
- Positive correlation between Conscientiousness and Extraversion, Agreeableness, Critical comments, Hostility, Warmth and Over-involvement.
- Negative correlation between Conscientiousness and Neuroticism.
- Positive correlation between Conscientiousness and Dissatisfaction.
- Positive correlation between Extraversion and Critical comments, Hostility, Warmth, Dissatisfaction and Over-involvement.

- Negative correlation between Extraversion and Agreeableness & Neuroticism.
- Positive correlations between Agreeableness and Neuroticism, Critical comment, Hostility, Warmth, Dissatisfaction and Over-involvement.
- Negative correlation between Neuroticism and Critical comments, Hostility, Dissatisfaction, Over-involvement and Warmth.
- Positive correlation between Critical comments and Hostility, Warmth, Dissatisfaction and Emotion over-involvement.
- Positive correlation between Hostility and Warmth & Over-involvement.
- Positive correlation between Warmth and Over-involvement.
- Positive correlation between Dissatisfaction and Over-involvement.
- Significant difference in the scores of Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism between the three groups having positive, negative and average Expressed Emotion overall scores.
- Age of the participants was negatively correlated with Openness & Neuroticism and was positively correlated with other study variables.
- Gender difference was seen in the scores of personality traits but not in the components of Expressed Emotion.
- Significant differences in the scores of all the study variables based on the socio-economic strata.
- Years of marriage was negatively correlated with Openness & Neuroticism and was positively correlated with other study variables.

The findings indicate the existing pattern between the two main variables and their sub-domains, and the relationship between the study variables and the various socio-demographic variables. Thus, understanding the relationship between the personality traits of the primary

caregiver and their nature of Expressed Emotion might aid in preventing relapse in the person with schizophrenia and also in better prognosis.

Implications of the study:

- The findings can help mental health professionals to understand the role of Expressed Emotion from the caregiver as a factor that need to be intervened.
- Understanding the basic personality traits in the person and thereby introducing strategies appropriate for that person to understand and modify the Expressed Emotion.
- With the knowledge about the pattern existing between the Personality traits and Expressed Emotion, the mental health professional might predict and prevent the negative effects of Expressed Emotion by understanding the basic personality traits in that person.

Limitations of the study:

- The study includes a smaller sample size due to the availability of sample and time. Thus, generalising the results to a greater population might be questioned.
- The study includes tools that are only self-report measures and has no clinical rating involved which may result in any discrepancies in the results.
- It also restricts its sample characteristic in a particular locality, thus differences due to cultural factors was not reflected in this study.
- There was no intervention or follow-up sessions provided for the participants to understand and modify their Expressed Emotion, thereby reducing the chances of relapse.

Future directions:

- Longitudinal research that understands this pattern on a larger sample can be carried out to understand the influence of the existing pattern between Expressed Emotion and Personality on the relapse of the illness.
- Intervention studies to understand and modify the nature of Expressed Emotion and thereby preventing the rate of relapse.

CHAPTER VI

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CHAPTER VII
APPENDIX

APPENDIX 1- CONSENT FORM (ENGLISH)

National Institute for Empowerment of Persons with Multiple Disability (NIEPMD)

Ministry of Social Justice and Empowerment, Govt. of. India
Muttukadu, ECR Road, Chennai – 603 112
RESEARCHER: Saranya Sivakumar

CONTACT: saranya7sivakumar@gmail.com 8838495060

PERSONALITY TRAITS AND EXPRESSED EMOTION IN SPOUSES OF PATIENTS WITH SCHIZOPHRENIA

STUDY INFORMATION SHEET

The family plays a vital role in the care of a person with Mental illness. The emotional states within the family have a major impact on the prognosis and factors related to relapse in the client. Thus, working with the family is important in rehabilitation of the client.

Studies available have established the importance of expressed emotion in the caregivers and the effect on relapse. This study explores the personality traits of the spouse and their nature of expressed emotion, thereby understanding the pattern existing. Exploration of this pattern can help in understanding the proneness of relapse due to expressed emotion.

Who will be the participants?

Spouses of persons with Schizophrenia

What are my benefits if I participate in the study?

You would be able to understand the nature of expressed emotion that exist and the consequences of the same. If needed, ways to modify the expressed emotion may be suggested for better prognosis in the client.

Does this study involve any expenses?

No, it does not involve any expenses.

Is it legally enforceable?

No, this is not a legally binding document. It is a research document.

Will there be any negative consequences if I participate?

No, the participation in this study will not lead to any negative consequences.

Are there any basic requirements to participate in the study?

None.

Voluntary Participation:

Your participation in this study is completely voluntary and you can refuse to participate.

Withdraw from the study:

You are free to choose whether or not you want to be a part of this study. Saying "NO" will not affect your relationship with the researcher or the institute and your spouse will be receiving standard treatment.

Confidentiality:

The personal information given by you will be kept confidential. Only members of the research team will know your name and details. Your name will not appear in any report or publication. However, the overall results of the study will be published in the research journals.

Mode of session & Video Recording:

All the sessions will be conducted in a room setting. The sessions will not be audio or video recorded.

Undertaking by the researcher

Your consent to participate in the above research by Ms Saranya S and Dr Karthikeyan, Department of Clinical Psychology, NIEPMD, Chennai is sought. You have the right to refuse consent or withdraw the same during any part of the research without giving any reason. In such an event, your spouse will still receive the best possible treatment, without prejudice. If you have any doubts about the research, please feel free to clarify the same. Even during the research, you are free to contact the researcher (Ms. Saranya S). The information provided by you will be kept strictly confidential.

Consent to participate in the research study

	YES/NO
I confirm that I have had an adequate explanation and have clearly understood the information sheet of the study and have had the opportunity to ask questions.	
I understand that my participation is voluntary and that I am free to withdraw from the study at any time without giving a reason, without my treatment being affected.	
I understand that all personal information I shared will be kept confidential and will not be shared with anyone other than those involved in the research study.	
I agree to take part in the above study voluntarily	
I have received a copy of the study information sheet and consent form	

Name of the Client: Signature
Date:

Name of the Spouse: Signature:
Date:

Name of the researcher: Signature
Date:

APPENDIX 2- CONSENT FORM (TAMIL)

ஒன்றுக்கும் மேற்பட்ட ஊனமுற்றோரின் மேம்பாட்டிற்கான தேசிய நிறுவனம் (NIEPMD)

சமூக நீதி மற்றும் அதிகாரம் வழங்கல் அமைச்சகம், இந்திய அரசு, முட்டுக்காடு, கிழக்கு கடற்கறை சாலை, சென்னை – 603 112

தொ.பே: 9526115304, NIEPMD தொ.பே: 044-27472113, 27472046

மின்னஞ்சல்: saranya7sivakumar@gmail.com

ஸ்கிசோஃப்ரினியா உள்ளவர்களின் வாழ்க்கைத் துணைகளில் ஆளுமைப் பண்புகள் மற்றும் வெளிப்படுத்தப்பட்ட உணர்ச்சிகள்

ஆய்வு தகவல் தாள்

மனநலம் பாதிக்கப்பட்ட ஒரு நபரின் பராமரிப்பில் குடும்பம் முக்கிய பங்கு வகிக்கிறது. குடும்பத்திற்குள் உள்ள உணர்ச்சி நிலைகள் வாடிக்கையாளரின் முன்கணிப்பு மற்றும் மறுபிறப்பு தொடர்பான காரணிகளில் பெரும் தாக்கத்தை ஏற்படுத்துகின்றன. எனவே, வாடிக்கையாளரின் மறுவாழ்வில் குடும்பத்துடன் பணிபுரிவது முக்கியம். கிடைக்கக்கூடிய ஆய்வுகள் பராமரிப்பாளர்களில் வெளிப்படுத்தப்பட்ட உணர்ச்சியின் முக்கியத்துவத்தையும் மறுபிறப்பில் விளைவையும் நிறுவியுள்ளன. இந்த ஆய்வு வாழ்க்கைத் துணையின் ஆளுமைப் பண்புகள் மற்றும் அவர்களின் வெளிப்படுத்தப்பட்ட உணர்ச்சியின் தன்மையை ஆராய்கிறது, இதன் மூலம் இருக்கும் வடிவத்தைப் புரிந்துகொள்கிறது. இந்த முறையை ஆராய்வது வெளிப்படுத்தப்பட்ட உணர்ச்சி காரணமாக மறுபிறப்பு ஏற்படுவதற்கான வாய்ப்பைப் புரிந்துகொள்ள உதவும்.

பங்கேற்பாளர்கள் யார்?

ஸ்கிசோஃப்ரினியா கொண்ட நபர்களின் வாழ்க்கைத் துணைவர்கள்

நான் ஆய்வில் பங்கேற்றால் என்ன பயன்?

வெளிப்படுத்தப்பட்ட உணர்ச்சியின் தன்மையையும் அதன் விளைவுகளையும் நீங்கள் புரிந்து கொள்ள முடியும். தேவைப்பட்டால், வாடிக்கையாளருக்கு சிறந்த முன்கணிப்புக்காக வெளிப்படுத்தப்பட்ட உணர்ச்சியை மாற்றுவதற்கான வழிகள் பரிந்துரைக்கப்படலாம்.

இந்த ஆய்வில் ஏதேனும் செலவுகள் உள்ளதா?

இல்லை, இதில் எந்த செலவும் இல்லை.

இது சட்டப்படி அமலாக்கப்படுமா?

இல்லை, இது சட்டப்பூர்வ ஆவணம் அல்ல. இது ஒரு ஆய்வு ஆவணம்.

நான் பங்கேற்றால் ஏதேனும் எதிர்மறையான விளைவுகள் ஏற்படுமா?

இல்லை, இந்த ஆய்வில் பங்கேற்பது எதிர்மறையான விளைவுகளுக்கு வழிவகுக்காது.

ஆய்வில் பங்கேற்க ஏதேனும் அடிப்படைத் தேவைகள் உள்ளதா?

இல்லை.

தன்னார்வ பங்கேற்பு:

இந்த ஆய்வில் நீங்கள் பங்கேற்பது முற்றிலும் தன்னார்வமானது மற்றும் நீங்கள் பங்கேற்க மறுக்கலாம்.

ஆய்வில் இருந்து விலகவும்:

இந்த ஆய்வின் ஒரு பகுதியாக நீங்கள் இருக்க விரும்புகிறீர்களா இல்லையா என்பதைத் தேர்வுசெய்ய உங்களுக்கு சுதந்திரம் உள்ளது. "இல்லை" என்று சொல்வது ஆராய்ச்சியாளர் அல்லது நிறுவனத்துடனான உங்கள் உறவைப் பாதிக்காது மற்றும் உங்கள் வாழ்க்கைத் துணை நிலையான சிகிச்சையைப் பெறுவார்.

இரகசியத்தன்மை:

நீங்கள் அளிக்கும் தனிப்பட்ட தகவல்கள் ரகசியமாக வைக்கப்படும். ஆராய்ச்சி குழுவில் உள்ளவர்கள் மட்டுமே உங்கள் பெயர் மற்றும் விவரங்களை அறிவார்கள். உங்கள் பெயர் எந்த அறிக்கையிலும் அல்லது வெளியீட்டிலும் தோன்றாது. இருப்பினும், ஆய்வின் ஒட்டுமொத்த முடிவுகள் ஆய்வு இதழ்களில் வெளியிடப்படும்.

ஆய்வாளரால் மேற்கொள்ளப்படுகிறது

Ms சரண்யா எஸ் மற்றும் டாக்டர் கார்த்திகேயன், மருத்துவ உளவியல் துறை, NIEPMD, சென்னை ஆகியோரின் மேற்கூறிய ஆராய்ச்சியில் பங்கேற்க

உங்கள் ஒப்புதல் கோரப்பட்டுள்ளது. ஆராய்ச்சியின் எந்தப் பகுதியிலும் எந்த காரணமும் கூறாமல் சம்மதத்தை மறுக்கவோ அல்லது திரும்பப் பெறவோ உங்களுக்கு உரிமை உண்டு. அத்தகைய நிகழ்வில், உங்கள் வாழ்க்கைத் துணை பாரபட்சமின்றி சிறந்த சிகிச்சையைப் பெறுவார். ஆராய்ச்சியில் ஏதேனும் சந்தேகம் இருந்தால், அதைத் தெளிவுபடுத்தவும். ஆராய்ச்சியின் போது கூட, ஆராய்ச்சியாளரை (Ms சரண்யா எஸ்) நீங்கள் தொடர்பு கொள்ளலாம். நீங்கள் வழங்கிய தகவல்கள் கண்டிப்பாக ரகசியமாக வைக்கப்படும்.

ஆராய்ச்சி ஆய்வில் பங்கேற்க ஒப்புதல்

	ஆம்/ இல்லை
என்னிடம் போதுமான விளக்கமும், ஆய்வின் தகவல் தாளைத் தெளிவாகப் புரிந்துகொண்டு கேள்விகள் கேட்கும் வாய்ப்பும் கிடைத்துள்ளது என்பதை உறுதிப்படுத்துகிறேன்.	
எனது பங்கேற்பு தன்னார்வமானது என்பதையும், எனது சிகிச்சை பாதிக்கப்படாமல், எந்த நேரத்திலும் காரணத்தை தெரிவிக்காமல் படிப்பில் இருந்து விலகுவதற்கு நான் சுதந்திரமாக இருக்கிறேன் என்பதையும் புரிந்துகொள்கிறேன்.	
நான் பகிர்ந்த அனைத்து தனிப்பட்ட தகவல்களும் ரகசியமாக வைக்கப்படும் மற்றும் ஆராய்ச்சி ஆய்வில் ஈடுபட்டுள்ளவர்களைத் தவிர வேறு யாருடனும் பகிரப்படாது என்பதை நான் புரிந்துகொள்கிறேன்.	
மேலே உள்ள ஆய்வில் தானாக முன்வந்து பங்கேற்க ஒப்புக்கொள்கிறேன்.	

APPENDIX 3- SOCIO-DEMOGRAPHIC DATA SHEET

SOCIO-DEMOGRAPHIC DETAILS

Age of the client:

Gender of the client:

Age of the Spouse:

Gender of the Spouse:

Married for:

Education:

Occupation:

Socioeconomic strata: Lower/Upper lower/Lower Middle/Upper Middle/Upper

Place of residence – Rural/Urban

No. of people in the family:

Type of family: Nuclear/Joint/Extended

APPENDIX 4- BIG FIVE INVENTORY (BFI)

The Big Five Inventory (BFI) Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement. Disagree strongly 1; Disagree a little 2; Neither agree nor disagree 3; Agree a little 4; Agree Strongly 5.

I see Myself as Someone Who...

____1. Is talkative	____23. Tends to be lazy
____2. Tends to find fault with others	____24. Is emotionally stable, not easily upset
____3. Does a thorough job	____25. Is inventive
____4. Is depressed, blue	____26. Has an assertive personality
____5. Is original, comes up with new ideas	____27. Can be cold and aloof
____6. Is reserved	____28. Perseveres until the task is finished
____7. Is helpful and unselfish with others	____29. Can be moody
____8. Can be somewhat careless	____30. Values artistic, aesthetic experiences
____9. Is relaxed, handles stress well	____31. Is sometimes shy, inhibited
____10. Is curious about many different things	____32. Is considerate and kind to almost everyone
____11. Is full of energy	____33. Does things efficiently
____12. Starts quarrels with others	____34. Remains calm in tense situations
____13. Is a reliable worker	____35. Prefers work that is routine
____14. Can be tense	____36. Is outgoing, sociable
____15. Is ingenious, a deep thinker	____37. Is sometimes rude to others
____16. Generates a lot of enthusiasm	____38. Makes plans and follows through with them
____17. Has a forgiving nature	____39. Gets nervous easily
____18. Tends to be disorganized	____40. Likes to reflect, play with ideas
____19. Worries a lot	____41. Has few artistic interests
____20. Has an active imagination	____42. Likes to cooperate with others
____21. Tends to be quiet	____43. Is easily distracted
____22. Is generally trusting	____44. Is sophisticated in art, music, or literature

APPENDIX 5- ATTITUDE QUESTIONNAIRE

I will ask you some general questions that pertain to your child/relative and his disorder. Listen to each question carefully, understand them. And answer each question with a Yes or No or Not sure according to how true the statement for you. Please don't think too long for any of one question and answer quickly as you can. There are no right or wrong answers, the answer is what you think is right. Your responses will not be revealed to anyone else. Now please read carefully and answer the questions.

Sl.No.		Yes	No	Not sure
1	[CC] Do you always scold or criticize the patient			
2	[W] Do you give the patient lots of love and affection			
3	[H] Do you oppose everything whatever the patient says			
4	[O] Do you worry too much about the patient about his disorder and prognosis			
5	[D] Is the patient behaviour is out of tolerance			
6	[CC] Do you seldom feel bad about the patient's habits (ignoring the bad habits)			
7	[H] Do you compel or give pressure to change the habits of the patient			
8	[W] Do you make involve or allow the patient to participate in everyday fun and happy moments in the family.			
9	[D] Do you often get upset with patient's behaviour (speech, actions, behaviours, habits and character)			
10	[OI] Do you support the patient more than required			
11	[CC] Do you often think about patient's behaviour (argue or speak)			
12	[H] Do you a pay very less attention to the condition of the patient's actions			
13	[D] Do you get angry with the patient's habits			
14	[W] Do you have the friendly relationship with the patient			
15	[CC] Do you impose your opinions on the patient			
16	[D] Do you often tolerate if the patient fails to listen to you			
17	[W] Do you give patient less sympathy			
18	[OI] Can you often spend time with the patient			
19	[CC] Do you ever tried pay attention in the patient's daily routine			
20	[D] Do you get very less troubled by the patient's misbehaviour (taking off and throwing off clothes or other such strange behaviours)			
21	[W] Do you rarely show affection while conversing with the patient			
22	[OI] Do you rarely ignore patient's wishes			
23	[H] Do you severely punish the patient to stop his / her unwanted behaviour			
24	[D] Do you find it difficult to stay away from the patient			
25	[W] Do you devote less time of your schedule to the patient			
26	[OI] Can you easily interact with the patient			
27	[H] Do you find the patient inferior to other			
28	[OI] Even if the patient makes mistake, do you often stop him less often			
29	[H] Do you rarely bare the symptoms of the patient			
30	[OI] Can you give up your daily routines for the treatment of the patient			