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People have been seeking help for their underlying psychological problems since ages. Of course, it was not until around a little more than a hundred years ago that a formal professional approach was brought into address the issue into more structured and scientific way. The journey of development of counselling and psychotherapy was never easy and always posed challenges time and again specifically due to rapid social and cultural transformation more so in last four decades. The whole fabric of society has been completely and radically changed. The family and cultural value systems have been tremendously altogether taken new shape. The communication pattern as well as relational issues are entirely different now. The pace of social transformation and the advancement of technology has changed the face of society itself. Such scenario has furthered interest of psychotherapy and counselling professionals to examine and evolve newer techniques of psychotherapies to address the need of diverse world.

Again, the socio-demographic patterns of the world are changing rapidly, and these changes do reflect among the clients who come to us seeking help for their psychological problems. Thus, in addition to learn about various theories of psychotherapy and counselling and how they translate into day to day practice, we need to learn how much these approaches are relevant and how effective they are, with diverse clients? Sue and Sue (2013) defined multicultural counselling / therapy as "both a helping role and process that uses modalities and define goals consistent with life experience and cultural values of clients, recognizes client identities to include individual, group and universal and culture specific strategies and roles in the healing process and balances the importance of individualism and collectivism in the assessment, diagnosis, and treatment of clients and client's system.

As per Lee and Ramirez (2000), the multicultural movement in the field of psychotherapy emerged in the USA in 1960s and 1970s. This was the period when psychotherapists/ counsellors started recognizing one of two instances with culturally diverse population; either assuming a benevolent role as if helping the less fortunate or recognizing the salience of culture in the counselling process but at the same time not abandoning or modifying traditional psychotherapy paradigms to accommodate the role of culture (Frew & Spiegler, 2008). Lee and Remirez (2000) further point out "The responsibility remain with the culturally different client to adjust to the psychotherapy process, rather than therapists adjusting models to the needs of clients". In the last three four decades however, the onus has shifted to therapists assuming the responsibility of adopting to meet requirements of the clients hailing from diverse culture, and, eventually in due course of time, multicultural approach of psychotherapy has significantly gained momentum, influence and prominence.

We have to develop skill and competence to choose suitable therapeutic approach and become culturally competent therapist. Further, the term cultural and multicultural generally have a more inclusive meaning and literature in all popular books of psychotherapy include diversity in all its variations, including culture as well as ethnicity, race, age, gender, sexual orientation, socio-economic status, educational level, religious and spiritual orientation, and physical ability.

Being culturally competent means that you understand and respect the world views of culturally diverse clients and develop appropriate intervention strategies and techniques consistent with your clients' cultural identities. To achieve cultural competence, you must become aware of your own world view - that is, your assumptions, values and biases of the counselling approach you are using. Social scientists concerned with multicultural issues point to the fact that traditional psychological notions about human personality, psychological disorders, and change process were based on the world views of the individuals. One of the persistent criticism of traditional theories of counselling and psychotherapy is that they assume the cultural perspective in which good psychotherapy will eventually work for everyone irrespective of the cultures, they belonged to. However cultural universality has been challenged by many professionals in the past who argue for the
use of culture specific strategies in counselling and psychotherapy (Herring, 1999; Parham, White & Ajamu, 1999). This culturally relative perspective has eventually led to introduction and development of newer indigenous models of culture - specific therapies. Various new psychotherapeutic approaches are being introduced so as to address as well as to maintain balance between culturally universal as well as relative perspective tailored as per need of a given client. We can not deny the fact that it takes time for new theoretical models to be developed and become part of the day to day practice. In any case, this is a very challenging phase for clinicians to keep pace with the changing face of the society and to evolve the suitable therapeutic methods to be employed in varied categories of client representing diverse socio-cultural background.

In last two decades issue relating to feminist multicultural ethics have drawn attention of psychotherapists to analyse and view dilemmas in various areas of counselling and psychotherapy. In the light of changing role of modern women, feminist ethics has influenced our profession to large extent. The feminist theme reflected in the philosophy and assumptions of ethical feminist multicultural therapeutic approaches include components in reference to sociopolitical context, empowerment of clients, social justice, validation of the experience of women hailing from a specific demographical background, the ethic of care besides naturally and genuineness in the psychotherapeutic relationship. Of course, some feminist criticize the principled approach to ethics, may be partly because the meaning of moral principle is unclear and is shaped by an individual's place in the social culture (Noddings, 1984). However, some others feel that principles provide guidance and that moral principles implicitly take care of many of the ethical decisions feminists make and the beliefs, they hold. We have ethical responsibility to ensure that our interactions with clients are in service of clients and not designed to meet our own needs (Kitechener, 2000).

Hence, in light of above discussion, it is amply clear that in diverse world before making the choice we must understand and learn what we have to choose from, which means exposing ourself to a variety of available therapeutic models and approaches with scientifically validated outcome results. In any case choosing a psychotherapeutic approach is determined on our initially selecting a single approach. Indeed, a majority of therapists prefer to a single theoretical approach and employ therapeutic techniques that are primarily derived from it and at the same time, they are comfortable with. Again, a substantial number of therapists subscribe to more than one approach, known as eclecticism, which involves both theoretical and technical eclecticism borrowed from multiple approaches to treat / mange the clients. Of course, developing a unique overriding theory that encompasses multiple approaches requires extensive experiences and exposure prior to formally getting in practice of psychotherapy. In recent years number of therapists have been working on integrating divergent counselling and psychotherapy approaches (Gold, 1996; Norcross & Goldfried, 2005). Psychotherapy integration involves identifying in common element in different approaches to psychotherapy and meticulously developing formal theoretical integration. In 1983, the society for Exploration of Psychotherapy Integration was formed as an international organization. The society's founder judiciously choose the words "Exploration of" to indicate that the psychotherapy integration is possibility rather than something that exists or that we are certain can occur. In fact, divergent perspective of many approaches have, mostly in terms of both their theoretical construct and their techniques of change makes psychotherapy integration difficult (Lazarus, 1995).

We can’t also undermine political battle among psychotherapists having fascination for a specific school of thought who all believe that their approach is right or even advocating that heir approach is superior to other existing approaches. Again, integration of psychotherapies also become difficult especially by the virtue of fact that there is lack of common language among the psychotherapist of different backgrounds and orientation. With each theoretical approach having its own terminology, sometimes it is difficult for psychotherapists from different approaches to communicate clearly with one another. Moreover, confusion is further created because many terms have multiple meanings as well.

Still various new psychotherapeutic approaches have been introduced in last two decades to focus and address various psychosocial issues so as to help
the society at large. Keep in mind, however, that all counselling and psychotherapeutic approaches hone in on aspect of clients and their problems deemed essential by the approach and even less or no attention to aspects considered nonessential. Still all the approaches have their blind spot as well. In a digital era, every day newer and newer challenges are coming to us and accordingly we keep updating ourselves to tackle the problems in efficient manner.

In present scenario, family and couple therapy have been a ray of hope for most of the people living with interpersonal as well as marital conflict. In due course of time, their core therapeutic concepts have been evolved, synthesized and eventually successfully applied with in wide range of client hailing from diverse culture. Family therapy has a long history of investigating and documenting how services can be modified to fit within the cultural and social milieu of diverse ethnic groups (Ho, Rasheed & Rasheed. 2004). Gradually, family and relational therapeutic applications have gained prominence in most of the therapeutic interventions as core or auxiliary support modality both in modality both in clinical and non-clinical population (Singh, 2004). Beside, these issues, approaches, to use when working with gay and lesbian females, physical and terminal illness are to be refined and periodically validated to stand the test of time without compromising with professional ethics. In the last we must understand that formal counselling and psychotherapy techniques have travelled a long way from informal to formal and then from individual to group to community set up. Every day, we come a cross with a varieties of issues with psychosocial implications and that is how and why we have to keep striving to evolve short term approaches of psychotherapies without weakening the original foundations of schools of psychotherapeutics. Secret of growth of our profession lies in constant change taking place in the society, culture and advancement of technology. We have to work hard to ensure delivery of counselling & psychotherapeutic service adhering to professional ethics (Singh, 2006).

REFERENCES
I feel both humbled and honoured on the invitation to deliver the H. N. Murthy oration on this memorable occasion. I had the privilege of knowing and interacting frequently with Prof. Murthy during my doctoral stint at NIMHANS. It was in fact, he who encouraged me to work in the area of altered states of consciousness and opened up broad vistas of exciting and challenging possibilities. His enthusiasm, joy in doing research, deep and profound scholarship, generosity of spirit and willingness to guide and mould naïve students has remained with me over the years. This is my small tribute and homage to a pioneering clinical psychologist, an excellent human being and a person who most closely approximated a fully functioning person.

There is now a greater emphasis on the development of approaches which will enable Psychology and in particular Clinical and Health Psychology to move in the direction of becoming an integrative science. This presentation is situated within this broad framework. It will focus on the integrative movement in both psychological sciences and psychotherapy and health psychology.

As far as clinical interventions are concerned this movement can be conceptualized at two levels: Integration within psychotherapeutic approaches, and integration with traditional spiritual and healing practices. This section would also dwell on the present status of psychotherapy practice in India and the imperatives, both theoretical and pragmatic to adopt an integrative stance.

I.1: INTEGRATION IN WESTERN PSYCHOTHERAPY

Research has indicated that psychotherapy is moving toward an integrated approach to therapy (Norcross, 2005). The movement toward integration of the various schools of psychotherapy has been in the making for decades. As the field of psychotherapy has developed over the past several decades, there has been a decline in the ideological cold war among the various schools of psychotherapy (Goldfried, Pachankis, & Bell, 2005).

The integrative psychotherapy movement was a shift from the prevailing atmosphere of factionalism and competition amongst the psychotherapies and a step toward dialogue and cooperation. Also, practitioners increasingly recognized that no single therapy or group of therapies had demonstrated superior efficacy in comparison to any other theory and the correlated lack of success of any one theory to explain and predict pathology, personality, or behavioral change. Other factors included the introduction of shorter-term, focused psychotherapies, greater communication between clinicians and academicians, and a demand for therapist accountability and documentation of the effectiveness of psychological therapies.

A significant trend was the identification of common factors related to successful therapy outcome that cut across the various therapeutic schools.

I.2: Integration Strategies:

Clinicians have used a number of ways to integrate the various counselling theories or psychotherapy, including technical eclecticism, theoretical integration, assimilative integration, common factors, multitheoretical psychotherapy, and helping skills integration (Norcross & Goldfried, 2005).

Eclecticism may be defined as an approach that does not hold rigidly to any single paradigm or any single set of assumptions, but rather draws upon multiple theories to gain insight into phenomena. Eclecticism in psychology has been caused by the belief that many factors influence human behaviour; therefore, it is important to examine a client from a number of theoretical perspectives (Goldfried, Pachankis, & Bell, 2005).

Theoretical integration is perhaps the most difficult and sophisticated of the three types of psychotherapy integration because it involves bringing together theoretical concepts from disparate
theoretical approaches, some of which may present contrasting worldviews. Proponents of theoretical integration maintain that it offers new perspectives at the levels of theory and practice because it entails a synthesis of different models of personality functioning, psychopathology, and psychological change.

The assimilative integration approach to psychotherapy involves grounding oneself in one system of psychotherapy but with a view toward selectively incorporating (assimilating) practices and views from other systems. Assimilative integrationists use a single, coherent theoretical system as its core, but they borrow from a broad range of technical interventions from multiple systems. Assimilative integrationists believe integration should take place at the practice level rather than at the theory level.

The common factors approach has been influenced mainly by the work of Rogers (1957). The core conditions (or necessary and sufficient conditions) to effect change in clients have now become part of the early training of most helping professionals (Rogers, 1951). Thus as succinctly summarized by Norcross (2005), “The common factors approach seeks to determine the core ingredients that different therapies share in common, with the eventual goal of creating more parsimonious and efficacious treatments based on their commonalities.”

Multitheoretical approaches to therapy have used two or more theories. For example, Brooks-Harris (2008) integrated cognitive, behavioral, experiential, biopsychosocial, psychodynamic, systemic, and multicultural perspectives.

II. IMPERATIVES FOR EVOLVING INTEGRATIVE APPROACHES IN INDIA

II.1: Cultural Issues and Imperatives:

The role of cultural factors in psychotherapeutic interventions has been showcased by Thapa (2000, 2014). Psychotherapy, Foucault had asserted involves “technologies of the self” (cf. Erwin, 1997). The intrapsychic self in India varies and includes an integration of a familial self with a spiritual self (Roland, 1988). The familial self is characterised by symbiosis-reciprocity (which includes intensely emotional relationships, a “we-self” that is relational in nature), narcissistic configurations of we-self regard that denotes self-esteem derived from identification with the family and other groups and a socially contextual ego ideal. The spiritual self in his view is a basic assumption in Hindu culture and is psychologically engraved in the preconscious of all Indians.

Helping systems have been a part of many Asian cultures and have emphasized harmonious relations among body, mind, and spirit. In the Western cultural traditions, however, these three levels of functioning have been separated; this separation has been the legacy of western scientific and technological ideologies. Mental health practitioners have long accepted that cultural beliefs and practices enter into the psychotherapeutic process; they form a part of the both the client’s and therapist’s definition and understanding of the problem. Berry et al. (1982) have stated that there is a “triangular relationship between the client, the therapist and society”.

It was found that while psychotherapists in India have been sensitive to cultural nuances in the practice of psychotherapy, few attempts have been made to develop models which are congruent with cultural traditions and the changes taking place therein. Interwoven here are two strands of thought: i) divergence from Western models of psychotherapy to ensure a better cultural fit and ii) accepting that psychotherapy must fit the lives and experiences of clients, whose metaphysical assumptions concerning the nature of man, society and the world, whose culture and society are vastly different from the Western world. The epistemological issue here is pertaining to the cultural relativism of Western models which are products of their place and time (Thapa, 1994).

The Global Mental Health (GMH) initiative aimed to improve mental health services for people with mental disorders, particularly for those living in developing and non-Western countries where effective and evidence-based treatments are scarce (Herrman & Swartz, 2007). This movement has been criticized for its ignorance of the socio-cultural context of mental health (Kirmayer & Pederson, 2014) and failing to recognize that culture shapes the experience, expression, and coping of distress and that local idioms and conceptualizations of health and distress will differ.

Second, the notion of treatment gap and evidence-based practices ignore two interrelated phenomena: preferred sources of help and indigenous healing systems. People in Asia tend to underutilize
mental health services (Mathur, Ann, Kumar, & Menon, 2014; Fones & Kua, 2003; Tuliao, 2014) for various reasons such as stigma, shame, linguistic barriers, conflicting styles of emotional expression, different concepts of the self, somatization and unfamiliarity with the Western modes of mental health services (Sue & Sue, 2013). Many of these reasons reflect the differences in worldviews between mental health providers and Asian people (Lee, 2015). These divergences constitute the main argument for integrating Asian healing concepts into psychotherapy (Bojuwoye & Sodi, 2010; Lee, in press). Worldviews are beliefs, assumptions, and values that describe reality, human nature, the meanings of life, and one’s relationships with the world (Koltko-Rivera, 2004). A shared worldview provides client and therapist a common framework to work together (Fischer, Jome, & Atkinson, 1998).

Frank and Frank (1991) have conceptualized the shared worldview in terms of providing a therapeutic rationale that makes sense to the client. All healing systems, including psychotherapy and traditional healing practices, are embedded in “a rationale, conceptual schemes, or myth that provides a plausible explanation for the [client’s] symptoms and prescribes a ritual or procedure for resolving them”. However, the form and content of a mythic world varies across healing systems. It may take a scientific or a supernatural form. The question does not lie in whether a particular myth is truer than the other but in whether it is socioculturally meaningful to both practitioner and client. Thus, one of the therapist’s cultural competencies is his or her ability in using interventions consistent with the client’s worldviews (Hwang, 2006; Sue & Sue, 2013). Raguram and Bhola in the 6th ICSSR survey (in press) have pointed out that the voices from India that address the importance of rooting therapies in the cultural context are collectively louder (Avasthi, 2011; Carson, Jain & Ramirez, 2009; Jacob & Kuruvilla, 2012; Manickam, 2010; Marwaha, 2003; Raney & Cinarbas, 2005; Soundarajan, 2009).

Thus, Jacob & Kuruvilla (2012) proposed that the form of therapeutic techniques may be relatively universal, while the content must be matched with local and individual realities. Therefore, therapy goals and processes must be tailored to the collectivist Indian society with its tilt towards interdependence (Markus & Kitayama, 1991) and familism (Roland, 1988). Hierarchical societal structures and childrearing patterns mean that a more directive Guru Chela therapy relationship (Neki, 1973) is still valid. The barriers to seeking psychotherapy include stigma, philosophical beliefs in reincarnation and fatalism, cultural misconceptions, for example, related to sexuality, and cultural strictures against revealing family issues, can all influence the way in which therapy is perceived and carried out in our country.

Another important consideration is that India is viewed as a single culture, but in reality, the complex intersections of diverse religions, ethnicities, languages, socio-economic strata, literacy level and rural-urban residence, make for ‘many Indias’. These issues need to be addressed while planning interventions.

II.2: Pragmatic Concerns and Imperatives:

Epidemiological studies have provided data about the prevalence of mental disorders in the community and have highlighted the magnitude of the problem (Math & Srinivasaraju, 2010; National Mental Health Survey of India, 2015-16 Gururaj et al., 2016; Murthy, 2017). Math and Srinivasaraju (2010) in their review on the epidemiology of psychiatric disorders in India based on the data published from 1960 to 2009 have concluded that the overall prevalence rate was approximately 190-200/1000 population which means that at least 20% of the population does have one or the other mental disorder, which requires the intervention. This was a modest estimation of the psychiatric prevalence in the Indian population.

The more recent National Mental Health Survey of India 2015-16 in its summary (Gururaj et al., 2016) has pointed out that mental disorders contribute to a significant load of morbidity and disability. There is evidence that persons with mental illness are unable to receive quality care due to limited awareness, availability, accessibility and affordability with the costs of care becoming increasingly prohibitive. Even more worrying is the finding that persons with mental disorders account for nearly a fourth of the total case load in primary care settings highlighting the burden at peripheral levels. Most often, these individuals present as common mental health problems or as a comorbid condition of other disorders and are missed or inappropriately managed.

Based on uniform and standardised data collection procedures, this survey has estimated that, excluding tobacco use disorders, mental morbidity
of individuals above the age of 18 years currently was 10.6%. The life time prevalence in the surveyed population was 13.7%. Translated to real numbers (based on weightage for different levels), nearly 150 million Indians are in need of active interventions. Common mental disorders (CMDs), including depression, anxiety disorders and substance use disorders are a huge burden affecting nearly 10.0% of the population.

As pointed out by Raguram & Bhola (in press), the need to evolve culturally relevant and acceptable models of psychological interventions that are also empirically supported cannot be overstated.

III. PAST INITIATIVES AND EFFORTS AT INTEGRATING PSYCHOTHERAPY IN INDIA

This section will focus briefly on past initiatives and attempts to integrate, in both theory and practice, indigenous and spiritual techniques with psychotherapeutic methods.

III.1: Girindrasekhar Bose:

Girindrasekhar Bose, who pioneered the psychoanalytic movement in India learnt hypnosis and by 1914 was treating patients using a technique similar to Freud’s method. Bose also used notions derived from a study of Indian psycho-philosophical schools of self-realization. In the practice of Psychoanalysis, Bose’s method was to ask the patient to free-associate and then “build up wish fulfillment and fantasies with reference to the repressed wish, ultimately taking up the role of the subject and the object in the wish situation”. The analyst took on an active, didactic (instructional) role, similar to the Guru-chela relationship. This relationship is in consonance with cultural traditions that have emphasized a symbiotic mode of relating with others. Bose also incorporated in Psychoanalysis, meditative procedures, Tantric visualization and Yoganidra.

III.2: N. C. Surya

The discontent with Western models of psychotherapy was first enunciated by Surya and Jayaram in 1964. They observed that the use of a foreign language and alien conceptual frameworks were ineffectual in understanding the “whole existence” of the client. They also outlined client characteristics in terms of specific anticipations and expectancies, including a willingness to accept support, to discard “ego-bounds”, less interest in intrapsychic explanations and more demanding in terms of time and personal needs. In further expositions, Surya (1979) focused on personal autonomy and responsibility, first through personal apprenticeship to establish autonomy over the functioning of one’s body and then subsequently in the client. Using the notion of “total health”, he asked therapists to engage in “active experimentation with the self, as a total human being, trying to reach ever new heights of efficiency”. He believed that therapists must explore and experience “the profound psychosomatic roots of words and their interactional implications for health and ill-health”.

III. 3: J. S. Neki:

Most well-known alternative formulation of psychotherapy in India is the Guru-chela relationship proposed by Neki. Neki (1979) identified three trends in the efforts to make psychotherapy more culturally sensitive: (i) sensitivity arising from client expectations and characteristics; (ii) awareness of the ethno-specific nature of Western psychotherapy; (iii) rediscovery of indigenous therapeutic paradigms.

His assumption was that the most acceptable form of psychotherapy for Indian clients would be the Guru-chela relationship. Neki defined this as a relationship sui generis, with its own distinctive dynamics and goals. In this relationship, the Guru is more active and takes on responsibility for the direction and outcome of psychotherapy. The Guru persona is one that can be effortlessly adopted and has greater cultural sanction and acceptance.

III.4: Sudhir Kakar:

His writings have focused on different aspects of Indian experience and psychic life. He accepted the historical and cultural relativity of mental health concepts and acknowledged that psychotherapy is partly a social institution that provides glimpses into the symbolic universes of Indian culture.

He also presented a model of counselling: the relational model (Kakar, 1984). This is based on the premise that each individual is constituted of relationships. The client’s problems are disorders of relationships, including the relationship with the natural and cosmic world. The techniques used would seek to connect (or reconnect) the client with sources of psychological strength that include an integration with the social and cosmic order. In Kakar’s words, this would “require a polyphonic social drama that
attempts a ritual restoration of the dialogue with the person’s family, community and its traditions”. In this model, the counsellor is a benign figure offering the client, “a developmental second chance”.

III.5: R.L. Kapur:
Carstairs & Kapur (1976) in their landmark study located in the coastal village of Kota, observed that the people of Kota not discriminating between physical illness, mental illness and suffering of other kinds, have taken their troubles to the temple priests or to itinerant holy men, but most of all to three kinds of professional healers: Vais, Mantarwadis and Patris. They thus recommended a co-existence of traditional and modern forms of therapy. In his personal quest, Kapur (2009) studied spirituality and interviewed ascetics from different sects of Hinduism, expanding on the mental health implications of his findings. He has pointed out that Indian spiritual traditions have paid attention to both the external, material world as well as examining the inner world with a view to finding answers to existential questions. Thus very rich psychological insights a view to finding answers to existential questions. Thus very rich psychological insights may emerge which can be an essential part of psychotherapy.

IV. PRESENT PROSPECTS AND EFFORTS AT INTEGRATING PSYCHOTHERAPY IN INDIA
Raguram & Bhola (in press) have highlighted the role of indigenous intervention paradigms. The critical issue pertaining to cultural universalism and cultural relativism have culminated in the critical question, Is (and should there be) a unique indigenous ‘Indian Psychotherapy’? This section will focus briefly on how therapeutic interventions can incorporate and include spirituality, Ayurveda, yoga and meditative practices.

IV.1: Spirituality:
Literature on caring for the whole person recognizes that human suffering includes not only cognitive, emotional and volitional but also existential and spiritual dimensions. Existing conceptual categories can no longer accommodate the rapidly shifting values and emerging realities in a world shorn of moorings characterised by extreme states of anxiety and confusion. Scientific advances have not increased our ability to predict and control human destiny; we have not found any satisfactory rational explanation and scientific solution of human suffering and evil.

As a result, there is a growing awareness in mental health professionals of the need to foster spirituality and well-being in clinical practice. There is no one specific approach to psychotherapy that involves the integration of spiritual healing. Instead, there are some major types of emphases and a repertoire of techniques that may be adopted. In the spiritual traditions, the healer is the conduit of healing, and it is through the healer's inner activities that healing is enabled to take place. Such inner activities include the healer's state of consciousness and contents of consciousness (Sollod, 1993).

In the past decade or so, practitioners and researchers worldwide have acknowledged the intersections between spirituality and mental health. One might argue that spirituality has always been embedded in everyday life in India. With a more legitimate position, therapists and counselors can explore spiritual perspectives as part of holistic paradigms in wellbeing, mental illness and recovery.

IV.2: Meditation:
Meditative practices are an integral part of Indian heritage and there has been an exponential increase in their application in mental health. In fact, meditation has moved beyond the stress-reduction paradigm to help in building personal resources towards positive mental health (Sahoo, 2011). Research studies have included clinical and non-clinical samples and demonstrated the wide-ranging impact of meditation.

However, the integration into psychotherapeutic paradigms and mental health training frameworks is still tenuous. The incorporation of meditative practices into dialectical behaviour therapy and cognitive-behavioural therapy in the West, has been paralleled by a focus on mindfulness-based meditative practices in India. On a speculative note, the use of meditation as part of integrated treatments may well open doors to greater client acceptability of psychotherapy in general.

IV.3: Yoga
There is scope for yoga to be used as a prescriptive treatment in conjunction with medical treatment for various disorders. While it may not serve a curative function, it is often aimed at better management of disease-related symptoms and at psychological adaptation.

Caplan, Portillo & Seely (2013) have
demonstrated how Yoga practices can complement modern psychological theory and clinical work. Interestingly, mental health professionals have recognized that yoga may be a beneficial therapeutic supplement to psychotherapy, but they are not entirely informed about why or how yoga is effective. Forfylow (2011) has asserted that despite the lack of conclusive research evidence to support integrating yoga as an effective clinical treatment, yoga continues to be a popular complementary and alternative treatment. Integrating yoga with psychotherapy may allow mental health professionals to work more collaboratively with clients. Uebelacker, Tremont, et al. (2010) argued that yoga and psychotherapy can be easily married, as there “are many similarities between psychotherapy and yoga”, both are multidimensional, and each can be implemented uniquely (Uebelacker & Tremont et al., 2010).

IV.4 Other Techniques:
Psychotherapeutic techniques have been enumerated in the Atharveda and include remedies for illness and psychological health and well-being (Rangaswami, 2009). These techniques include samkalp, sadesh, samvashikaran, daiviya havan therapy and prayashchitta. Tripathi (2002) has presented an Indian approach to psychotherapy (Sattvavajaya) which involves restrengthening of the Sattva which is one of the three fundamental modes of the psycho-pranic system. Many of these and other techniques can be assimilated and seamlessly integrated into existing therapeutic paradigms. Looking into the future, there is potential for the traditional Indian psycho-philosophical-cultural methods of healing to be used in other areas, with greater attention to research methodology.

Concluding Caveat:
Many questions remain concerning how such integration might occur. One area of concern is whether such methods would be subject to adequate empirical testing and outcome research before they become widely used. Are the given techniques effective? If so, what are their strengths and limitations, their pros and cons?

REFERENCES


Acts made by nations play a major role in protecting the rights of citizens and thereby ensure smooth functioning of society. Individuals with mental illness especially those who suffer from severe illness, unable to lead normal life, experience neglect and discrimination in society. Others who are mentally ill but able to lead a reasonably normal life, become victim to social exclusion as there are many negative prejudices and beliefs prevailing regarding mental illness in communities. There have been incidences of neglect and bad happenings reported in the early days of custodial care for mentally ill at asylums (WHO, 2005). The Government of India, which was under the rule of Great Britain, brought the Indian Lunatic Asylum Act in 1858 and subsequently Indian Lunacy Act (ILA) in 1912 to prevent occurrence of such happenings. The Act of 1912 had sections which spoke of the custodial respects of a patient at the asylum. The Acts ensured protection to mentally ill who were receiving custodial treatment. Owing to the need to protect other rights of mentally ill and regularise treatment facilities, the Act of 1912 was revamped in 1987, by the Government of India, with the name of Mental Health Act which consolidated law relating to the treatment and care of mentally ill persons by ensuring better provision with respect to their property and other matters. The Act of 1987 had 10 chapters with 98 sections which spoke of various legal aspects of mental illness, rights of mentally ill, duties of government and directives towards proper functioning of mental healthcare system. The Act received a further revision in 2017 and currently we have the Mental Healthcare Act (MHA). The present Act of 2017, which received much expansion has 16 chapters with 126 sections (passed on 7th April 2017 and came into force from July 7, 2018).

Mental health issues which are increasing day by day is becoming a greater concern. Results of the recent metal health survey conducted at national level by NIMHANS in 2016 shows that 10.5% of adult Indian population above 18 years has some mental morbidity at the given point of time (NMHS, 2016). This shows that roughly 13 crores of Indian population may have some mental ailments which needs to be addressed. Although recent mental healthcare advancements are helping us in a great deal in managing people with mental illness, however, there is a large group of mentally afflicted individuals who are not able to access these facilities(Srivastava et al., 2016). The mental health establishments and healthcare professionals in the country are insufficient to meet the present requirement (Sidana, 2018). Lack of awareness and stigma persists in the communities which results in various forms of atrocities towards mentally ill (Srivastava et al., 2016). Mentally ill faces discrimination and exploitation in society. To curb such issues, providing proper care and treatment to those who are suffering and ensuring protection of their rights against discrimination, neglect and exploitation in society is pivotal. It can be achieved only through developing strategic measures for promotion of mental health, generating awareness among the public regarding mental illness and
In addition to this, developing and expanding facilities for increasing training of mental health professionals who provide services with scientific vigour and humane values along with creation of infrastructural facilities. It is also important to formulate proper rules and regulations and monitoring system for the functioning of establishments providing treatment and care for mentally ill. The development of redressal systems for mentally ill receiving care especially proclaiming their rights and laying out rules to ensure the protection of rights at the community level and treatment facilities is warranted. The newer scientific research studies to explore and devise newer and better management strategies must be undertaken. In the light of these points, Mental Healthcare Act 2017 is reviewed here.

The Mental Healthcare Act 2017 by Government of India which replaces the erstwhile Mental Health Act of 1987 has revoked responsibility of the State towards protecting rights of mentally ill and ensuring quality operationalization of mental health delivery system in the country. Although some of the major sections have been retained, there are numerous changes and additions have been made which reflects the changes in past three decades of understanding of mental illness, people affected by illness and developments of mental healthcare system. Important points are elaborated in subsequent Tables.

**Table 1: Comparison of Mental Health Act 1987 and Mental Healthcare Act 2017 for Important Points:**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Mental Health Act 1987</th>
<th>Mental Health care Act 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chapters and sections</td>
<td>10 chapters 98 sections</td>
</tr>
<tr>
<td>2</td>
<td>List of Definitions</td>
<td>Limited number of definitions</td>
</tr>
<tr>
<td>3</td>
<td>Requisite qualifications of mental health and allied professionals</td>
<td>Not Provided</td>
</tr>
<tr>
<td>4</td>
<td>Mental health establishments</td>
<td>Only speaks of psychiatric hospitals as treatment centres</td>
</tr>
<tr>
<td>5</td>
<td>Advanced directive of mentally ill</td>
<td>No provision</td>
</tr>
<tr>
<td>6</td>
<td>Nominated representative</td>
<td>No provision</td>
</tr>
<tr>
<td>7</td>
<td>Norms for admission of minor</td>
<td>Not provided</td>
</tr>
<tr>
<td>8</td>
<td>Mental health authorities</td>
<td>Does not speak about the constitution and operations</td>
</tr>
<tr>
<td>9</td>
<td>Rights of mentally ill</td>
<td>Speaks of only fewer rights</td>
</tr>
<tr>
<td>10</td>
<td>Central and state mental health authority fund</td>
<td>Not mentioned</td>
</tr>
<tr>
<td>11</td>
<td>Mental health review board</td>
<td>Not mentioned</td>
</tr>
<tr>
<td>12</td>
<td>Directive towards prohibition of harmful treatments</td>
<td>Not mentioned</td>
</tr>
</tbody>
</table>
### Table 2: List of Important Modifications:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Mental Health Act 1987</th>
<th>Mental Healthcare Act 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Had fewer definitions</td>
<td>Expanded list of definitions including caregiver and other mental health professionals</td>
</tr>
<tr>
<td>2</td>
<td>No proper definition of mental illness</td>
<td>Defines mental illness in accordance with the current scientific conceptualization</td>
</tr>
<tr>
<td>3</td>
<td>Speaks of only psychiatrist and medical practitioner as treating professional</td>
<td>The list of treating professionals include psychiatrist, clinical psychologist, psychiatric social worker and alternative healthcare practitioners</td>
</tr>
<tr>
<td>4</td>
<td>Speaks only of psychiatric hospital and psychiatric nursing homes as treatment facility</td>
<td>Includes all sort of establishments wholly or partly providing care to mentally ill including facilities where alternative healthcare practices are followed</td>
</tr>
<tr>
<td>5</td>
<td>Does not provide details of the constitution and system of functioning of mental health authorities</td>
<td>Specifies in detail regarding the constitution of mental health authorities and their functions</td>
</tr>
<tr>
<td>6</td>
<td>Emphasizes on procedure of acquiring licence to establish and maintain a psychiatric hospital</td>
<td>Lays down the procedure for obtaining registration for mental health establishments and outlines the procedure of supervision of it's functions</td>
</tr>
<tr>
<td>7</td>
<td>Does not provide standards by which a patient is to be diagnosed to be mentally ill.</td>
<td>Provides international classificatory system by WHO as referential point for deciding whether a person is having mental illness or not.</td>
</tr>
</tbody>
</table>

### Table 3: List of Important New Provisions:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
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<tbody>
<tr>
<td>1</td>
<td>Provision of right for mentally ill who is not minor to make an advanced directive in writing regarding how to be or not to be treated during state of illness when not in a state to decide for oneself.</td>
</tr>
<tr>
<td>2</td>
<td>Provision to have a nominated representative whom the patient can entrust capacity to decide for himself/herself regarding matters related to treatment in state of illness when he/she is not able to do for oneself.</td>
</tr>
<tr>
<td>3</td>
<td>Inclusion of alternative healthcare practitioners providing treatment to mentally ill as mental health practitioners. The professional qualification which entitles alternative healthcare practitioners to treat mentally ill in the act are post-graduate degree (Ayurveda) in Mano Vigyan Avum Manas Roga, Post-graduate degree (Homoeopathy) in Psychiatry, Post-graduate degree (Unani) in Moalijat (Nafasiyatt) and Post-graduate degree (Siddha) in Sirappu Maruthuvam. Professionals of respective alternate healthcare systems with requisite qualification as stated above will be considered as mental health professionals.</td>
</tr>
<tr>
<td>4</td>
<td>Mental health professionals, namely, clinical psychologist, psychiatric social worker, and psychiatric nurse are included and defined.</td>
</tr>
<tr>
<td>5</td>
<td>Constitution of mental health review board for grievance redressal of mentally ill</td>
</tr>
<tr>
<td>6</td>
<td>Inclusion of mentally ill or their representative in the relevant bodies.</td>
</tr>
<tr>
<td>7</td>
<td>Decriminalization of suicide</td>
</tr>
<tr>
<td>8</td>
<td>Special provisions for northeast and hill states</td>
</tr>
<tr>
<td>9</td>
<td>Inclusion of newer rights for mentally ill in accordance to United Nations Conventions of Rights for Person with Disabilities</td>
</tr>
<tr>
<td>10</td>
<td>Penalising care facilities if not following the sections of the Act</td>
</tr>
<tr>
<td>11</td>
<td>Mandating need for obtaining informed consent prior to research involving patients</td>
</tr>
<tr>
<td>12</td>
<td>Prohibition of practices that are harmful to the patient</td>
</tr>
<tr>
<td>13</td>
<td>Every insurer shall make provision for medical insurance for treatment of mental illness on the same basis as is available for treatment of physical illness</td>
</tr>
<tr>
<td>14</td>
<td>Constitution of central and state mental health authority Fund</td>
</tr>
</tbody>
</table>
Conception of Mental Illness and Treatment:

Expansion and newer additions in the list of definitions of the preliminary section of Act deserves special attention. The present Act defines mental illness as “a substantial disorder of thinking, mood, perception, orientation or memory that grossly impairs judgment, behaviour, capacity to recognise reality or ability to meet the ordinary demands of life, mental conditions associated with the abuse of alcohol and drugs, but does not include mental retardation which is a condition of arrested or incomplete development of mind of a person, specially characterised by sub-normality of intelligence”. Further Mental healthcare is defined as “that which includes analysis and diagnosis of a person's mental condition and treatment as well as care and rehabilitation of such person for his mental illness or suspected mental illness”. Caregivers and professionals aiding in mental healthcare like psychiatrist, clinical psychologists, psychiatric social workers, mental health nurse, alternative health practitioners from system of Ayurveda, Homeopathy and Siddha providing treatment to mentally ill are defined. Professional definition includes the requisite educational qualification and the authority providing the degree. Expansion of conceptualization of care delivery unit from psychiatric hospital to mental health establishment requires worth mentioning. The current definition includes all health establishments wholly or partly meant for care of person with mental illness. Establishments where alternative healthcare practices are being employed for care of person with mental illness are also considered as mental health establishments and such that they also come under the surveillance of the jurisdiction. The Chapter 2 of the Act speaks on the standards to be followed and things to be taken care of while classifying a person as to have mental illness. The Mental Health Act of 1987 was not having any section that dealt with these aspects. The Act states that whether or not a person is mentally ill is to established by using accepted medical standards and internationally recognized system of classification (ICD by WHO) and the classification should be undertaken only for purpose of treatment. The Act also says that any form of non-conformity shouldn't be considered as mental illness. Further, the Act states that any previous history of treatment also does not justify future determination of state of illness. The Act also considers that a person with mental illness should be deemed to have the capacity to make decision regarding his care provided he/she is able to understand the illness state and the available treatment options.

Protection of Rights of Mentally Ill:

In comparison to the previous Act, right of person with mental illness has received special attention in the present Act. The Act ensures that every person with mental illness has the right to quality mental healthcare and endows government the responsibility to ensure provision of required facilities in a cost effective manner without discrimination. The Act also ensures protection of right of mentally ill. The Act emphasizes that like all human beings, mentally ill has the right to live in society with dignity without any form of segregation and exploitation. They have right of confidentiality regarding illness and receiving treatment. The Act also speaks of the rights that a mentally ill person should have when he/she is receiving inpatient treatment which includes right to communicate through telephone and electronic media, right to receive or reject visitors and right to complain regarding the deficiencies in provision of care. The present Act gives the provision of consideration of making an advance directive as a right of person deemed to have mental illness regarding how he/she wishes to be cared or not cared for a mental illness when he/she ceases to have capacity to make mental health decisions. The present Act also speaks of a nominated representative whom the patient can entrust his/her duties and responsibilities through advanced directive. If none is nominated by patient in advance the Director, Department of Social Welfare or his representative may be entrusted with this responsibility. The Act also gave direction and various guidelines that the nominated representative has to follow while exercising the duties and responsibilities of the patient.

Prevention of Mental Illness and Ensuring Quality Delivery of Mental Healthcare:

The present Act speaks much on the responsibilities of government towards promotion of mental health and prevention of mental illness in the society. The responsibilities include designing
and implementing awareness programmes and educational programmes to meet the human resource requirements in the area of mental health and to co-ordinate various services provided by different ministry which can be beneficial for prevention and management of mental illness. Similar to previous Act, the current Act also speaks of the need of formation of central and state mental health authorities and their responsibilities. Along with specifying the duties, the present Act also speaks about the constitution of the authorities and the responsibilities of it’s members. The Act also specifies the system by which the authorities should function like the frequency of meetings, remunerations etc. Central Mental Health Authority Fund and State Mental Health Authority Funds the system of financing it, purposes for which the fund can be utilized and accounting of the same. Mental Health Review Board is a newer addition. The Act directs the state mental health authorities to constitute mental health review boards to deal with matters related to rights of mentally ill with respect to treatment and confidentiality and functioning of mental health establishments. The board constituted for a district or group of districts will have district judge, representative of district collector, district magistrate, or deputy commissioner, a psychiatrist, a medical practitioner, two persons with mental illness or caregivers from governmental and nongovernmental organisations working in the field of mental health as members. The present Act also outlays the duties of governmental agencies that are not involved in the managed care of patients with mentally ill, but yet play a major role in managing patients in the society like police station, public health establishments and legal bodies. The Act bestows officer in the charge of the police station with the responsibility of protecting wandering patients with mental illness and bringing them under provision of care. Further, the officer also should report to the concerned magistrate if a mentally ill under his jurisdiction is found ill treated or neglected. The magistrate is directed to produce orders for care of such patients. Prisoners who are found to have mental illness, as per the Act are to be moved to a suitable mental health establishment and left for care until recovery.

Mental Health Establishments and Managed Care of Mentally Ill:

In comparison with the previous Act which only included psychiatric hospitals and psychiatric nursing homes under its purview, the present Act brings all sort of establishments that function with the basic objective of providing healthcare to mentally ill under its jurisdiction. The Act directs that all the mental health establishments to function has to be registered with the mental health authorities except those which have already been registered under clinical establishments Act, 2010 or under any law in force regarding the respective states. The Act specifies the minimum standards that the mental health establishments should have for functioning and explains the procedure of registration, certification and periodic renewal of the registration with respective authorities constituted by the Act.

Aspects related to admission, and detention of mentally ill in a psychiatric hospital was extensively dealt in the Mental Health Act of 1987. Besides these aspects the current Act also includes regulations with respect to treatment. Similar to the past Act the present Act classifies patient seeking admission as independent and supported and outlays different set of rules and procedure to be followed for admission. The current Act emphasizes on the need of ensuring admissions in mental health establishments as voluntary by request as far as possible except in conditions where supported admission is unavoidable. The patient who gets admitted in the established is bound to follow the rules and regulation of the establishment. The Act also outlays the procedures and rules to be followed for the admission of a patient who is minor. Again, the Act also speaks of rules and procedures to be followed for detention of the patient at the treatment facility beyond thirty days. The Act strictly prohibits procedures which are known to produce harm like sterilisation, electro convulsive therapy without use of muscle relaxants, psychosurgery and solitary confinement. Act strictly prohibits electro convulsive therapy in minors. Procedure and situation where by physical restraint can be used is also specified.

Critical Appraisal of the Act:

Considering the inclusion of various new provisions towards protecting the rights and ensuring quality healthcare for individuals with
mental afflictions, it is safe to assume that the current Mental Healthcare Act of 2017 is likely to bring a positive impact in the field of mental healthcare in India. The present Act reflects the advancements in the past three decades of understanding of the mental illness, mentally afflicted individuals and advancements in mental healthcare. The Act seems to have a more human face with inclusion of rights proclaimed by United Nation's Convention on Rights of People with disabilities (UNCRPD, 2016). Rights of the individual with mental illness has been given due consideration extensively in the Act. Act has given due importance to the decision and choices of patients receiving treatment and has spoken of the need of obtaining informed consent prior to treatment from the patient or caregiver. There are proper rules and regulations being laid out in managing a person with mental illness when he/she is in a state not able to make proper judgement regarding himself/ herself. Provision of making an advanced directive and entrusting a nominated representative can be considered to help the mentally afflicted individuals protect their rights to treatment and care at states when not able to do for themselves. Provision of too much autonomy to patient has received criticism as it may also in turn negatively affect the treatment process by hindering the mental health professional from exercising certain treatment choices (Duffy et al., 2018). Further, the Act has in mind the various sort of discrimination and exploitation faced by mentally ill in society and has taken drastic steps to prevent them from occurring in family, society and at treatment facilities.

Suicide which was considered to be a crime attracting punishment is no more a crime as per the new Act. The Section 115 of the Act directs concerned judicial service machinery to adhere to the section and to ensure proper treatment and care to individual attempting suicides so that further attempts may be prevented. This move has been widely acclaimed by the professional group serving people with mental ailments (Sneha et al., 2018). A person who commits suicide is presumed to have severe stress and shall not be punished, however, the clause “unless proved otherwise” of this section may make police to investigate the cause (Neredumilli et al., 2018). The Act also entrusts the government machineries concerned, with responsibility of care and ensurance of right to individuals who have been severely neglected and exploited. Constitution of authorities at central and state levels for prevention of mental illness and ensuring the quality operation of mental healthcare delivery system receive worth appreciation. With proper specifications made available regarding duties and responsibilities of these bodies along with their constitution and operation, it is expected that these bodies will be more functional in the future. Inclusion of people affected with mental illness or their representative in such bodies dealing with rights of mentally ill is expected to ensure better deliverance of justice to the mentally afflicted facing discrimination and neglect. Specification of duties, responsibilities of other government machineries like police, judicial system and public health establishments towards protection and care of mentally afflicted individuals is likely to prevent atrocities and ensure quality care of destitute mentally ill.

Consideration of alternative treatment approaches like Ayurveda, Siddha, Unani, Homeopathy and Yoga, inclusion of establishments providing treatment based on such approaches as mental health establishments and inclusion of professionals providing treatment based on alternative approaches as mental health professionals reflect a welcoming attitude and validation of such approaches. However such inclusion may receive criticism owing to the fact that there is no conclusive research evidence which indicate that any of the alternative healthcare practices are effective in treating mental disorders (Thirthalli et al., 2016). Definition of professionals who are involved in the care of patient with mental illness with their professional qualifications ensures that quacks claiming to be professionals without requisite qualification are kept out of the picture. Further the Act does not speak anything much regarding psychotherapy which is a prominent method of treatment of the mentally afflicted. The Act strictly prohibits certain methods of treatment which has proved to cause serious harm to the individuals. Approaches like psychosurgery, electroconvulsiv therapy without muscle relaxants is deemed as unlawful. The Act seems to be biased with respect to its approach as it gives due consideration of aspects which can come into conflict with law neglecting others which is significant with respect to mental healthcare. The Act do speak about the need for prevention of mental
illness but has not constitute necessitate bodies nor has directed required functions with respect to that to any government bodies coming under the purview of the Act. This might result in poor prevention. Section entrusting liability of ensurance of rights for person with mental illness, if he/she is not able to realize by himself/herself on mental health professionals has received criticism as these entails a responsibility which practically difficult to be attained.

Overall, we as a mental health professional must understand that the present Act will definitely further the objective of the Government of India to serve the population with optimum quality of care. The Act rightly addresses promotive, preventive, curative and rehabilitative aspects related to mental health issues prevalent in the society. Due emphasis has been given so as to improve the delivery of quality mental healthcare not only in the hospital/clinical set-up but also in community set-up. School mental health programmes are to be expanded and counselling services in University/College set-ups are also to be established to help students at the time of distress and crisis. Sensitive issues related to human rights, treatment choices and legal safeguards have also been adequately discussed in the Act. The present Act with meticulously formulated mental health rules is likely to ensure that the individuals with mental illness can live in the society with respect and dignity.

Specifically in the context of Clinical Psychology, present Act of 2017 has moved far ahead in comparison to previous Act of 1987. A group of Clinical Psychologists do express their dissatisfaction as Clinical Psychologists have been included as a professional registered with the concerned State Authority under section 55 of the Act rather than a strait forward inclusion like psychiatrist, however, if we compare it with the previous Act, in the present Act Clinical Psychologists have been included as mental health professionals with clearly delineated definition, role and responsibilities. The role has been acknowledged in all setting like, mental health establishment, community etc. in promotion, prevention, management and rehabilitation of persons suffering from mental illness. The Rules and Regulation of the Act is also in the direction of giving due recognition to the profession of Clinical Psychology. It is our responsibility as a professional to put adequate effort in implementation of the Act and provide quality services in the setting in which we are working.

REFERENCES
INTRODUCTION

In childhood and adolescence, the major sources of stress are found to be negligence of parents, high expectations in academic or other performances, abusive circumstances in childhood, stress associated with growing up and demand for familial responsibility (Hussain Kumar & Husain, 2008). Academic performance has been reported as one of the significant sources of stress in students (Aldwin & Greenberger, 1987). Academic performance has been found to be a significant source of stress among children and adolescents. Understanding the behavioural and electrophysiological correlates of academic stress implies the need for stress management programs in schools. The present study was conducted to compare the behavioural and electrophysiological outcome of the stress levels between high and low rankers in high school students. A case-controlled study design was adopted, comprised of ten high rankers and ten low rankers, high school female students. The ranking was obtained from the school records of the previous examination. The Perceived Stress Scale (PSS) was administered to assess the subjectively experienced stress, followed by 19-channel resting-state electroencephalogram (EEG) recording for ten minutes (five minutes each for eyes closed and eyes open) with a one-minute interval between conditions. The results from the PSS score indicate that low rankers experienced a significantly higher amount of stress compared to the high rankers (p-value = 0.011). The power spectrum analysis of the EEG data showed significantly lower alpha power in occipital (p-value = 0.02) and higher beta power at parietal (p-value = 0.038), central (p-value = 0.015) and the occipital (p-value = 0.021) regions among low rankers. Higher alpha activity has a positive correlation with relaxation and higher beta correlates with higher stress, indicates that low ranking students are more prone to be stressed that the high rankers. Conclusion: The higher stress found among low rankers provides indirect confirmatory evidence towards the negative association between academic performance and stress.

Keywords: Academic Performance, Stress, Student, Electroencephalogram (EEG), Behavioural.
often lack interest in daily activities compared to the non-stressed children (Hussain et al., 2008).

There are different ways to evaluate stress response. One of the most commonly used methods to measure an individual’s level of stress is self-report questionnaires (Holmes & Rahe, 1967). However, these questionnaires are of subjective in nature (Liu, Chen, Hou, Wang & Chou, 2014). Another approach is to use biochemical markers of stress. Clinicians commonly measure cortisol and alpha-amylase levels to evaluate the stress in individuals (Yamaguchi et al., 2004).

A third approach is to assess electrophysiological data. EEG signals have been found reliable to identify the mental stress levels in resting state (Al-shargie, Tang, Badruddin & Kiguchi, 2015). It can be recorded non-invasively using surface electrodes from the scalp and has an excellent temporal resolution with ease of use, and low setup cost (Berka et al., 2004). Based on the frequency, EEG signals can be categorized into different frequency bands, such as Delta (0.5-3 Hz), Theta (4-7 Hz), Alpha (8-12 Hz) and Beta (13-25 Hz). Each frequency band represents a mental state of an individual. In a relaxed situation, alpha activity is predominantly seen while in a state of mild or moderate stress the beta wave is more prominent. In cases of severe stress, subjects have often been reported to show excessive theta wave activity in their EEG wave patterns (Jena, 2015).

To summarize, the review of the literature indicates the high prevalence of stress in school going children, mainly due to their academic performance. To the best of the authors knowledge, in the Indian setting, there is no study comparing behavioural and electrophysiological correlates associated with the stress level in high school students caused by their academic performance. Therefore, in the present study, we aim to compare the academic stress in the high and low rankers in high school students using behavioural and electrophysiological parameters.

MATERIALS AND METHODS

Sample:

A case-controlled sampling design for the present study was taken, recruiting twenty female students studying secondary school certificate in a convent school. These students were selected from the same class of total 90 students. Based on their academic performance provided by the school authority, students were divided into two groups:

- High Rankers (N=10)
- Low Rankers (N=10)

Age range varied from 14 - 17 years (Mean = 15.35; SD = 0.671).

Procedure:

All the necessary ethical standards had been maintained, while conducting the research. The school authorities were approached with the proposed study. After obtaining permission from the school, students were invited to the Clinical Neuropsychology Unit one by one along with their parents/guardian for the assessment. A consent and assent form was provided to the parents/guardian and student respectively. Students were instructed to sit comfortably on a chair in a proper sound attenuated room. The Perceived Stress Scale (PSS) was then administered followed by the EEG data acquisition.

Tools:

Assessment of Behavioural Variables:

The Perceived Stress Scale is a 10-item self-report questionnaire used to assess the level of stress in an individual for the past month in their lives. The questions given in the scale are general in nature and are phrased to understand how unpredictable, uncontrollable, and overloaded respondents find their lives (Cohen, Kamarck, & Mermelstein, 1994). A higher score reflects a greater amount of perceived stress. The psychometric properties of PSS have been well documented in a college student population (Lee, 2012).

Assessment of Electrophysiological Variables:

EEG recording was performed using Synamps amplifier (Neuroscan, Inc., El Paso, Texas) with a 19-channel Ag/AgCl electrode cap placed according to the standard 10-20 International system of electrode placement. EEG recording was performed in a sound attenuated and dimly lit room. Two VEOG (Vertical Electro Oculo Graphic) channels were placed vertically on the outer ridges of the eye to detect eye movement artefact. Linked mastoids were used as a common reference. Electrodes were applied using a preparation gel and then glued to the scalp with a conductive gel to decrease the impedance between
scalp and electrode. Impedances were checked at the commencement of recording and were ensured to be <10 kΩ (see Figure 1). EEG was recorded in resting state condition in eyes closed followed by eyes open each for 5 minutes. A gap of 1-minute was provided in between the two recording conditions.

**Figure 1: Electrode Placement:**

19-Channel Ag/AgCl electrode cap placed according to the standard 10-20 International system of electrode placement. The linked mastoids were used as a common reference.

During the recording, the students were instructed to remain calm and awake, but still to reduce movement artefacts. The acquired EEG data was then analysed offline on Neuroscan version 4.4 software. For pre-processing, the spatial filter was applied to remove the eye movement artefacts. Further pre-processed EEG data were analysed using the Fast Fourier Transformation (FFT) to perform power spectrum analysis.

For the statistical analysis of the data, SPSS version 20 was used. As the data did not violate the normal distribution evidenced by Shapiro Wilk test (Shapiro & Wilk, 1965), parametric statistical methods were used for inferential statistics. An independent sample t-test was performed for the intergroup comparison to compare the age range, mean score of PSS scale and EEG power spectrum value. The threshold level of error was kept at 0.05 (p < 0.05).

**RESULTS AND DISCUSSION**

The sample consisted of 20 female students, studying in a convent school in Bengaluru, India. The mean age of the students was 15.35 ± 0.67 SD years. The baseline comparison of age showed there was no significant difference (p-value = 0.75) between the groups.

**Behavioural Variables:**

The Perceived Stress Scale (PSS) was administered to assess the subjectively reported stress in students. The results indicate a significant difference between the mean PSS score of two groups (p-value=0.011). The low rankers group showed higher PSS scores as compared to the high rankers. The finding from the behavioral analysis indicates that low rankers had higher perceived stress compared to the high rankers. This finding is corroborated by the previous literature which indicates a negative correlation between the academic performance and stress (Clark & Rieker, 1986; Felsten & Wilcox, 1992; Linn & Zeppa, 1984; Struthers et al., 2000).

**Table 1 - Mean Perceived Stress Scale Score (Independent Sample t-test)**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Variables</th>
<th>High Rankers Mean ± SD</th>
<th>Low Rankers Mean ± SD</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Perceived Stress Score</td>
<td>16.80 ± 4.6</td>
<td>22.1 ± 3.7</td>
<td>0.011*</td>
</tr>
</tbody>
</table>

(Asterisk indicates the significant differences, *p<0.05)

**Electrophysiological Variables:**

The results from the power spectrum analysis of the EEG data showed significantly higher alpha
and lower beta activity in high rankers as compared to the low rankers at specific scalp locations. We found significantly higher occipital alpha (p-value = 0.02), while lower beta in parietal (p-value = 0.038), occipital (p-value = 0.015), and central (p-value = 0.021) regions in the high rankers as compared to the low rankers. No significant differences were observed in delta and theta band at any site (Table 2).

Table 2: EEG Power Spectrum (Independent Sample t-test)

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Variables</th>
<th>High Rankers</th>
<th>Low Rankers</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Frontal Alpha</td>
<td>4.514 ± 0.926</td>
<td>3.978 ± 1.084</td>
<td>0.249</td>
</tr>
<tr>
<td>2</td>
<td>Parietal Alpha</td>
<td>53.677 ± 6.091</td>
<td>47.433 ± 10.74</td>
<td>0.127</td>
</tr>
<tr>
<td>3</td>
<td>Central Alpha</td>
<td>22.549 ± 1.766</td>
<td>21.524 ± 3.323</td>
<td>0.400</td>
</tr>
<tr>
<td>4</td>
<td>Temporal Alpha</td>
<td>31.274 ± 1.868</td>
<td>33.438 ± 6.474</td>
<td>0.323</td>
</tr>
<tr>
<td>5</td>
<td>Occipital Alpha</td>
<td>49.022 ± 5.571</td>
<td>40.703 ± 8.614</td>
<td>0.020*</td>
</tr>
<tr>
<td>6</td>
<td>Frontal Beta</td>
<td>1.352 ± 0.394</td>
<td>1.155 ± 0.057</td>
<td>0.136</td>
</tr>
<tr>
<td>7</td>
<td>Parietal Beta</td>
<td>5.370 ± 1.824</td>
<td>7.613 ± 2.585</td>
<td>0.038*</td>
</tr>
<tr>
<td>8</td>
<td>Central Beta</td>
<td>2.398 ± 0.440</td>
<td>3.874 ± 1.797</td>
<td>0.021*</td>
</tr>
<tr>
<td>9</td>
<td>Temporal Beta</td>
<td>4.129 ± 1.001</td>
<td>5.169 ± 1.804</td>
<td>0.129</td>
</tr>
<tr>
<td>10</td>
<td>Occipital Beta</td>
<td>5.336 ± 1.435</td>
<td>8.271 ± 3.124</td>
<td>0.015*</td>
</tr>
<tr>
<td>11</td>
<td>Frontal Theta</td>
<td>6.686 ± 1.345</td>
<td>8.083 ± 1.909</td>
<td>0.075</td>
</tr>
<tr>
<td>12</td>
<td>Parietal Theta</td>
<td>24.733 ± 5.332</td>
<td>23.128 ± 7.081</td>
<td>0.574</td>
</tr>
<tr>
<td>13</td>
<td>Central Theta</td>
<td>12.318 ± 2.654</td>
<td>14.764 ± 3.543</td>
<td>0.098</td>
</tr>
<tr>
<td>14</td>
<td>Temporal Theta</td>
<td>19.466 ± 3.483</td>
<td>20.438 ± 6.123</td>
<td>0.668</td>
</tr>
<tr>
<td>15</td>
<td>Occipital Theta</td>
<td>25.495 ± 6.699</td>
<td>26.654 ± 5.572</td>
<td>0.679</td>
</tr>
<tr>
<td>16</td>
<td>Frontal Delta</td>
<td>0.576 ± 0.133</td>
<td>0.564 ± 0.143</td>
<td>0.853</td>
</tr>
<tr>
<td>17</td>
<td>Parietal Delta</td>
<td>2.740 ± 1.016</td>
<td>3.321 ± 0.958</td>
<td>0.204</td>
</tr>
<tr>
<td>18</td>
<td>Central Delta</td>
<td>1.269 ± 0.354</td>
<td>1.373 ± 0.482</td>
<td>0.589</td>
</tr>
<tr>
<td>19</td>
<td>Temporal Delta</td>
<td>2.021 ± 0.883</td>
<td>2.342 ± 1.008</td>
<td>0.458</td>
</tr>
<tr>
<td>20</td>
<td>Occipital Delta</td>
<td>2.789 ± 1.272</td>
<td>3.463 ± 1.459</td>
<td>0.285</td>
</tr>
</tbody>
</table>

(Asterisk indicates the significant differences, *p<0.05)

The only frequency band showed an intergroup significant difference, are reported.

It has been found that beta waves are more prominent during the higher stress condition, while alpha waves are predominant during relaxation (Alshargie et al., 2015; Jena, 2015)

Although it has been documented that an optimal level of stress aids academic performance, high level of stress is known to adversely affect performance (Kets de Vries, 1979; Yerkes & Dodson, 1908).

CONCLUSION

The findings from both behavioural and electrophysiological studies indicate that low ranker students were found to have more stress compared to the high ranker students. The results are in line with the previous studies suggest a negative association between stress and academic performance. However, our findings do not implicate any cause and effect relationship between stress and academic performance considering the multifaceted relationship between these two variables which is mediated by many other variables such as learned resourcefulness, cultural background, personality traits, experience and coping skills.
LIMITATIONS

- There are few limitations in the present study:
  - The sample size was small.
  - The participating student’s groups were limited to a specific class and region.
  - Hence, the results of the study cannot be generalized in context to a larger population, but rather be suggested.

Conflict of Interest: None

Acknowledgement:

We thank Mr. Deepak R. Ullal, for providing technical support in EEG recording.

REFERENCES


Neuropsychological Indicators of Malingering on Wechsler Memory Scale - III

Tanu Singh¹ and Masroor Jahan²*

INTRODUCTION

No other syndrome is as easy to define yet so difficult to diagnose as malingering. Malingering is the intentional production of false or grossly exaggerated physical or psychological symptoms, motivated by external incentives. In practice, malingering commonly must be differentiated from factitious disorder, which also involves intentional production of symptoms. In factitious disorder, the patient’s motivation is to assume the sick role, which can be thought of as internal or psychological incentive. The main features of malingering on both the DSM-III and DSM-IV-TR include: (1) the intentional production of false or grossly exaggerated physical or psychological symptoms, (2) motivated by external incentives such as obtaining financial compensation, evading criminal prosecution, avoiding military duty, avoiding work, or obtaining illicit drugs” American Psychiatric Association 2000).

Response Style of Malingers During Simulation:

The following is a generic summary of strategies that fakers, including the defendant in the instant case, may employ in attempts to feign believable deficits on neuropsychological evaluations (Craine, 1981, 1990a; Hall, 1990a).

Distribute Errors:

To cover their targets, fakers tend to make a deliberate number of mistakes throughout the evaluation rather than miss only difficult items. A balance is sought between appearing fully functional (missing too few items) and appearing too impaired (missing too many items). Fakers attempt to control their errors as much as possible, but, in practice, they fail to maintain a "realistic" percentage of errors. Failure on easy items, according to Craine (1990), also occurs on graduated forced-choice tests. Deliberate errors are made on the (easy) items to which the answers are known. Random responses may occur when the faker encounters (difficult) items to which the answers are unknown. This means that the point between the known (and deliberately faked) items and the unknown items is very difficult to estimate. Thus, the evaluator needs to weight missed easy items more heavily than mistakes on difficult items. Irrelevant responding refers to a response style in which the individual does not become psychologically engaged in the assessment process (Rogers, 1988). The given responses are not necessarily related to the content of the clinical inquiry. This process of disengagement, although more prevalent in psychological testing, is

ABSTRACT

Reliably diagnosing malingered mental illness is complex. There are limited studies or assessment tools for identify the malingerers from other psychiatric condition. The present study tried to find out neuropsychological indicators of malingering on memory functions under two conditions, actual and simulated. 30 schizophrenic patients and 30 normal individuals were taken. Normal individual gave their performance in two conditions, firstly their genuine performances were obtained and 3 days later they were asked to simulate on WMS-III (Indian adaptation). Genuine performances were significantly superior to the simulated performances. Discriminant analysis was used to see the discriminant the group performance in different conditions. On WMS-III classification rate shows that 80% feigned performance were classified as feigned. In addition during simulation normal participant using different response style for faking on different subtest of WMS-III which are Error of Commission, Random Response, Distribute Error and Failure on easy items, these response style differentiate normal faker from patient group. Different response styles might be helpful in identifying malingerers.

Keywords: Malingering, Neuropsychological indicators, Response style.
also observe in clinical interview when a particular patients makes no effort to respond accurately to clinical inquiries.

Some studies which identifies some response style during simulation. Based on the preliminary work of Rogers (1997) six primary response style can be identified that person undergoing forensic, psychological and psychiatric examination may adopt, Symptom feigning, guardedness, false presentation of positive trait, irrelevant responding, random responding, candid responding and hybrid responding. Some other studies of Crain (1981), and Hall (1995), also identified some response style such as distribute error, random response, failure on easy items and erratic affective style.

**Wechsler Memory Scale- III:**

The Indian adaptation of the Wechsler Memory Scale-III was carried on in National Institute of Mental Health Neuroscience (NIMHANS), Bangalore, India (Guruappa & Rao, 2009). This test comprised of 11 subtests with 6 primary subtest and 5 optional subtests. The WMS-III is intended for use with older adolescents and adults aged 16-89 years. In this study, only primary subtests were used from the Wechsler Memory Scale-III. WMS-III Primary scale contains Logical Memory, Faces, Verbal Paired Associate Learning, Family Pictures, Letter Number Sequencing, Spatial span, Logical Memory-II, Faces-II, Verbal Paired Associate Learning-II, and Family Picture-II. In scoring procedure these subtests score are converted in different index like, Auditory Immediate, Visual Immediate. Immediate Memory, Auditory Delayed, Visual Delayed, Auditory Recognition Delayed, General Memory and Working Memory. The reliability of the WMS-III was established using test retest method. The reliability co-efficient for the subtest score range from 0.40 to 0.90.

**Procedure:**

The study was conducted in Ranchi Institute of Neuro-Psychiatry and Allied Sciences (RINPAS) Ranchi. It was a two Independent Group Design study using purposive sampling technique. Participants of patient group were selected according to the inclusion and exclusion criteria from male and female wards of the RINPAS. Out of the forty participants screened to by fulfilling criteria, thirty participants were finally selected after screening using Brief Psychiatric Rating Scale. Similarly forty workers in RINPAS who matched with the socio-demographic characteristics who did not had any history of psychiatric illness were selected as normal participants the basis of the inclusion and exclusion criteria. Amongst them thirty participants were finally enrolled as participants of study after screening for psychiatric vulnerability using General Health Questionnaire-12. Participants of both groups were explained the nature and purpose of the study and informed consent was obtained. Thereafter Wechsler Memory Scale-III (WMS-III) was administered on participants of patient group in ideal testing conditions. On the other hand this test was administered twice on participants of normal group. On the initial administration participants of normal group were instructed to give their actual performance on WMS-III. After 2 or 3 days of first administration the same tests were-administered on same participants. During the second administration the participants of normal group were asked to perform, assuming either as they were mental defectives or that they were in a situation where they had to pretend that they were mental defectives unable to perform accurately. The test profiles, so obtained were scored according to the scoring criteria given the manual of respective tests. Beside the response style of participants for simulating mentally defective condition were observed and recorded. The data so obtained was tabulated and was subjected to relevant statistical analysis and inferences were drawn out.

**RESULTS**

To understand socio-demographic variable and group difference between patient group and normal group, chi-square test was applied.

A Socio-demographic characteristic of the sample shows that mean age of the patient (patients of schizophrenia) and normal group. The mean and SD of the patient group was 29.93 and 7.58 respectively. The mean and SD of the Normal group was 29.50 and 6.50 respectively. The t-value was .23 and statistically no significant difference was observed between the two groups suggesting that both groups were comparable on age. To find out the descriptive information about the socio-
demographic characteristics of entire sample chi square implied on category variable. Statistically no significant difference was found in sex, education, marital status, occupation and socio economic status. These all variables are significant at 0.05 level.

**Table - 1: Showing the Comparison of the Patient’s Actual Performance and Normal Group Simulated Performance on WMS - III**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Groups (N=30)</th>
<th>Mean±SD</th>
<th>t-value (df=58)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditory Immediate</td>
<td>Normal Simulated trial</td>
<td>61.40± 9.20</td>
<td>3.98**</td>
</tr>
<tr>
<td></td>
<td>Patient Actual trial</td>
<td>73.37±13.61</td>
<td></td>
</tr>
<tr>
<td>Visual Immediate</td>
<td>Normal Simulated trial</td>
<td>51.10±6.94</td>
<td>6.97**</td>
</tr>
<tr>
<td></td>
<td>patient Actual trial</td>
<td>69.83±12.97</td>
<td></td>
</tr>
<tr>
<td>Immediate Memory</td>
<td>Normal Simulated trial</td>
<td>49.87±6.07</td>
<td>6.06**</td>
</tr>
<tr>
<td></td>
<td>Patient Actual trial</td>
<td>66.03±13.27</td>
<td></td>
</tr>
<tr>
<td>Auditory Delayed</td>
<td>Normal Simulated trial</td>
<td>60.77±10.14</td>
<td>3.06**</td>
</tr>
<tr>
<td></td>
<td>Patient Actual trial</td>
<td>69.80±12.57</td>
<td></td>
</tr>
<tr>
<td>Visual Delayed</td>
<td>Normal Simulated trial</td>
<td>51.67±6.82</td>
<td>4.46**</td>
</tr>
<tr>
<td></td>
<td>Patient Actual trial</td>
<td>64.00±13.50</td>
<td></td>
</tr>
<tr>
<td>Auditory Recognition Delay</td>
<td>Normal Simulated trial</td>
<td>55.83±4.56</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>patient Actual trial</td>
<td>57.47±8.51</td>
<td></td>
</tr>
<tr>
<td>General Memory</td>
<td>Normal Simulated trial</td>
<td>49.17±5.81</td>
<td>3.88**</td>
</tr>
<tr>
<td></td>
<td>Patient Actual trial</td>
<td>58.73±12.16</td>
<td></td>
</tr>
<tr>
<td>Working Memory</td>
<td>Normal Simulated trial</td>
<td>53.63±6.25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Patient Actual trial</td>
<td>70.10±10.72</td>
<td>7.26**</td>
</tr>
</tbody>
</table>

**= p<0.01

To find out the significance of difference between patient actual and normal simulated performance, t-test was calculated. Statistically significant difference was observed between the two groups on 0.05 levels suggesting that patient’s group performance was better than normal simulated group.

**Table - 2: Result of Different Response Style During the Performance of Patient Group and Normal Simulated on WMS - III**

<table>
<thead>
<tr>
<th>Response Syles</th>
<th>Actual Performance</th>
<th>Simulated Performance</th>
<th>Chi-Square (df=1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error of Omission (LM)</td>
<td>Absent</td>
<td>N (%): 24 (80.0%)</td>
<td>21 (70.0%)</td>
</tr>
<tr>
<td></td>
<td>Present</td>
<td>N (%): 6 (20.0%)</td>
<td>9 (30.0%)</td>
</tr>
<tr>
<td>Error of Commission (LM)</td>
<td>Absent</td>
<td>N (%): 30 (100.0%)</td>
<td>8 (26.7%)</td>
</tr>
<tr>
<td></td>
<td>Present</td>
<td>N (%): 0 (0.0%)</td>
<td>22 (73.3%)</td>
</tr>
</tbody>
</table>

**Table - 3: Showing Discriminant Analysis of Patient Actual and Normal Simulated Performance on WMS-III Index Score**

<table>
<thead>
<tr>
<th>Discriminant Index</th>
<th>Wilks Lamda</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Visual Immediate Index</td>
<td>.52</td>
</tr>
<tr>
<td>2 Auditory Recognition Index</td>
<td>.41</td>
</tr>
<tr>
<td>3 Working Memory Index</td>
<td>.37</td>
</tr>
</tbody>
</table>

**Table 4: Table Shows Result of Stepwise Discriminant Analysis Conducted to Assess the Classification Accuracy in Differentiated Performance By Patient Actual and Normal Group Simulated on Different WMS-III Indexes**

<table>
<thead>
<tr>
<th>Patient actual and normal simulated performance</th>
<th>Predicted Group Membership</th>
<th>Classification rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal group</td>
<td>Normal Simulated N (%)</td>
<td>Patient Actual N %</td>
</tr>
<tr>
<td>Normal simulated</td>
<td>24 (80%)</td>
<td>6 (20%)</td>
</tr>
<tr>
<td>Patient actual</td>
<td>0 (0%)</td>
<td>30 (100%)</td>
</tr>
</tbody>
</table>

Discriminant analysis shows 90% original group correctly classified, which revealed that 80% of feigned performances were classified as feigned and 20% performance were classified as truthful.

**DISCUSSION**

There are limited studies or assessment tools for identifying the malinger from other psychiatric condition, however, some studies for example compared the simulated performance of normal participants with patient’s performance on
WMS-III, which suggest that the performance of the normal participants become poor than patient’s performance, it shows that when normal participants were instructed for simulated performance their response become more deteriorated. It suggests that normal people exaggerated their performance during simulation. Similarly, Bauman, Z. et al. (2015) conducted a study to find out the indicators of suboptimal performance embedded in the Wechsler Memory Scale-fourth edition (WMS-IV). In their study they selected 50 patient with mixed-etiology and the experimental malingerers who were asked to simulate cognitive impairment as a result of a traumatic brain injury, the last group consisted of 50 healthy controls who were instructed to put forth full effort, and results shows that experimental malingerers performed significantly lower on all WMS-IV-NL tasks then did the patients and healthy controls. The result showed an overall classification rate of 78.4%, and only spatial addition explained a significant amount of variation. This study finding indicates the normal participants during simulation performed significantly lower than patient group on all WMS-III, which is line with previous studies (Carlozz et al., 2013; Langeluddecke & Lucas, 2003; Ord et al., 2008). Furthermore, in comparison with the patients, normal simulator scored significantly worse on the auditory immediate, visual immediate, working memory, general memory, visual delayed and auditory delayed. This result are in agreement with the notion that malingerer have a tendency to overestimate the magnitude of cognitive deficits arising from some psychiatric illness and as a result, show even poorer performances than patient on previous editions of the WMS (Langeluddecke & Lucas, 2003; Rogers, 2012). Iverson et al. (2000) found attention/concentration index scores substantially below general memory scores (>25 points) in approximately 5% of a non-compensation-seeking inpatient substance abuse population (n=332). Iverson & Slick (2001) documented only a 6.5% to 9.0% false positive rate in 1,986 patients with acute TBI. Similarly, Slick et al. (2001) observed a false-positive rate of only 7% in non-compensation-seeking HIV - positive individuals (n=55); however, the false positive rate was elevated to 18% in patients with above average general memory index scores. Miller and colleagues (2011) found that four of the five WMS-IV ACS scores (i.e., word choice test, Digit Span, VPA-Rec, and VR-Rec) performed well in discriminating between moderate to severe TBI patients and coached experimental malingerers. It shows that when normal participants were instructed for simulated performance their responses become more deteriorated on test. Similar result has been found in Guilmette & Giuliano (1992) study; they used forced-choice procedure for detecting feigned memory impairment was administered to brain-damaged patients, psychiatric inpatients, and two groups of non patients. The simulators performed significantly worse on this measure than the brain-damaged or psychiatric patients. It suggests that normal people exaggerated their performance during simulation.

Response Style:

WMS-III index include different subtests such as Logical Memory, Verbal Paired Associates, Family Picture, Spatial Span and Letter Number Sequencing, and performance of the patient on these subtest identify different response styles which discriminate the performance of normal simulated and patient actual response. Some response style is used during the performance when normal group were asked to simulate. The most discriminant variables Error of Commission, Random Response, Distribute Error and failure on easy items, these response styles was found on different subtest of WMS-III. Error of Commission which mainly seen on Logical Memory subtest. Error of Commission occur during recall of the stories, and it occur in the form of change the name, place, numeric value, and change the time of occurrence of the events of the story characters which shows that they were able to understand. Random Response is another response style which frequently followed by normal participant during simulation And this response style observed on Verbal Paired Associate Test. In this test normal participant change their response in all trial, for example some time they used a word which related to another pair of word but that was not continued in all trial, it frequently changed in all trial. Some times normal participant used new word also. In patient group most of the patient omitted or forget the words. If patient group used a word which related to another pair of word but that was not continued in all trial, it frequently changed in all trial. Distributed Error is mainly seen in Family Picture test and In distribute error, to cover their target, fakers tend to make a deliberate number of mistakes throughout the evaluation rather than miss only difficult items. A balance is sought
between appearing fully functional and appearing too impaired. Normal participant frequently change the activity of character in different picture for example in first picture a particular character activity was replaced by another character activity which related to another picture. This response style differentiated the performance of normal participant from patient group, where this kind of response style was not observed.

Failure on easy items, according to Crain, also occur in graduated forced-choice tests. Deliberate error are made on easy items to which answer are known. This response style was mainly observed on Letter Number Sequencing and Spatial Span where the normal participant failure on very easy items during simulation but this not seen in patient group. This response style differentiates normal faker from patient group. Pankratz, 1988 also found Persons genuinely impaired will usually guess randomly on Explicit Alternative Testing (EAT) testing. Fakers do worse than chance because they intentionally suppress the correct answers on items to which they know the answers.

CONCLUSION
This study using WMS-III scale to identify the signs of malingering it is very important in present contexts as there were very few studies that assessment tools are present to identify the malingerers from psychiatric patients/ healthy person. Research will facilitate to understand the deliberate production of false or gross exaggeration of physical or psychological symptoms for known external reward. The understanding will help to develop strategies to detect the malingering in clinical setup. The generalizability of this study is at issue for several reasons. Motivation to participate in a study, even when compensated financially, is different than The motivation to gain financial reward through litigation.

Conflict of Interest: None

Financial Support: Nil

REFERENCES
Emotional Dysregulation of Affect in Persons with Obsessive-Compulsive Disorder

S Kumar\textsuperscript{1}, S Mohanty\textsuperscript{2*} and R Kumar\textsuperscript{3}

ABSTRACT

Persons with Obsessive-Compulsive Disorder are known to have difficulties in regulating their emotions, and primarily use suppression strategies. Obsessions create negative affect in afflicted individuals. Gratz & Roemer (2004) developed comprehensive conceptualization of emotional dysregulation. In this study, we aimed at exploring associations between Positive and Negative Affect and Emotional Dysregulation in persons with OCD. Sample consisted of 30 persons with OCD diagnosed as per ICD-10. Positive and Negative Affect Scale (Watson, Clark and Tellegen, 1988) and Difficulties in Emotion Regulation Scale (Gratz & Roemer, 2004) were used to measure affect and emotion dysregulation. The results revealed that none of the dimensions of Difficulties in Emotion Regulation Scale was associated with Positive Affect, but Negative Affect was also significantly associated. The implications for management of negative affect in persons with OCD is implicated.

Keywords: Affect regulation, OCD, Psychotherapy, Positive Negative Affect, Emotional Regulation

INTRODUCTION

Obsessive-compulsive disorder (OCD) is characterized by recurrent and persistent ideas, thoughts, images, or impulses that are intrusive, unwanted, and cause marked anxiety or distress. In response to these obsessions, people with OCD often engage in repetitive ritualistic behaviours or mental acts that are excessive, time-consuming and often distressing (American Psychological Association, 2013). Persons with OCD have multiple dysfunctional beliefs such as inflated sense of responsibility (Salkovskis, 1998) and thought-action fusion (Rachman, 1998); appraisals of the content of obsessions in this manner produce distress in these patients. To deal with the negative affects generated by dysfunctional appraisal of obsessions, emotion regulation strategies are invoked. Thought suppression (Wegner, 1994; Wegner, Schneider, Carter, & White, 1987; Wenzlaff & Wegner, 2000) is frequently used by the persons affected by OCD (Ladouceure et al., 2000; Purdon, 1999; Purdon, Rowa, & Antony, 2007). Research findings suggest that the strategy of thought suppression is triggered by negative appraisal of thoughts which is associated with greater OCD symptomatology (Purdon, 2004). In thought suppression, a person attempts to hold back unwanted thoughts and make attempts to remove already occurred thoughts of this nature. Intrusions of thoughts despite attempts to suppress might reflect poor suppression abilities. Tolin, Abramowicz, Przeworski, and Foa (2002) suggested that deficient processes of cognitive inhibition may underlie obsessions.

Positive and Negative affect constitute as a basic structure of self-reported emotional experience across cultures (Tellegen, 1985). Positive affect reflects the extent to which a person feels enthusiastic, active and alert. Negative affect reflects distress which is involved in a variety of emotions like anger, contempt, disgust, guilt, fear and nervousness (Watson, Clark, & Tellegen, 1988). High levels of Negative Affect is positively associated with depression, anxiety, and rumination (Nolen-Hoeksema, 2000; Trapnell & Campbell, 1999), while high levels of Positive Affect is correlated with job and marital satisfaction and physical health (Naragon & Watson, 2009). Given the connotations of negative affect, it can be conceptualized that persons with OCD might have high magnitude of negative affect. According to Salkovskis and Freeston (2001) negative mood could increase frequencies of intrusive thoughts, accessibility of dysfunctional assumptions, proneness to inadequate appraisals and reduced efficacy of thoughts suppression and neutralizing strategies. Karami, Momeni, Zakiei (2013) observed negative relationship between positive affect and obsessive-compulsive symptomatology; and positive relationship with negative affect.
Learning of emotion regulation is an important developmental task during the course of development. Failure of emotion regulation is termed as emotion dysregulation. In “Emotion dysregulation” there is an inappropriate or maladaptive application of emotion regulation strategies even if they are available for appropriate use. On the other hand, “problems in emotion regulation” indicate an absence of these strategies (Cicchetti, Ackerman, Izard, 1995). Cole and Hall (2008) conceptualized emotion dysregulation as comprising the following characteristics: (a) ineffectiveness of regulatory attempts; (b) interference of emotions with appropriate behaviours; (c) emotions expressed or experienced as out of context; and (d) emotional variations occurring either too abruptly or too slowly.

Emotional and behavioural consequences of emotional dysregulation are specifically being studied in children and adolescents (Crowell et al. 2006; Shannon et. Al. 2005; Crowell et al. 2005). Emotion dysregulation is implicated in a wide range of clinical conditions. Emotion dysregulation has been called the “hallmark of psychopathology” (Beauchaine, Gatzke-Kopp, Mead, 2007). The construct of emotion dysregulation is being increasing used in psychiatric and clinical psychology literature and being considered as a ‘transdiagnostic process’ (Kring, 2008).

MATERIAL AND METHOD

Aim:

In this study, we considered examination of emotional dysregulation of positive and negative affect in adults with OCD.

Participants:

The study was carried out at Institute of Mental Health and Hospital, Agra. 30 patients with a diagnosis of OCD according to ICD-10 Diagnostic Criteria were taken for the study. The patients with history of major psychiatric disorders, major medical conditions, intellectual impairment were not included.

Measures:

Affect was assessed through Positive and Negative Affect Scale (Watson, Clark and Tellegen, 1988). It has 20 items, 10 each for positive affect and 10 for negative affect. The items are rated on a 5-point scale. The scale is reported to be reliable and valid measure of affect (Kercher, 1992; Watson et al., 1988).

Difficulties in Emotion Dysregulation Scale (Gratz & Roemer, 2004):

was used to assess emotion dysregulation. The scale is based on author’s conceptualization of emotion regulation as (a) emotional awareness, (b) emotional clarity, (c) emotional acceptance, (d) impulse control, (e) ability to engage in goal-directed behaviour while experiencing negative emotions, and (f) ability to use situationally appropriate emotion regulation strategies flexibly to modulate emotional responses as desired. It is a 36-items scale which cover all of the above aspects of emotion regulation. The scale has following dimensions (a) Non-acceptance of emotional responses (b) Difficulties in goal-directed behavior (c) Impulse control difficulties (d) lack of emotional awareness (e) Limited access to emotion regulation strategies, and (f) Lack of emotional clarity. These dimensions were obtained through a factor analysis. The scale is a reliable and valid measure of the emotion regulation (Gratz & Roemer, 2004; Medrano & Trógolo, 2016).

RESULTS

Table - 1: Sample Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Patients: (N=30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in Years</td>
<td>28.36±9.34</td>
</tr>
<tr>
<td>Years of Education</td>
<td>13.6±3.46</td>
</tr>
<tr>
<td>Duration of Illness (in Years)</td>
<td>8.03±3.64</td>
</tr>
<tr>
<td>Age of Onset (in Years)</td>
<td>19.53±6.03</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>70%</td>
</tr>
<tr>
<td>Female</td>
<td>30%</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>50%</td>
</tr>
<tr>
<td>Unmarried</td>
<td>50%</td>
</tr>
<tr>
<td>Domicile</td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>30%</td>
</tr>
<tr>
<td>Urban</td>
<td>70%</td>
</tr>
</tbody>
</table>

The mean age of the participants was 28.36 years (SD 9.34 years), the average years of education was 13.6 years (SD 3.46 years), average duration of illness was 8.03 years (SD 3.64 years), and mean age of onset was 19.53 years (SD 6.03 years). 70% of the
sample was male, the distribution of marital status was equal and 70% participants were from urban areas.

Table-2: Mean & S.D for PANAS and DERS Scores

<table>
<thead>
<tr>
<th>Dimensions of Measures</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PANAS: Positive Affect</td>
<td>16.80</td>
<td>2.41</td>
</tr>
<tr>
<td>PANAS: Negative Affect</td>
<td>25.06</td>
<td>6.55</td>
</tr>
<tr>
<td>DERS: Non-Acceptance</td>
<td>15.10</td>
<td>3.69</td>
</tr>
<tr>
<td>DERS: Goal</td>
<td>17.10</td>
<td>4.08</td>
</tr>
<tr>
<td>DERS: Impulse</td>
<td>11.43</td>
<td>3.96</td>
</tr>
<tr>
<td>DERS: Emotional Awareness</td>
<td>20.83</td>
<td>3.86</td>
</tr>
<tr>
<td>DERS: Strategies</td>
<td>20.80</td>
<td>4.23</td>
</tr>
<tr>
<td>DERS: Clarity</td>
<td>13.36</td>
<td>2.07</td>
</tr>
</tbody>
</table>

Table - 3: Correlation Coefficients in Dimensions of DERS and PANAS

<table>
<thead>
<tr>
<th>Dimensions of Measures</th>
<th>PANAS: Positive</th>
<th>PANAS: Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>DERS: Non-Acceptance</td>
<td>.168</td>
<td>.480**</td>
</tr>
<tr>
<td>DERS: Goal</td>
<td>.271</td>
<td>.038</td>
</tr>
<tr>
<td>DERS: Impulse</td>
<td>.280</td>
<td>.576**</td>
</tr>
<tr>
<td>DERS: Emotional Awareness</td>
<td>-.011</td>
<td>-.198</td>
</tr>
<tr>
<td>DERS: Strategies</td>
<td>.165</td>
<td>.581**</td>
</tr>
<tr>
<td>DERS: Clarity</td>
<td>-.205</td>
<td>-.400*</td>
</tr>
</tbody>
</table>

** Significant 0.01 level. * Significant 0.05 level

The results revealed that none of the dimensions of Difficulties in Emotional Regulation Scale (DERS) was associated with Positive Affect on Positive and Negative Affect Scale (PANAS). The scores on Negative Affect on PANAS were positively correlated on following three dimensions (a) non-acceptance (b) Impulse and (c) Strategies. However, Negative Affect was inversely correlated with clarity dimension of DERS.

DISCUSSION

Persons with OCD are known to have difficulties in regulating their emotions specifically negative emotions and use ‘thought suppression’ strategies on priority. The present study aimed at exploring associations between Positive & Negative Affect vis-à-vis Emotional Dysregulation. Six dimensions of emotional dysregulation assessed by DERS were examined with reference to two dimensions of PANAS. The results revealed that none of the dimensions of DERS was significantly associated with positive affect in persons with OCD. But for negative affect, propensity to emotion dysregulation was found to be prominent in persons with OCD.

Non-acceptance of emotion is significantly associated with negative affect. Non-acceptance of negative affect involves secondary negative emotional reactions to the experience of negative affect (Gratz & Roemer, 2004) which may include feelings of shame, anger, embarrassment and even negative view of oneself. Adversely reacting to the negative emotional experience with other negative emotions might have deleterious effects of optimum processing of negative emotions and could even complicate the primary negative emotional experience. Negative emotional experiences are associated with greater distress and experience of obsessive symptoms. Salkovskis (1985) noted that the “presence or absence of dysphoric mood or salient belief appears to be an important determinant of whether discomfort follows ... intrusions or not”. Purdon (2004) suggested that low mood primes negative appraisals and affects the extent to which thought suppression re-triggers intrusive thoughts.

Second dimension of DERS is Goals which taps difficulties in engaging in goal directed behaviors. When content of obsessions and accompanied distress dominate the mind of persons with OCD, they find it difficult to disengage themselves from the content of OCD and focus on other things in life. A relationship between Goals dimension of DERS and negative affect might be expected. But the results of the present study did not suggest any such relationship.

Impulse dimension of DERS is significantly associated with negative affect. The persons with OCD have difficulties controlling impulses when experiencing negative emotions. They score significantly higher on Barratt Impulsiveness Scale than the healthy control group (Onur et al., 2016 and Grassi et al., 2015) specifically on ‘Cognitive Impulsivity’ dimension. Gross and John (2003) found impulse control difficulties as the significant
predictor of OCD symptoms. Negative emotional experience may trigger impulsive decision making in these patients.

The dimension of strategies of DERS is significantly associated with negative affect in persons with OCD. They have limited access to emotion regulation strategies. They feel that they will end up feeling depressed, it will continue to experience negative emotional state for a longer period, feel overwhelming and helpless to deal with the massive negative emotional experience. Due to their difficulties in handling the negative emotional experiences, they tend to adopt maladaptive emotional regulation strategies such as thought suppression.

Clarity dimension of DERS is inversely correlated with negative affect in persons with OCD. They have less clarity of understanding and making sense of their negative feelings. Gross and John (2003) reported that in a regression model, lack of clarity had a unique contribution in predicting OCD symptoms.

CONCLUSION

The persons with OCD are known to have difficulties in regulating their emotions and tend to adopt maladaptive strategies. The present study was an attempt to examine the association between affect and emotion dysregulation in persons with OCD. Most of the literature has focused on OCD symptoms and patterns of emotion regulation. In this study we extended and considered affect regulation as such instead of OCD symptoms. The results clearly reveal emotion dysregulation of only negative affect in the persons with OCD. No dimension of Difficulties in Emotion Regulation Scale was associated with positive affect. These results can be useful both for clinical purposes as well as trigger further research interest. Lack of clarity of negative emotion, limited access to emotion regulation strategies for negative emotional experience, non-acceptance and avoidance of negative emotional state and taking impulsive decisions due to negative affect, might be the maintaining factors in OCD symptoms. Cognitive approaches that deal with training these persons on how to manage their negative emotions should be helpful in empowering them not only for taking charge of their negative emotions but also should lead to decreased severity of OCD symptoms.

Conflict of Interest: None

Financial Support: Nil

REFERENCES


INTRODUCTION

Clinical Neuropsychology is concerned with the cognitive, emotional and behavioural consequences of brain dysfunction. Traditionally, neuropsychology services have been placed within neurological, neurosurgical and medical settings. A survey of American neuropsychologists at the turn of the century (Sweet, Moberg, & Suchy, 2000) revealed that the majority of clinical neuropsychologists were involved in evaluating and treating brain dysfunction. However a gradual shift has been documented over the years, with psychiatry overtaking neurology as the top referral source for neuropsychologists in the USA between 1989 and 1999 (Sweet et al., 2000).

As a discipline that originated with the study of lesioned brains, the newer avatar of neuropsychology in relation to psychiatry brings a different set of referral questions, and different challenges. In the last three or four decades, research in psychiatry has enhanced understanding of the neurobiological underpinnings of many psychiatric disorders. Neurocognitive deficits have emerged as an important concomitant to a range of psychiatric disorders, beginning with schizophrenia, and extending to bipolar disorder, obsessive-compulsive disorder, autism spectrum disorders, with continually mounting research evidence for the role of neurocognition in depression, anxiety disorders, eating disorders, and personality disorders. Neurocognitive deficits can limit an individual’s independent living skills, can affect their ability to manage complex tasks of daily living, can hamper social and occupational functioning. Indeed, disturbances in measures of neurocognition have been shown to account for a greater degree of variability in workplace performance than total depression severity (McIntyre et al., 2015).

Neuropsychology Referrals and Outcomes in an Adult Mental Health Service in India

Himani Kashyap1*, Manoj Kumar Sharma2, Smrithi M3, and Leeshma K4

ABSTRACT

Clinical neuropsychological services, traditionally developed for brain damage or injury, are increasingly focused on psychiatric referrals. Although neurocognition is implicated in, and significantly impacts outcomes for, many psychiatric disorders, neuropsychological assessments are still not part of routine clinical care in many psychiatric settings in India. The current study aimed to assess the reasons for referral and outcomes of neuropsychological assessment in clinical psychiatric settings. An audit of neuropsychology referrals received by a clinical psychology team in an adult mental health unit of a large tertiary referral centre in India was conducted over a year. Findings resulted approximately 51% of individuals were referred due to observed or reported cognitive decline. The most common diagnoses in the current sample were bipolar disorder, psychosis and ‘not yet diagnosed’ (17.9%), followed by schizophrenia and depression among others (10.7%). Over 77% of referred individuals received psychoeducation / feedback following assessment; approximately 51% were referred for further (neuro) psychological intervention. Limitations in resources hamper access to neuropsychological services in India, particularly in psychiatric settings. Nevertheless, cognitive difficulties are a key concern for many individuals with psychiatric disorders, and hence neuropsychological assessments with a consultative focus and emphasis on feedback / psychoeducation are important for improving outcomes in routine clinical psychiatric settings, consistent with the shifts in focus in clinical neuropsychology across the world.

Keywords: Neuropsychological Feedback, Psychiatric settings, Neurocognition, Neuropsychology in India, Neuropsychology in Asia.
Evidence also shows that neurocognitive dysfunction in psychiatric disorders may precede the onset of symptoms (in schizophrenia, (Lenz et al., 2006; Woodberry, Giuliano, & Seidman, 2008), persist beyond remission (in OCD, (Rao et al., 2008)), and may even predict treatment outcomes (in depression, (Etkin et al., 2015) and OCD, (McNamara et al., 2014)). Distinguishing cognitive profiles associated with psychiatric conditions versus other ‘organic’ pathology such as acquired or degenerative brain disorders is one of the major referral questions in psychiatric settings (Collinson, Lam, & Hayes, 2010). Allot and colleagues (Allott, Brewer, McGorry, & Proffitt, 2011) highlight a number of other reasons why contributions from clinical neuropsychology may be useful in psychiatric settings. In addition to those already mentioned above, they emphasize the role of cognitive ability as a “rate-limiting” factor in influencing engagement in the success of medication compliance, specific therapies, or psychosocial interventions. Further they cite evidence for compromised neurodevelopment and early cognitive dysfunction resulting in the formation of maladaptive coping mechanisms or schema, which may influence psychiatric symptom expression.

Despite such striking evidence, neuropsychological assessments and interventions are often not part of routine clinical care in psychiatry. The predominant focus for neuropsychology in psychiatric settings is research; in clinical settings, neuropsychology has a limited role beyond diagnosis - assessments are undertaken mainly to rule out organic pathology such as stroke or degenerative disorders. Cognitive remediation / rehabilitation programs have been developed for traumatic brain injuries, stroke, mild cognitive impairment and schizophrenia, however the same is not true for other psychiatric disorders.

In the context of psychiatric settings, across the world, there is a “shift away from an assessment model focused on ‘does the patient have brain damage?’ and ‘where is the lesion located?’ toward one emphasizing the understanding of a patient’s pattern of strengths and weaknesses and the functional implications of that pattern”(Meth, Bernstein, Calamia, & Tranel, 2018). In India however this progression is blocked by significant limitations in resources – a recent review estimates that there are only 50 practicing neuropsychologists in India, for a population of over 1.2 billion (Kumar & Sadasivan, 2016). Available standardized tests are also predominantly suitable for educated English-speaking individuals, a significant limiting factor in most Asian countries (Collinson et al., 2010). In such a scenario, neuropsychological assessments in psychiatric settings almost seem like a luxury, in the presence of significant unmet need for neuropsychologists in brain injury rehabilitation settings. Nevertheless, the mounting evidence indicates that neuropsychological assessments and interventions are necessary in psychiatric settings if we are to address the concerns of a significant percentage of individuals who deal with cognitive dysfunction and its repercussions on economic burden for individuals, families and nations (Fineberg et al., 2013; Greenberg, Fournier, Sisitsky, Pike, & Kessler, 2015; Jaeger, Berns, Uzelac, & Davis-Conway, 2006).

In this context, the current paper is an attempt to document the nature of clinical presentations, referral questions and outcomes associated with neuropsychology referrals in an adult mental health unit in a large tertiary referral centre in India. It is anticipated that such documentation will work towards standardizing of best practices worldwide, and represent a step towards minimizing gaps in service delivery.

MATERIAL AND METHODS

Aim:
The aim of the current study was to assess the reasons for referral and outcomes of neuropsychological assessment in clinical psychiatric settings.

Setting:
The data presented is from a clinical psychology team attached to the adult mental health services at a large tertiary referral centre in India. The adult mental health services are available for individuals aged 18 and above, who are screened at first contact and triaged to emergency services, inpatient services and outpatient services as indicated.

The clinical psychology team received referrals for neuropsychological assessment from the adult mental health unit, at an average rate of one or two per week. These assessments were carried out
on an appointment-basis by members of the clinical psychology team who have training and clinical experience with neuropsychological assessments.

Procedure:
The data reported is an audit of neuropsychology referrals received in the unit. The period of reporting is between March 2017 and February 2018. Data were collected from the referral register and medical records of referred individuals maintaining confidentiality with regard to identifying information.

Analysis:
The data was analyzed using the Statistical Package for Social Sciences (SPSS Version 20). Descriptive statistics were employed predominantly, keeping with the objectives.

RESULTS
A total of 65 individuals were referred for neuropsychological assessment between March 2017 and February 2018. Of these, 30 individuals (46.1%) were not assessed in the unit, either because they missed the assessment appointment (n=9; 13.8%), or because they were assessed as part of other research studies into which they were recruited with consent (n=20; 30.8%). No information was available about one individual because the file/registration number was not traceable. Data is reported for the remaining 35 individuals who were assessed by the clinical psychology team.

Demographic and Clinical Details:
Out of the 35 individuals seen for assessment, more than two-thirds were male (68.6) and the rest were female (31.4). Table 1 shows the diagnosis of patients referred for assessment. The majority of individuals referred were those with psychosis, bipolar affective disorder or ‘not yet diagnosed’.

Table 1 - Diagnosis of Patients Referred for Assessment.

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Frequency (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychosis</td>
<td>5 (17.9)</td>
</tr>
<tr>
<td>BPAD</td>
<td>5 (17.9)</td>
</tr>
<tr>
<td>NYD</td>
<td>5 (17.9)</td>
</tr>
<tr>
<td>Other Anxiety Disorder</td>
<td>4 (14.3)</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>3 (10.7)</td>
</tr>
</tbody>
</table>

Diagnosis – Bipolar Affective Disorder; Nyd – Not Yet Diagnosed; ADHD–Attention Deficit Hyperactivity Disorder; OCD–Obsessive Compulsive Disorder; TBI–Traumatic Brain Injury.

The numbers do not add up to the total n=35 since some individuals had more than one diagnosis.

Reasons for Referral:
Table 2 shows the reasons for referral for neuropsychological assessment. From the table, it is evident that more than half of the individuals were referred because of self-reported cognitive decline, while others were referred as part of management plan for cognitive deficits previously established, or because the treating team suspected an organic cause of illness.

Table 2 - Reasons for Referral of Individuals for Neuropsychology Assessment.

<table>
<thead>
<tr>
<th>Reason for Referral</th>
<th>Frequency (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Decline</td>
<td>18 (51.4)</td>
</tr>
<tr>
<td>Management</td>
<td>9 (25.7)</td>
</tr>
<tr>
<td>Suspected Organic Cause</td>
<td>8 (22.9)</td>
</tr>
</tbody>
</table>

Outcomes:
Table 3 shows the outcomes following neuropsychological assessment. The majority of individuals received psychoeducation and feedback following the assessment. Approximately half of the patients were referred for psychological, including neuropsychological, intervention following the assessment. In a few other cases, the
neuropsychological assessment was followed by a referral for specialist consultation (e.g., neurologist, neurosurgeon etc.), a change in diagnosis, referral to other services (such as Psychiatric Rehabilitation Services or Yoga therapy), or further investigation (such as neuroimaging). Follow-up records were unavailable for a few individuals (2.9%), and hence outcome data could not be documented.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Frequency (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychoeducation and Feedback</td>
<td>27 (77.1)</td>
</tr>
<tr>
<td>Referral for (Neuro) Psychological Intervention</td>
<td>18 (51.4)</td>
</tr>
<tr>
<td>Specialist Consultation</td>
<td>3 (8.6)</td>
</tr>
<tr>
<td>Change in Diagnosis</td>
<td>3 (8.6)</td>
</tr>
<tr>
<td>Referral to Other Services</td>
<td>1 (2.9)</td>
</tr>
<tr>
<td>Further Investigation</td>
<td>1 (2.9)</td>
</tr>
<tr>
<td>No Information Available</td>
<td>1 (2.9)</td>
</tr>
</tbody>
</table>

Note: The numbers do not add up to the total n=35 since some individuals experienced more than one of the above outcomes

**DISCUSSION**

The study aimed to document the nature of neuropsychology referrals and outcomes in adult psychiatric settings at a tertiary referral centre in India.

More than half the individuals were referred because of observed or reported cognitive decline, approximately one quarter each due to a suspected organic syndrome and for purposes of management of cognitive difficulties. While individuals referred for a neuropsychological evaluation in a psychiatric setting may be expected to have a probable diagnosis of an organic condition, with regard to this sample, brain dysfunction in the form of traumatic brain injuries, seizures, organic psychiatric illness, and dementia were rather uncommon. The most common diagnoses in the current sample were bipolar disorder, psychosis and ‘not yet diagnosed’, followed by schizophrenia and depression among others. Of note, approximately 9% of individuals (including some ‘not yet diagnosed’) had a change in diagnosis recorded following the neuropsychological assessment. Thus neuropsychological evaluations serve an important diagnostic function in psychiatric settings. They also appear to be useful across a range of different presentations, not necessarily of a known organic nature.

A majority of referred individuals (over 77%) received psychoeducation / feedback following assessment, which is extremely encouraging, given generally poor follow-up rates in Indian settings. These figures are worth highlighting, as research has shown that a collaborative and individualized approach to assessment and feedback is related to improved patient outcomes (Rosado et al., 2018). The major reasons for an absence of psychoeducation are likely to be logistic (some of the individuals who did not receive psychoeducation were lost to follow-up, while others were referred locally, or for specialist consultation). Access to services continues to be a significant difficulty in the Indian population, perhaps common to many Asian settings. A potential solution to this problem worth exploring may include telephonic or postal feedback / psychoeducation. A small percentage of individuals were also referred for specialist consultation or further investigation. While an attempt was made to understand if the assessment contributed to a change in treatment, this data could not be adequately captured as it was not clear from the medical records for many individuals whether treatment change was a direct consequence of the assessment findings.

A significant percentage of tested individuals were referred for further psychological intervention. This is an encouraging outcome, as intervention targeting cognitive difficulties is a first step towards addressing the large percentage of individuals with psychiatric disorders who are unable to resume previous work and study roles. For instance, evidence suggests that nearly 60% of individuals diagnosed with major depressive disorder (MDD) remain functionally disabled 6 months after hospitalization despite significant improvement in depressive symptoms (Jaeger et al., 2006). Cognition has been highlighted as a principal mediator of occupational impairment in depression, schizophrenia and obsessive-compulsive disorder, amongst others (US National Academies of Sciences, Engineering, and Medicine (2015); in some cases, to a greater degree than the symptoms themselves (McIntyre et al., 2015).
A shifting global trend is reflected in the finding that psychiatry has become the top referral source for neuropsychologists (Sweet et al., 2000). Consistent with this finding, there is also a growing focus on broader goals for neuropsychological assessments including informing patients’ next steps, increasing patient safety, or improving quality of life (Meth et al., 2018). This includes, but is not limited to assessing capacity for specific aspects of daily living such as making treatment decisions, driving, handling financial affairs, returning to work, and managing independent living (Collinson et al., 2010). This broadening and shifting focus is likely to become evident more slowly in India given the severe shortage of trained neuropsychologists in the country (Kumar & Sadasivan, 2016). Nevertheless, with the recently passed Indian Mental Health Care Act (2017), the right of the individual with mental illness to make informed decisions regarding treatment has received a significant boost. In this context, neuropsychological assessments with a consultative focus, i.e., aimed at understanding the individuals’ strengths and weaknesses reflective of their everyday difficulties in a controlled test environment, and helping to enhance their socio-occupational functioning, are critical. Indeed, several of the individuals in our sample had themselves initiated the request for neuropsychological evaluation. Following the feedback of the assessment, their reactions ranged from:

- “I’m so relieved to know that I don’t have dementia – I have been so worried about it”
- “This assessment recreated exactly the situations I have difficulty with at work. This is the first time I feel understood”
- “I have been through therapy before, but although my psychiatric symptoms are gone, my memory is a big problem for me. I can’t study or work like before. The feedback really helped me understand what is happening with me. I understand now what I need to do, and also that I need to do it consistently and repeatedly for it to make a difference”.

Two other individuals, diagnosed with adult ADHD, had commented that they could never be like ‘others’, and never be able to reach their full potential because of their diagnosis. Following the feedback and intervention, they reported, as well as were objectively noted to be, more aware of their attentional fluctuations and impulsivity, and better able to utilize their attentional resources efficiently at work.

While cognitive remediation programs are established for some brain disorders, evidence-based programs for psychiatric disorders other than schizophrenia are still a long way off (Cicerone et al., 2000; Tchanturia, Lounes, & Holtum, 2014; Wykes et al., 2003). The need for intervention programs for the milder deficits experienced by individuals with other psychiatric disorders cannot be ignored. Nevertheless, neuropsychological assessments and feedback as part of routine clinical practice may be the first step, and not an insignificant one either. Training in Asia may have a unique advantage in addressing the need in psychiatric settings since in most parts of Asia neuropsychology is a specialized branch of clinical psychology (Collinson et al., 2010), and individuals with a postgraduate in clinical psychology also receive training in neuropsychological assessments and intervention (Kumar & Sadasivan, 2016).

Disclosure Statement:
The authors have no conflicts of interest to disclose.

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Effect of Anti-Smoking Advertising on the Indian Population: A Comparative Behavioural and Electrophysiological Outcome Study

Rajnish Kumar Gupta1 Jamuna Rajeshwaran2* Abhineet Ojha3 Pooja Rathore4 Mohd Afsar5 and Amitabh Bhattacharya6

ABSTRACT

Tobacco smoking is one of the biggest public health threats worldwide. To control and prevent this threat countrywide the Indian Government has initiated anti-smoking mass media campaigning by broadcasting these advertisements during movies and serials. The present study was conducted to analyze the behavioural and electrophysiological correlates of the effects of Indian anti-smoking TV advertisements on the smokers and non-smokers while watching the advertisements. Case-controlled study design was adopted for this study. The sample comprised of twenty male subjects selected from the local community. Based on Fagerstrom Test for Nicotine Dependence (FTND) subjects were divided into Non-Smoker (N=10) and Smoker (N=10) groups. In the smoker group, a further pre and post assessment was performed using Assessment of Motivation: Readiness to Quit Ladder questionnaire. All the participants from both groups also underwent an electroencephalography (EEG) assessment to measure their brain response under three different conditions (Resting condition, Neutral Video, and Anti-smoking video condition). The power spectrum analysis of the EEG data indicates an increased theta power in frontal and parietal regions in smokers which might led to complex inward thinking about the smoking behavior and thereby causing a mental stress state reflected as decreased alpha power. There was no significa difference was observed in non-smokers under all three conditions. The behavioral finding among the smokers indicates an increased readiness to quit the smoking can be suggested as a behavioral response towards the mental stress. Conclusion: The exposure to anti-tobacco advertisements increases the motivation to quit smoking and ought to be considered an important component of mass media-based smoking cessation programs.

Keywords: Smoking, Electroencephalogram, E E G, Behavioural, Anti-Smoking Advertisements.

INTRODUCTION

Tobacco smoking is one of the biggest public health threats responsible for killing more than seven million people a year worldwide. It is a leading global cause of preventable deaths and diseases killing more individuals than HIV, tuberculosis, and malaria combined each year (Forouzanfar et al., 2015). According to the World Health Organization (WHO), it is estimated that by 2025, 8% of India’s population would be smokers (approx. 83,514,000 persons), approximately 15% men and 1% women (Organization, 2015).

It has been established that tobacco smoking leads to various harmful consequences i.e. a variety of human cancers of the lung, larynx, urinary bladder, kidney, oral cavity and many others (Gandini et al., 2008). Smoking increases the oxidative stress in the body leading to chronic obstructive pulmonary disease (Barreiro et al., 2010). As compared to non-smokers, smokers have 2 to 4 times increased risk of heart disease and stroke (Control & Prevention, 1989; Health & Services, 2014). The risk of developing diabetes is 30-40% higher in a smoker than a non-smoker. It can also cause inflammation and decreased immune function. Smoking harms nearly every organ of the body and affects a person’s overall health (Health & Services, 2014).

To address the countrywide threat of tobacco the Indian Government has been initiating various programmes to control the excess tobacco consumption in the country. Smoking has been prohibited in public places, workplaces, healthcare places, government facilities, and public transport. Also, promotion of smoking either publicly or through mass media has been restricted by the government (JUSTICE). The Cigarettes and other Tobacco Products (Packaging and Labelling) Amendment Rules (2014), the health warning on the cigarettes packet was increased from 40% to 80-85% on each side (WELFARE). The Indian Government is also focusing on anti-smoking mass media campaigning. Research studies have demonstrated that mass media plays an important role in the distribution of information and in changing public opinions (Ambler, Ioannides, & Rose, 2000).

Therefore, the Government has made these antismoking advertisements mandatory to be broadcasted.

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during movies and serials along with a warning message. The main objective of these advertisements is to influence smokers to ponder over their smoking habits and motivate them to quit smoking. It has been showed that the emotion and motivation of smokers can render their quitting behaviours towards smoking (Wakefield, Flay, Nichter, & Giovino, 2003). These advertisements contain both message and the graphics of harmful aftereffects of smoking. The strong graphic images displaying the ill-effects of smoking have higher emotional content and tend to give more predominant effect than the other commercials.

EEG signals have been found reliable to identify the mental state of an individual while watching commercial advertisements (Nomura & Mitsukura, 2015). Some electrophysiological studies have found a higher prefrontal cortex activity while watching emotional television commercials (Astolfi et al., 2009; Vecchiato, Astolfi, Tabarrini, et al., 2010). Other studies have suggested an active role of prefrontal and parietal areas involved in the coding of information from TV commercials (Researchers have found a significant difference in cortical activation, mainly focusing on the theta and alpha frequency band while watching TV commercials (Ohme, Reykowska, Wiener, & Choromanska, 2010; Vecchiato, Astolfi, Fallani, et al., 2010; Vecchiato et al., 2011).

To summarize, the existing studies suggest that anti-smoking advertisements have a significantly positive impact on public opinion. Although all these studies are using a behavioural approach to measure the effect of anti-smoking advertisements on an individual's motivation to quit. However, an additional study needs to be carried out to examine the brain activity while watching anti-smoking advertisements. Also, there is a need to compare the effect of these advertisements on smoker and non-smoker population. Therefore, the present study was conducted to analyze the behavioural and electrophysiological correlates of the effects of Indian anti-smoking TV advertisements on the smokers and non-smokers.

METHODOLOGY

Sample:

The sample size for the present study consisted of twenty male subjects selected from the local community in Bengaluru, India. The age of the participants ranged between 20-35 years (Mean = 26.6, S.D = 3.66). All the participants had normal or corrected to normal vision and hearing. Also, the participants were at least high school graduates and had familiarity with at least one of the following languages i.e. Hindi, English, Tamil or Kannada. The participants reporting any history of medical, neurological, psychiatric or substance drug alcohol abuse disorder were excluded from the study.

Procedure:

All the necessary ethical standards had been maintained, while conducting the research. Each participant was invited to the laboratory and a written informed consent was obtained from each of them. They were instructed to sit comfortably in a proper sound attenuated room. A brief history of their smoking habits was taken initially and then Fagerstrom Test for Nicotine Dependence (FTND) was administered to assess their Nicotine use. FTND is the most used 6 item self-report questionnaire which measures the degree of nicotine dependency on a 0-10 rating scale by physiological and behavioural symptoms (Heatherton, Kozlowski, Frecker, & FAGERSTROM, 1991).

Based on the assessment, subjects were divided into two groups:

1. Non-smoker (N=10): The individuals who smoked none in the past one year and had scored zero in the FTND.
2. Smoker (N=10): The individuals who smoked ≥ 5 cigarettes per day and had scored ≥ 1 in the FTND. The FTND score varied from 3-7 indicating low to moderate dependency on nicotine for smokers.

In the smoker group, a further pre and post behavioural assessment was performed using Assessment of Motivation: Readiness to Quit Ladder questionnaire (Lois Biener & Abrams, 1991). This scale was used to assess an individual's current willingness to quit tobacco use. It was scored on a 10 - point Likert scale: 1 = strongly disagree to 10 = strongly agree for quitting smoking.

All the participants from both groups also underwent an electroencephalography (EEG) assessment to measure their brain response under different conditions. The EEG recording was performed using Syn Amps amplifier (Neuroscan, Inc., El Paso, Texas) with the help of a 19-channel Ag/AgCl electrode cap. The electrode placement was done according to the 10-20 international
electrode placement protocol along with additional VEOG (Vertical Electro Oculo Graphic) channels were placed on outer ridges of the eye to detect eye movement artifacts. Linked mastoids were used as a common reference (Figure 1). Impedance was checked and ensured to be <10 kΩ at the beginning of the recording. Proper instructions were given to the subjects to remain calm and still to avoid any motion artifacts.

Figure 1: Electrode Placement

A 19-channel Ag/AgCl electrode cap placement according to the International 10-20 electrode placement.

The linked mastoids were used as a common reference. The EEG recording was performed for 9 minutes under 3 conditions, (i) Resting State, (ii) Neutral video, and (iii) Anti-Smoking advertisement video. In the resting state, EEG was recorded for 3 minutes in eyes open condition while the subjects were instructed to relax and calm. In the neutral video condition, EEG was recorded while subjects were watching a video clip of glittery pattern with a different color for the 3-minute duration. A study done by Hsieh et. al. (2007) showed that glittery pattern does not elicit any emotions thus we considered it as neutral video condition.

In the anti-smoking video condition, EEG was recorded while subjects were watching anti-smoking advertisements video. The anti-smoking video was clipped into a single by combining five different anti-smoking advertisements which are frequently broadcasting on television and movie theaters in India. These advertisements contain strong graphic content describing the aftereffects of smoking on body organs i.e. lungs, oral cavity, and brain. It also showed the adverse effect of passive smoking on the fetus, infants, and children. The total duration of the video was 3 minutes. It was made in 4 different languages (Hindi, English, Tamil, and Kannada) and was presented to the subjects according to their choice. It was taken into consideration that the meaning and duration of each clipping in the video remained same in all languages.

A distraction task was also performed in between the EEG recording for the duration of 1-minute. In the task, subjects were instructed to move a square block in between the moving vertical bars using the keyboard arrow keys. The objective of the distraction task was to minimize the possibility of any association of the brain activity in different EEG recording conditions. No EEG was performed during the distraction task.

The NEUROSCAN software (version 4.4) was used to perform preprocessing steps to get the clean data with minimal artifacts. The power spectrum were watching a video clip of glittery pattern with a different color for the 3-minute duration. A study done by Hsieh et. al. (2007) showed that glittery pattern does not elicit any emotions thus we considered it as neutral video condition.

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The NEUROSCAN software (version 4.4) was used to perform preprocessing steps to get the clean data with minimal artifacts. The power spectrum
analysis of clean EEG data was done using Fast Fourier transformation (FFT) and further an intergroup and intragroup comparison was carried out to evaluate the differences between groups and conditions.

**Statistical Analysis:**

The statistical analysis was performed using SPSS v.20. The normality of the preprocessed data was tested using Shapiro Wilk’s test (Shapiro & Wilk, 1965). The parametric test for inferential statistics was used as the data was found normal. An independent sample t-test was performed to compare the mean EEG power values between two groups. For intragroup comparison, the mean power spectrum values were compared across 3 different conditions for each group using a one-way ANOVA followed by a post-hoc analysis using Bonferroni algorithm. Also, a dependent sample t-test was used to compare the pre-post score from the Assessment of Motivation: Readiness to Quit Ladder. The threshold level of error was kept at 0.05 (p*< 0.05).

**RESULTS**

The sample consisted of twenty male subjects (ten in each group) taken from a local community. The age (Mean ± S.D.) of the participants was 26.6 ± 3.7 years. The baseline comparison of age using an independent sample t-test showed no significant difference (p-value = 0.065) between the groups.

**Behavioural Assessment:**

The Assessment of Motivation: Readiness to Quit Ladder was administered to pre- and post- EEG recording only on the smoker population. The scores (Mean ± S.D.) from the pre- and post-assessment were 5.50 ± 1.650 and 7.40 ± 0.966 respectively, indicate a significant difference (p=0.004**) from a dependent sample t-test (Table 1).

**Table 1: Smoker Group: Mean Score of Assessment of Motivation - Readiness to Quit Ladder: Dependent Sample.**

<table>
<thead>
<tr>
<th>S. No</th>
<th>Variables</th>
<th>Pre-Score (Mean ± SD)</th>
<th>Post-Score (Mean ± SD)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Assessment of Motivation: Readiness to Quit Ladder</td>
<td>5.50 ± 1.650</td>
<td>7.40 ± 0.966</td>
<td>0.004*</td>
</tr>
</tbody>
</table>

p < 0.01**

**Electrophysiological Assessment:**

**Intragroup Comparison:**

To analyze the EEG power spectrum in each group, an intragroup comparison was performed using 1-way ANOVA followed by Bonferroni post-hoc analysis between three conditions: eyes open, neutral video and anti-smoking video. In non-smoker group, there was no significant difference being observed between any conditions (Table 2).

**Table 2: Non-Smoker: Mean EEG power spectrum value: 1-way ANOVA (Post-Hoc Analysis Using Bonferroni Algorithm)**

<table>
<thead>
<tr>
<th>S. No</th>
<th>Variables</th>
<th>EEG Power Spectrum (µ2/Hz) (Mean ± SD)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Frontal Delta Eyes Open</td>
<td>0.989±0.299</td>
<td>0.502</td>
</tr>
<tr>
<td>1</td>
<td>Frontal Delta Neutral Video</td>
<td>0.795±0.273</td>
<td>0.343</td>
</tr>
<tr>
<td>1</td>
<td>Frontal Delta Anti-Smoking Video</td>
<td>0.950±0.343</td>
<td>0.502</td>
</tr>
<tr>
<td>2</td>
<td>Parietal Delta Eyes Open</td>
<td>1.961±0.782</td>
<td>0.293</td>
</tr>
<tr>
<td>2</td>
<td>Parietal Delta Neutral Video</td>
<td>1.407±0.771</td>
<td>0.598</td>
</tr>
<tr>
<td>2</td>
<td>Parietal Delta Anti-Smoking Video</td>
<td>0.980±0.273</td>
<td>0.293</td>
</tr>
<tr>
<td>3</td>
<td>Central Delta Eyes Open</td>
<td>0.972±0.516</td>
<td>1.000</td>
</tr>
<tr>
<td>3</td>
<td>Central Delta Neutral Video</td>
<td>0.906±0.499</td>
<td>0.451</td>
</tr>
<tr>
<td>3</td>
<td>Central Delta Anti-Smoking Video</td>
<td>0.805±0.451</td>
<td>1.000</td>
</tr>
<tr>
<td>4</td>
<td>Temporal Delta Eyes Open</td>
<td>1.309±0.607</td>
<td>1.093±0.465</td>
</tr>
<tr>
<td>4</td>
<td>Temporal Delta Neutral Video</td>
<td>1.300±0.776</td>
<td>0.465</td>
</tr>
<tr>
<td>4</td>
<td>Temporal Delta Anti-Smoking Video</td>
<td>0.857±0.776</td>
<td>0.465</td>
</tr>
<tr>
<td>5</td>
<td>Occipital Delta Eyes Open</td>
<td>2.055±0.869</td>
<td>1.097±0.596</td>
</tr>
<tr>
<td>5</td>
<td>Occipital Delta Neutral Video</td>
<td>1.495±0.895</td>
<td>0.596</td>
</tr>
<tr>
<td>5</td>
<td>Occipital Delta Anti-Smoking Video</td>
<td>1.951±0.895</td>
<td>0.596</td>
</tr>
<tr>
<td>6</td>
<td>Frontal Theta Eyes Open</td>
<td>10.032±1.815</td>
<td>11.866±3.294</td>
</tr>
<tr>
<td>6</td>
<td>Frontal Theta Neutral Video</td>
<td>10.416±1.761</td>
<td>11.866±3.294</td>
</tr>
<tr>
<td>6</td>
<td>Frontal Theta Anti-Smoking Video</td>
<td>11.866±3.294</td>
<td>1.000</td>
</tr>
<tr>
<td>7</td>
<td>Parietal Theta Eyes Open</td>
<td>15.149±3.496</td>
<td>16.163±1.747</td>
</tr>
<tr>
<td>7</td>
<td>Parietal Theta Neutral Video</td>
<td>15.351±3.439</td>
<td>16.163±1.747</td>
</tr>
<tr>
<td>7</td>
<td>Parietal Theta Anti-Smoking Video</td>
<td>16.163±1.747</td>
<td>1.000</td>
</tr>
<tr>
<td>8</td>
<td>Central Theta Eyes Open</td>
<td>9.234±2.380</td>
<td>11.483±2.877</td>
</tr>
<tr>
<td>8</td>
<td>Central Theta Neutral Video</td>
<td>9.666±4.012</td>
<td>11.483±2.877</td>
</tr>
<tr>
<td>8</td>
<td>Central Theta Anti-Smoking Video</td>
<td>14.728±3.160</td>
<td>1.000</td>
</tr>
<tr>
<td>9</td>
<td>Temporal Theta Eyes Open</td>
<td>13.616±3.569</td>
<td>18.783±3.721</td>
</tr>
<tr>
<td>9</td>
<td>Temporal Theta Neutral Video</td>
<td>13.381±4.679</td>
<td>18.783±3.721</td>
</tr>
<tr>
<td>9</td>
<td>Temporal Theta Anti-Smoking Video</td>
<td>13.381±4.679</td>
<td>1.000</td>
</tr>
<tr>
<td>10</td>
<td>Occipital Theta Eyes Open</td>
<td>16.257±3.569</td>
<td>16.952±4.679</td>
</tr>
<tr>
<td>10</td>
<td>Occipital Theta Neutral Video</td>
<td>16.952±4.679</td>
<td>18.783±3.721</td>
</tr>
<tr>
<td>10</td>
<td>Occipital Theta Anti-Smoking Video</td>
<td>16.952±4.679</td>
<td>1.000</td>
</tr>
</tbody>
</table>
In smoker group, we did not find any significant difference between eyes open and neutral video conditions. For eyes open versus anti-smoking video, we found a significant increment in theta (p=0.023*; 0.045*) at the frontal and parietal regions, respectively. Similarly, for neutral video versus anti-smoking video, we observed a significant increment in theta (p=0.049*; 0.035*) and decrement in alpha (p=0.045*; 0.049*) at the frontal and parietal regions, respectively (Table 3).

**Table 3: Smoker: Mean EEG Power Spectrum Value: 1- way ANOVA (Post-Hoc Analysis Using Bonferroni Algorithm)**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Variables</th>
<th>EEG Power Spectrum (µ2/Hz) (Mean ± SD)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Frontal Delta</td>
<td>0.93±0.36</td>
<td>1.07±0.64</td>
</tr>
<tr>
<td>2</td>
<td>Parietal Delta</td>
<td>1.38±0.57</td>
<td>1.90±0.26</td>
</tr>
<tr>
<td>3</td>
<td>Central Delta</td>
<td>0.77±0.30</td>
<td>1.10±0.70</td>
</tr>
<tr>
<td>4</td>
<td>Temporal Delta</td>
<td>1.64±0.68</td>
<td>1.98±1.02</td>
</tr>
</tbody>
</table>

**Figure 4: Smoker Group: Mean EEG Power Spectrum Values: Eyes Open versus Anti-Smoking Video: Dependent Sample t-test (p < 0.05)**

Only significant p-values are reported.
Figure 5: Smoker Group: Mean EEG Power Spectrum Values: Neutral Video Versus Anti-Smoking Video: Dependent Sample t-test (p < 0.05*)

Only significant p-values are reported.

Intergroup Comparison:

An independent sample t-test was performed to analyze the EEG power spectrum in between the non-smoker and smoker groups for each condition. For eyes open and neutral video conditions, we did not find any significant difference between both groups (Table 4 and 5).

Table 4: Non-Smokers versus Smoker: Eyes Open Condition: Mean EEG Power Spectrum Value: Independent Sample t-test

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Variables</th>
<th>Non-Smokers</th>
<th>Smokers</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Frontal Delta</td>
<td>0.989 ± 0.299</td>
<td>0.931 ± 0.365</td>
<td>0.700</td>
</tr>
<tr>
<td>2</td>
<td>Parietal Delta</td>
<td>1.961 ± 0.782</td>
<td>1.389 ± 0.578</td>
<td>0.079</td>
</tr>
<tr>
<td>3</td>
<td>Central Delta</td>
<td>0.972 ± 0.516</td>
<td>0.775 ± 0.307</td>
<td>0.312</td>
</tr>
<tr>
<td>4</td>
<td>Temporal Delta</td>
<td>1.309 ± 0.407</td>
<td>1.645 ± 0.687</td>
<td>0.200</td>
</tr>
<tr>
<td>5</td>
<td>Occipital Delta</td>
<td>2.055 ± 0.869</td>
<td>1.497 ± 0.514</td>
<td>0.102</td>
</tr>
<tr>
<td>6</td>
<td>Frontal Theta</td>
<td>10.032 ± 1.815</td>
<td>11.671 ± 1.815</td>
<td>0.059</td>
</tr>
<tr>
<td>7</td>
<td>Parietal Theta</td>
<td>15.149 ± 5.439</td>
<td>15.402 ± 1.906</td>
<td>0.843</td>
</tr>
<tr>
<td>8</td>
<td>Central Theta</td>
<td>9.234 ± 2.380</td>
<td>12.215 ± 6.592</td>
<td>0.205</td>
</tr>
<tr>
<td>9</td>
<td>Temporal Theta</td>
<td>13.616 ± 3.569</td>
<td>14.166 ± 0.990</td>
<td>0.411</td>
</tr>
<tr>
<td>10</td>
<td>Occipital Theta</td>
<td>16.257 ± 3.569</td>
<td>18.741 ± 1.778</td>
<td>0.070</td>
</tr>
<tr>
<td>11</td>
<td>Frontal Alpha</td>
<td>4.389 ± 1.170</td>
<td>4.540 ± 2.007</td>
<td>0.684</td>
</tr>
<tr>
<td>12</td>
<td>Parietal Alpha</td>
<td>10.538 ± 2.144</td>
<td>11.012 ± 2.922</td>
<td>0.015*</td>
</tr>
<tr>
<td>13</td>
<td>Central Alpha</td>
<td>5.614 ± 2.052</td>
<td>4.134 ± 1.478</td>
<td>0.081</td>
</tr>
<tr>
<td>14</td>
<td>Temporal Alpha</td>
<td>5.556 ± 2.089</td>
<td>7.771 ± 3.233</td>
<td>0.085</td>
</tr>
<tr>
<td>15</td>
<td>Occipital Alpha</td>
<td>8.292 ± 4.191</td>
<td>9.300 ± 4.250</td>
<td>0.600</td>
</tr>
<tr>
<td>16</td>
<td>Frontal Beta</td>
<td>1.270 ± 0.760</td>
<td>0.918 ± 0.335</td>
<td>0.197</td>
</tr>
<tr>
<td>17</td>
<td>Parietal Beta</td>
<td>2.817 ± 1.739</td>
<td>3.112 ± 1.378</td>
<td>0.015*</td>
</tr>
<tr>
<td>18</td>
<td>Central Beta</td>
<td>2.064 ± 0.793</td>
<td>1.408 ± 0.643</td>
<td>0.057</td>
</tr>
<tr>
<td>19</td>
<td>Temporal Beta</td>
<td>2.392 ± 1.358</td>
<td>3.263 ± 1.382</td>
<td>0.172</td>
</tr>
<tr>
<td>20</td>
<td>Occipital Beta</td>
<td>2.937 ± 1.415</td>
<td>3.625 ± 1.706</td>
<td>0.339</td>
</tr>
</tbody>
</table>

While for anti-smoking advertisements, a significant increment in theta (p=0.048*; 0.04*) and decrement in alpha (p=0.015*; 0.016*) at the frontal and parietal location was observed, respectively.

Table 5: Non-Smokers Versus Smoker: Neutral Video Condition: Mean EEG Power Spectrum Value: Independent Sample t-test

<table>
<thead>
<tr>
<th>EEG Power Spectrum (µ2/Hz) (Mean ± SD)</th>
<th>S. No.</th>
<th>Variables</th>
<th>Non-Smokers</th>
<th>Smokers</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Frontal Delta</td>
<td>0.795 ± 0.273</td>
<td>1.071 ± 0.643</td>
<td>0.227</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Parietal Delta</td>
<td>1.407 ± 0.771</td>
<td>1.908 ± 0.926</td>
<td>0.205</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Central Delta</td>
<td>0.906 ± 0.449</td>
<td>1.101 ± 0.702</td>
<td>0.467</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Temporal Delta</td>
<td>1.300 ± 0.776</td>
<td>1.985 ± 1.027</td>
<td>0.109</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Occipital Delta</td>
<td>1.495 ± 0.895</td>
<td>1.431 ± 0.868</td>
<td>0.873</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Frontal Theta</td>
<td>10.416 ± 1.761</td>
<td>12.112 ± 2.088</td>
<td>0.065</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Parietal Theta</td>
<td>15.351 ± 5.439</td>
<td>15.538 ± 2.339</td>
<td>0.922</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Central Theta</td>
<td>9.966 ± 4.012</td>
<td>12.148 ± 4.851</td>
<td>0.288</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Temporal Theta</td>
<td>13.381 ± 3.616</td>
<td>16.498 ± 3.345</td>
<td>0.061</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Occipital Theta</td>
<td>16.952 ± 4.679</td>
<td>20.113 ± 8.833</td>
<td>0.331</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Frontal Alpha</td>
<td>4.397 ± 1.170</td>
<td>4.540 ± 2.007</td>
<td>0.848</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Parietal Alpha</td>
<td>10.538 ± 2.144</td>
<td>11.012 ± 2.922</td>
<td>0.684</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Central Alpha</td>
<td>5.614 ± 2.052</td>
<td>4.134 ± 1.478</td>
<td>0.081</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Temporal Alpha</td>
<td>5.556 ± 2.089</td>
<td>7.771 ± 3.233</td>
<td>0.085</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Occipital Alpha</td>
<td>8.292 ± 4.191</td>
<td>9.300 ± 4.250</td>
<td>0.600</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Frontal Beta</td>
<td>1.270 ± 0.760</td>
<td>0.918 ± 0.335</td>
<td>0.197</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Parietal Beta</td>
<td>2.817 ± 1.739</td>
<td>3.112 ± 1.378</td>
<td>0.015*</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Central Beta</td>
<td>2.064 ± 0.793</td>
<td>1.408 ± 0.643</td>
<td>0.057</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Temporal Beta</td>
<td>2.392 ± 1.358</td>
<td>3.263 ± 1.382</td>
<td>0.172</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Occipital Beta</td>
<td>2.937 ± 1.415</td>
<td>3.625 ± 1.706</td>
<td>0.339</td>
<td></td>
</tr>
</tbody>
</table>

Table 6: Non-Smokers Versus Smoker: Anti-Smoking Video Condition: Mean EEG Power Spectrum Value: Independent Sample t-test

<table>
<thead>
<tr>
<th>EEG Power Spectrum (µ2/Hz) (Mean ± SD)</th>
<th>S. No.</th>
<th>Variables</th>
<th>Non-Smokers</th>
<th>Smokers</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Frontal Delta</td>
<td>0.950 ± 0.343</td>
<td>1.171 ± 0.489</td>
<td>0.257</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Parietal Delta</td>
<td>1.201 ± 0.598</td>
<td>1.748 ± 1.123</td>
<td>0.191</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Central Delta</td>
<td>0.805 ± 0.451</td>
<td>1.132 ± 0.624</td>
<td>0.196</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Temporal Delta</td>
<td>1.093 ± 0.465</td>
<td>1.717 ± 0.957</td>
<td>0.080</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Occipital Delta</td>
<td>1.397 ± 0.596</td>
<td>1.729 ± 0.999</td>
<td>0.378</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Frontal Theta</td>
<td>11.866 ± 3.294</td>
<td>15.574 ± 4.449</td>
<td>0.048*</td>
<td></td>
</tr>
<tr>
<td>S.No.</td>
<td>Variables</td>
<td>Non-Smokers</td>
<td>Smokers</td>
<td>p value</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>--------------------</td>
<td>-----------------</td>
<td>----------------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Parietal Theta</td>
<td>16.163 ± 1.747</td>
<td>18.192 ± 2.313</td>
<td>0.040*</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Central Theta</td>
<td>11.483 ± 2.877</td>
<td>13.934 ± 3.657</td>
<td>0.113</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Temporal Theta</td>
<td>14.728 ± 3.160</td>
<td>16.790 ± 3.776</td>
<td>0.202</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Occipital Theta</td>
<td>18.783 ± 3.721</td>
<td>21.840 ± 4.187</td>
<td>0.0101</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Frontal Alpha</td>
<td>3.736 ± 1.074</td>
<td>2.362 ± 1.219</td>
<td>0.015*</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Parietal Alpha</td>
<td>11.366 ± 3.212</td>
<td>8.012 ± 2.400</td>
<td>0.016*</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Central Alpha</td>
<td>5.437 ± 2.011</td>
<td>4.067 ± 1.337</td>
<td>0.090</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Temporal Alpha</td>
<td>6.306 ± 2.068</td>
<td>6.214 ± 1.656</td>
<td>0.914</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Occipital Alpha</td>
<td>9.407 ± 2.493</td>
<td>9.136 ± 2.311</td>
<td>0.804</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Frontal Beta</td>
<td>1.315 ± 0.737</td>
<td>1.118 ± 0.288</td>
<td>0.447</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Parietal Beta</td>
<td>2.473 ± 1.377</td>
<td>2.870 ± 1.174</td>
<td>0.496</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Central Beta</td>
<td>2.430 ± 1.724</td>
<td>1.617 ± 0.749</td>
<td>0.188</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Temporal Beta</td>
<td>2.425 ± 0.997</td>
<td>3.254 ± 1.418</td>
<td>0.148</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Occipital Beta</td>
<td>3.096 ± 1.082</td>
<td>3.678 ± 1.996</td>
<td>0.428</td>
<td></td>
</tr>
</tbody>
</table>

\textit{(Asterisk indicates the significant differences, }^{*}p<0.05\text{)}

**Figure 6: Non-Smoker versus Smoker Group: Mean EEG Power Spectrum Values: Anti-Smoking Video**

\textbf{DISCUSSION}

The present study was conducted to analyze the smokers and non-smokers’ behavioral and electrophysiological outcomes for Indian anti-smoking TV advertisements. The non-smokers were only assessed with the electrophysiological assessment and no significant difference was observed between various conditions. On the other hand, the electrophysiological findings among smokers showed significantly increased theta and decreased theta power in fronto-parietal regions. This difference between groups could be possibly explained by a lack of personal association or meaning with the antismoking videos for the non-smokers and thereby yielding similar EEG power values in all three conditions. The behavioural finding among the smokers suggests that the exposure to antismoking advertisements was associated with an increased readiness to quit the smoking. However, the mechanism by which the anti-smoking videos bring about this change has been unclear. We hypothesize that anti-smoking videos would have led to complex inward thinking about the smoking behaviour (as reflected in increased theta power in frontal and parietal regions) and thereby causing a state of mental disequilibrium and stress (as reflected in decreased alpha power in the same regions). The increased readiness to quit after watching the anti-smoking videos can be conceptualized as a behavioural response to this mental disequilibrium or stress.

The previous finding also suggests that increased exposure to anti-tobacco advertisements increases smoking cessation rates, even after controlling for other factors that are related to smoking cessation (Hyland, Wakefield, Higbee, Szczypka, & Cummings, 2005). The findings further suggest that anti-smoking advertising ought to be considered an important component of mass media-based smoking cessation programs (Durkin, Brennan, & Wakefield, 2012). The increased tendency to quit smoking after watching the anti-smoking advertisements are consistent with reports that show comprehensive tobacco control programs run by the Government of India are effective in reducing smoking rates (Golechha, 2016; Reddy & Gupta, 2004).

Studies have shown that emotionally evocative advertisements play an important role in influencing an individual’s thought towards the cessation of smoking and have greater effects on smokers due to their personalized content which they can link to their life regarding the harmful smoking effects (Durkin, Biener, & Wakefield, 2009; Wakefield et al., 2003).
The advertisements with strong graphic content (i.e. tumors, damaged lung, and oral cavity) have been proven more effective in describing the ill-effects of smoking (Biener, Gilpin, & Albers, 2004; Louis Biener & Taylor, 2002; Donovan, Boulter, Borland, Jalleh, & Carter, 2003). These advertisements might help to denormalize smoking by portraying the negative impact on non-smokers due to passive smoking (Donovan et al., 2003; Goldman & Glantz, 1998; US Department of Health and Human Services, Centre for Disease Control and Prevention, Media Campaign Resource Book, Atlanta, Ga: US Dep of Health and Human Services; , November 1995).

The primary advantage the present study over previous studies is that prospective data on smoking cessation were examined in between smokers and non-smokers with exposure to anti-smoking advertising. The finding of higher cessation rates in smokers after watching the anti-smoking advertisements by the Assessment of Motivation: Readiness to Quit to Ladder lends further evidence that the observed relationship is causal.

LIMITATIONS

While there are several unique strengths of this study, the key limitation should be noted that the sample size of the present study is not very large and therefore, the results cannot be generalized.

FUTURE DIRECTIONS

The tobacco industry seems to rise day by day due to its huge regular potential users who keep on growing every year. Therefore, to compete with the tobacco industry, anti-smoking advertisements need to be ambitious, hard-hitting and explicit. Unless the advertisements grab and hold individual’s attention, their message would be lost. A strong anti-smoking media campaign is a key to any tobacco control effect. They should be able to influence smokers and aware them about the risks ineradicable in cigarette smoking and be able to motivate them in making a quit attempt. The positive association observed between exposure to anti-smoking advertising and increased post-assessment results of motivation to quit among adult smokers in this study adds to the growing body of evidence that supports the need for governments to continue investing in anti-smoking advertising campaigns.

Conflict of Interest : None

Acknowledgment :

We thank Mr. Deepak R. Ullal, for providing technical support in EEG recording.

REFERENCES


Durkin, S. J., Biener, L., & Wakefield, M. A. (2009). Effects of different types of antismoking ads on


INTRODUCTION

The notion of diagnostic relationship between depression and mania developed from the second half of the nineteenth century (Goodwin & Jamison, 1990). Bipolar affective disorder (BPAD) is also known as “manic-depressive illness or Mood disorder” is a serious, chronic, and relapsing mental health problem that mainly affects the mood. International Classification of Disease (ICD-10) defined it as a psychiatric terminology “Mood or Affective disorder and in Diagnostic and Statistical Manual of Mental Disorders (DSM-V) maintained it as Bipolar and Related disorder. Everyone has variations in their mood, but in bipolar disorder these changes can be very distressing and have a big impact on human life. One may feel high and low moods and that swings in the mood are overwhelming. The present study was planned to see the applicability of interpersonal and social rhythm therapy among patients with bipolar affective disorder (manic episode) for strengthening the coping ability. It was a hospital based study with pre-post research design with experimental group and control group. Total 12 inpatients with BPAD (Manic episode) selected from different wards of RINPAS and randomly divided into two groups (06 on experimental and 06 on control groups). Tools were used Young Mania Rating Scale (YMRS) and Ways of Coping Questionnaire (WCQ). For statistical analysis Non-parametric Test were used. Results of the study suggest that IPSRT was helpful to reduced the manic symptoms and improve coping ability with various domains significantly on experimental group individuals who were given psychotherapeutic intervention when compare to Control group.

Keywords: Bipolar Affective Disorder (BPAD), Mood, Mania, Coping Ability, Interpersonal and Social Rhythm Therapy.

INTRODUCTION

The notion of diagnostic relationship between depression and mania developed from the second half of the nineteenth century (Goodwin & Jamison, 1990). Bipolar affective disorder (BPAD) is also known as “manic-depressive illness or Mood disorder” is a serious, chronic, and relapsing mental health problem that mainly affects the mood. International Classification of Disease (ICD-10) defined it as a psychiatric terminology “Mood or Affective disorder and in Diagnostic and Statistical Manual of Mental Disorders (DSM-V) maintained it as Bipolar and Related disorder. Everyone has variations in their mood, but in bipolar disorder these changes can be very distressing and have a big impact on human life. One may feel high and low moods are extreme, and that swings in mood are overwhelming and represent heavy disturbances of emotional, mental, financial and social burden to direct and indirect ways on the individuals, their family and society. In worldwide, bipolar disorder is the sixth leading cause of disability (Murray & Lopez, 1996) among 15-44 years old and ninth leading cause of years lost due to death or disability worldwide (WHO, 2001).

Mania is an emotional state or mood in bipolar disorder with unfounded elation accompanied by hyperactivity, irritability, expansiveness, talkativeness, flight of ideas, distractibility and impractical grandiose plans (which can be delusional), inflated self-esteem, reduced sleep, logorrhea, racing thoughts, distractibility, increased involvement in pleasurable or high risk activities, while disdaining them, and psychomotor anxiety and stress or agitation, poor coping and adjustment ability. A person suffering from mania, whether single episode or multiple episodes, is considered to be a patient of bipolar illness (Belmaker, 2004).

Although the concept of coping can be applied to numerous physical, psychological, and psychosocial conditions, a large body of evidence indicates that psychosocial stress might play a major role in the onset and course of BPAD (Post & Leverich, 2006). Stressful experiences likely occur in a substantial number of people and have been considered difficult to control, and the choice of coping strategy could be a potential target for psychosocial interventions. Studies indicate that psychosocial interventions in BPAD have reported moderate functional improvement, improved social

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Research Article

Application of Interpersonal and Social Rhythm Therapy for Enhancing Coping Ability among Patients with Bipolar Affective Disorder (Mania)

Madhu Kumari Gupta*, Prakash Kumar Mahanta and K. S. Sengar

ABSTRACT

Bipolar affective disorder (BPAD) is a serious and chronic mental health problem that mainly affects the mood. Everyone has variations in their mood, but in bipolar disorder these changes can be very distressing and have a big impact on human life. One may feel high and low moods and that swings in the mood are overwhelming. The present study was planned to see the applicability of interpersonal and social rhythm therapy among patients with bipolar affective disorder (manic episode) for strengthening the coping ability. It was a hospital based study with pre-post research design with experimental group and control group. Total 12 inpatients with BPAD (Manic episode) selected from different wards of RINPAS and randomly divided into two groups (06 on experimental and 06 on control groups). Tools were used Young Mania Rating Scale (YMRS) and Ways of Coping Questionnaire (WCQ). For statistical analysis Non-parametric Test were used. Results of the study suggest that IPSRT was helpful to reduced the manic symptoms and improve coping ability with various domains significantly on experimental group individuals who were given psychotherapeutic intervention when compare to Control group.

Keywords: Bipolar Affective Disorder (BPAD), Mood, Mania, Coping Ability, Interpersonal and Social Rhythm Therapy.

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functioning/adaptation, and increased life satisfaction (Miklowitz & Otto, 2007). Concept of coping comprises four essential definitions: (i) coping is a process or interaction between the individual and environment, (ii). coping mechanisms likely manage a stressful situation rather than control or overcome it, (iii). the coping process comprises the notion of “evaluation” (i.e., how individuals perceive, interpret, and mentally represent the phenomenon), and (iv). the coping process involves efforts to manage, reduce, or endure internal and external demands that are appraised as exceeding the resources of the person (Folkman & Lazarus, 1980).

Over the years, research on coping in BPAD has developed slowly but continuously. Lam and Wong (1997) reported that BPAD patients' levels of functioning in the areas of work, marital relationships, parenting abilities, and social self-presentations, among others, were highly related to how well they coped with the course of mania. Lam et al. (2001) prospectively studied, over an 18-month period, which types of coping strategies in bipolar disorder patients were related to good outcome and a reduction of recurrence and found a relationship between reduced stimulation and prioritizing, reducing the number of tasks to realistic levels and decreasing the chances of experiencing a manic relapse. Coping responses have the capacity to distinctly influence the illness of course in affective disorders. Psychological intervention have been found effective interventions for incorporating adaptive coping in bipolar disorder (Fletcher et al., 2013).

In adolescents and adults, BPAD is associated with significant morbidity, mortality, and impairment in psychosocial and occupational functioning. Interpersonal and Social Rhythm Therapy (IPSRT) is an empirically supported adjunctive psychotherapy for adults and adolescents with BPAD, which has been shown to help delay relapse, speedy recovery from a bipolar manic-depressive episode, increases occupational and psychosocial functioning and regulate both circadian rhythms and sleep–wake cycles (Elizabeth et al., 2010). IPSRT is delays BPAD recurrence in adults by stabilizing daily routines and sleep–wake cycles (Goldstein et al., 2014). Interpersonal and Social Rhythm therapy focuses on the establishment and maintenance of regular daily rhythms, particularly in relation to sleep–wake cycle and circadian regulation, meal times, socialization, provides a potentially useful model for managing mania in the inpatient setting (Crowe & Porter., 2014).

METHODOLOGY

The present study was planned to see the applicability of interpersonal and social rhythm therapy among patients with bipolar affective disorder (manic episode) for enhancing the coping ability. It is a hospital based study with pre-post research design with experimental group and control group. Hypothesized that there is no significant effect of IPSRT on manic symptoms in individuals with BPAD (Mania episode) and there is no significant effect of IPSRT on coping ability in individuals with BPAD (Mania episode).

Sample:

The study was conducted at Ranchi Institute of Neuro-Psychiatry and Allied Sciences (RINPAS), Ranchi. Initially 12 male patients suffering from BPAD (Manic episode; as per ICD-10 DCR) were selected. Age range between 20 to 50 years and minimum education up to 5th std. Individual having any history of serious medical/physical illness h/o head injury, seizures, etc or co-morbid condition of psychiatric disorder, had ECT in past 6th months, mental retardation, family history of mental illness and alcohol/substance dependent disorder were excluded from the study. Individual selected through purposive sampling from male inpatient section at RINPAS as per the consent following the inclusion and exclusion criterions. Among the total numbers of individuals, 06 were randomly assigned for IPSRT with treatment as usual (experimental group) and 06 of them were assigned for treatment as usual (control group).

Measures:

Socio-demographic Data Sheet:

It is semi-structured Performa especially drafted for the present study to obtained information about individual’s identifying age, education, marital status, religion, residence, occupation, family type and duration of illness.

Young Mania Rating Scale (YMRS: Young, 1978):

The YMRS is an 11-item scale developed by Young in 1978 to assess the severity of Mania. Features operationally-defined anchor points and the normal expected score is >=20. Intra-rater Reliability is 0.93, with inter-rater reliability coefficients for each
item ranging from 0.67 to 0.97. Scoring for the items is made on a five-point scale with varying level of severity of manic symptoms, over the entire range of illness from mild to very severe.

**Ways of Coping Questionnaire (Folkman & Lazarus, 1988):**

This Questionnaire was developed by Folkman and Lazarus in 1988 to provide researchers with a theoretically derived measure that could be used to explore the role of coping in the relationship between stress and adaptational outcomes. The reliability and validity of the scale can be found to be 0.77 and 0.75 respectively. Ways of Coping Questionnaire is 4-point Likert type scale consists of 66 items which measures the following domains: Confrontive Coping, Distancing, Self-Controlling, Seeking Social Support, Accepting Responsibility, Escape – Avoidance, Painful Problem Solving and Positive Reappraisal.

**INTERPERSONAL AND SOCIAL RHYTHM THERAPY (IPSRT) MODULE**

The module was planned and focused on the study with different areas i.e. engagement in meaningful activities having significant effect on biological rhythm, interpersonal relationship, social rhythm, and mood of global functioning activities of daily living and coping with the stressful life events. The module was based on model and framework of psycho-social intervention for Bipolar disorder by ’Ellen Frank’ 2005. The component and technique of this module included: Psycho-education, Interpersonal Psychotherapy and Social Rhythm Therapy. Intervention process is divided into Four phases: - 1) Initial Phase; 2) Intermediate Phase; 3) Maintenance Phase; 4) Termination Phase. Each treatment session taken twice per week and time approximately at least 45 minutes- 01 hour specially for session and feedback, and other 2-3 days of the week only supervised by the therapist at wards and work place which were specially planned for the patients, over a period of two months.

**Procedure:**

In this study initially 12 male individuals who suffering from BPAD (Manic episode), were selected through purposive sampling as per the consent, inclusion and exclusion criterions, than socio-demographic details data sheet was filled by the individuals. Out of 12 individuals 06 was randomly assigned to experimental group and 06 control group. Than pre assessment was done on both group using tools of YMRS to screen out the manic symptoms and then Ways of Coping Questionnaire. After that, the intervention program IPSRT was started applying (mentioned IPSRT module) on experimental group. During that intervention program individuals were engaged to works in the kitchen, bakery, wards and male rehabilitation and occupational therapy section at RINPAS. The intervention (IPSRT) period was for two months during which the individuals were under supervision. After the intervention (IPSRT) program, the post assessment was done to determine the effect of the intervention on the experimental group.

**Statistical Analysis:**

As sample size in the study was small, hence obtained data was analyzed by using non-parametric tests applied for comparison of pre-post assessment of experimental and control groups (Chi-Square test and Mann Whitney U test).

**RESULTS**

**Table-1: Showing the Socio-Demographic variables between Experimental and Control group on Education, Marital status, Religion, Residence, Occupation and Family Type.**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td>1.333 NS</td>
</tr>
<tr>
<td>Matric</td>
<td>2 [66.7%]</td>
<td>1 [33.3%]</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Intermediate</td>
<td>3 [50.0%]</td>
<td>3 [50.0%]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduation</td>
<td>1 [50.0%]</td>
<td>1 [50.0%]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Above Graduation</td>
<td>0 [00.0%]</td>
<td>1 [100.0%]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
<td></td>
<td>1.500 NS</td>
</tr>
<tr>
<td>Unmarried</td>
<td>3 [75.0%]</td>
<td>1 [25.0%]</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>3 [37.5%]</td>
<td>5 [62.5%]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residence</td>
<td></td>
<td></td>
<td></td>
<td>1.833 NS</td>
</tr>
<tr>
<td>Rural</td>
<td>5 [62.5%]</td>
<td>3 [37.5%]</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>0 [00.0%]</td>
<td>1 [100.0%]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semi-urban</td>
<td>1 [33.3%]</td>
<td>2 [66.7%]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
<td></td>
<td>5.333 NS</td>
</tr>
<tr>
<td>Private job</td>
<td>1 [33.3%]</td>
<td>2 [66.7%]</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Farmer</td>
<td>2 [50.0%]</td>
<td>2 [50.0%]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business</td>
<td>0 [00.0%]</td>
<td>2 [100.0%]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student</td>
<td>2 [100.0%]</td>
<td>0 [00.0%]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>1 [100.0%]</td>
<td>0 [00.0%]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Type</td>
<td></td>
<td></td>
<td></td>
<td>0.000 NS</td>
</tr>
<tr>
<td>Nuclear Family</td>
<td>2 [50.0%]</td>
<td>2 [50.0%]</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Joint Family</td>
<td>4 [50.0%]</td>
<td>4 [50.0%]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NS =Not Significant
Table 1 shows the Comparison on the Education, Marital status, Religion, Residence, Occupation and Family type between the Experimental and Control group. The Chi-Square test was used for all variables. The $X^2$ value for Education, Marital status, Religion, Residence, Occupation and Family type were 1.333, 1.500, 2.000, 1.833, 5.333, and .000 (P value for these variables were 0.721, 0.221, 0.572, 0.400, 0.225, and 1.000). The results clearly suggest that there were no significant differences were found between Experimental group and Control group variables.

Table - 2: Showing the Age and Clinical Variables ‘Duration of Illness’ between Experimental Group and Control group.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Exp Group (N=6)</th>
<th>Cont. Group (N=6)</th>
<th>df</th>
<th>$X^2$</th>
<th>$P$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-30</td>
<td>4 [66.7%]</td>
<td>3 [50.0%]</td>
<td>1</td>
<td>0.343</td>
<td>NS</td>
</tr>
<tr>
<td>31-40</td>
<td>2 [33.3%]</td>
<td>3 [50.0%]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration of Illness in years</td>
<td></td>
<td></td>
<td></td>
<td>1.333</td>
<td>NS</td>
</tr>
<tr>
<td>1-4</td>
<td>4 [66.7%]</td>
<td>2 [33.3%]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-8</td>
<td>2 [33.3%]</td>
<td>4 [66.7%]</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NS=Not Significant

Table 2 shows the Comparison of Age between the Experimental and Control group. For analysis there also $X^2$ test was used. Age and duration of illness consider as continuous variable and $X^2$ value was 0.343 (p value not significant) and it was respectively suggested that it is not significant. There was no significant difference between Experimental and Control group on age and both groups were similar in the age variable. Table 2 also shows the Comparison on ‘Duration of Illness’ between the Experimental and Control group. $X^2$ value was 1.333). There was no significant difference between both groups on duration of illness.

Table - 3: Showing the Comparison between Experimental and Control groups at Pre and Post Intervention for Young Mania Rating Scale (YMRS).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Exp Group (Mean ± SD)</th>
<th>Control Group (Mean ± SD)</th>
<th>Mann Whitney</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
</tr>
<tr>
<td>YMRS</td>
<td>37.83 ±5.38</td>
<td>10.66 ±2.58</td>
<td>27.16 ±4.66</td>
</tr>
</tbody>
</table>

*p<0.05,  **p<.01.

Table 3 shows the Comparison between Experimental and Control group of Pre and Post assessment for Young Mania Rating Scale (YMRS). Mann Whitney U test was used for this purpose. Pre assessment Mean and SD of experimental group is (37.83±5.382) and post assessment Mean and SD (10.66±2.581), and for control group pre assessment Mean and SD (40.33±1.632) and post assessment Mean and SD (31.17±4.915). The difference between Experimental group (Pre & Post) was 27.16 and for Control group it was 9.17.  Mean rank for Experimental group was 9.50 and for Control group it was 3.50. The $Z= 2.89$ (p<0.01). Results of the present study suggest that manic symptoms were significantly reduced in the experimental group.

Table - 4: Showing the Comparison between Experimental and Control groups at Pre and Post Intervention for Ways of Coping Questionnaire WCQ.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Experimental Group (Mean ± SD)</th>
<th>Control Group (Mean ± SD)</th>
<th>Mann Whitney</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre Assessment (Mean ±SD)</td>
<td>Post Assessment (Mean ±SD)</td>
<td>Pre</td>
</tr>
<tr>
<td>WCQ Confrontive Coping</td>
<td>8.33 ±1.211</td>
<td>7.33 ±1.121</td>
<td>9.33±1.861</td>
</tr>
<tr>
<td>WCQ Distancing</td>
<td>6.50 ±1.187</td>
<td>6.66 ±1.211</td>
<td>8.33±2.338</td>
</tr>
<tr>
<td>WCQ Self-Controling</td>
<td>8.16 ±3.816</td>
<td>17.83 ±3.060</td>
<td>6.66±4.633</td>
</tr>
<tr>
<td>WCQ Seeking Social Support</td>
<td>10.16±2.562</td>
<td>9.33±2.732</td>
<td>12.33±3.559</td>
</tr>
<tr>
<td>WCQ Accepting Responsibility</td>
<td>7.16±2.639</td>
<td>10.16±1.169</td>
<td>3.50±1.378</td>
</tr>
<tr>
<td>WCQ Escape-Avoidance</td>
<td>9.50±3.391</td>
<td>17.33±4.033</td>
<td>16.33±4.226</td>
</tr>
<tr>
<td>WCQ Planful Problem Solving</td>
<td>8.00±3.464</td>
<td>16.16±1.722</td>
<td>6.66±3.502</td>
</tr>
</tbody>
</table>

*p<0.05,  **p<.01,  NS = Not Significant

*Table 4 shows the Comparison between Experimental and Control groups at Pre and Post Intervention for Ways of Coping Questionnaire WCQ.
Table 4 shows the Comparison between Experimental and Control group at Pre and Post assessment for Ways of Coping Questionnaire (WCQ). The significant differences were found between the groups on domains e.g. Confrontive Coping, Self-Controlling, Accepting Responsibility, Escape-Avoidance, and Planful Problem Solving.

The Pre assessment Mean and SD in the area of Confrontive Coping (8.33±1.211) and Post assessment Mean and SD (7.33±1.816) for experimental group. The Pre assessment Mean and SD (9.33±1.89) and Post assessment Mean and SD (10.00±2.666) for Control group in the area of Confrontive Coping. The Mean rank for Experimental group (8.67) and for Control group (4.33). The difference between Experimental group Pre & Post Mean (1.00), and for Control group it is (0.67). The U= 5.00 and Z =2.179 (P<0.05). The result of the present study suggest that IPRST is significantly helpful to improve the Confrontive coping ability of Experimental group individuals when compare to Control group.

In the area of Self-controlling Mean and SD for experimental group pre assessment is (8.16±3.816) and post assessment (17.83±3.060). Mean and SD of Control Group pre assessment is (6.66±4.633) and post assessment (9.33±3.326). The difference between Pre & Post Mean for experimental group is (9.67), and for Control group it is (2.67). The Mean rank is 4.00 Experimental group and for Control group is 9.00. The U=3.00, the Z= 2.423 (p<0.01). The result of the present study suggest that Interpersonal and Social Rhythm Therapy is significantly helpful to improve the Self controlling coping ability in experimental group individuals when compare to Control group.

The Mean and SD for pre assessment of Experimental group (8.00±3.464) and post assessment (16.16±1.722) in the area of Planful Problem Solving. However, pre assessment Mean and SD (6.66±3.502) and post assessment (8.33±2.875) for control group for the same area. Differences between Pre & Post Mean of experimental group is (8.16) and for control group it is (1.67). The Mean rank for experimental group (4.00) and for Control group (9.00). The U= 3.00, Z=2.419 (p< 0.01). The result of the present study also suggested Interpersonal and Social Rhythm Therapy is significantly improved the Planful Problem Solving ability in Experimental group individuals when compare to Control group.

**DISCUSSION**

The present study was conducted to evaluate the applicability of IPSRT to reducing the manic symptoms and improving coping ability among BPAD (manic episode) inpatients. The IPSRT is based on three components:- The instability model of bipolar disorder, theories regarding the functions of Social and environmental cues in promoting Circadian rhythm integrity, and the principles of Interpersonal psychotherapy.

In the study it was found that experimental group individuals significantly differences to reducing manic symptoms and improvement on them coping ability on experimental group who received IPSRT with treatment as usual compare to control group who were on treatment as usual and not given any other additional psychological intervention. There significant differences were found between
both groups on their pre and post assessment with on YMRS and WCQ and WCQ’s areas were found on Confrontive Coping, Self-Controlling, Accepting Responsibility, Escape-Avoidance, and Planful Problem Solving.

Result of the present study comparison between experimental and control group at pre and post assessment for YMRS (Table-3), suggest that intervention was significantly helpful to reduce the manic symptoms of experimental group individuals when compared to control group, as it is apparent from the mean difference of both groups present. The mean of the experimental group (after Intervention) was 37.83±5.38 to 10.66±2.58 in comparison to the control group, who were on treatment as usual and not given any other additional psychological intervention. Their baseline mean was 40.33±1.63 and completion of the study mean was 31.17±4.915. Here in control group the gain of improvement was only 9.17 in control group. The findings of the present study are in accordance with the study of Hlastala et al. (2010), the Interpersonal and Social Rhythm Therapy is an empirically supported adjunctive psychotherapy for people with bipolar disorder. The Interpersonal and Social Rhythm Therapy model focuses on three inter-related pathways to symptoms exacerbation and/or relapse in bipolar patients. This theoretical model focuses on medication non-adherence, disruption to the circadian systems (through sleep and social routing), and psychosocial stressors. Thus Interpersonal and Social Rhythm Therapy (IPSRT), attempts to intervene to each pathway to improve outcomes for bipolar patients. This is apparent from the result of present study which suggests the significant distortion in manic symptoms of the present study sample.

For WCQ’s area of Confrontive Coping Mean and SD of pre assessment for experimental group (8.33±1.211) and post assessment (7.33±.816), however, Mean and SD of pre assessment (9.33±1.89) and post assessment (10.00±2.366) for control group. The difference between pre-post mean experimental group was 1.00, and for control group it was 0.67. The Mean rank for experimental group was (8.67), control group (4.33). The result suggest that intervention was significantly helpful to improve the Confrontive coping ability of experimental group individuals when compare to Control group.

On Self-Controlling the Mean and SD of pre assessment for experimental group is (8.16±3.816) and post assessment (17.83±3.060). However, Mean & SD for pre assessment (6.66±4.633) and post assessment (9.33±3.326) for Control Group. The difference between Pre & Post Mean for experimental group is 9.67, and for Control group it is 2.67. The result of the present study suggest that intervention was significantly helpful to improve the coping ability of Self controlling of Experimental group individuals when compare to Control group.

In the area of Accepting Responsibility Pre assessment Mean and SD of experimental group (7.16±2.639) and post assessment (10.16±1.169). Hence, control group Mean and SD of pre assessment (3.50±1.3780) and post assessment (2.66±1.0320). The difference between mean of experimental group is 3.00, and for Control group it is 0.84.

Escape Avoidance Mean and SD (Pre assessment) of Experimental group (9.50±3.391) and Post assessment it is (17.33±4.033). For the same area Mean and SD for control group pre assessment (16.33±4.226) and post assessment it is (15.00±5.403). The difference between Experimental group (Pre & Post Mean) was 7.83, and for Control group it is 1.33. The result of the present study suggest that intervention was significantly helpful to improve the coping ability of Escape Avoidance of Experimental group individuals when compare to Control group.

Planful Problem Solving area’s pre assessment Mean and SD of Experimental group is (8.00±3.464) and Post assessment is (16.16±1.722). Control group pre assessment Mean and SD (6.66±3.502) and Post assessment (8.33±2.875). The difference between Experimental group (Pre & Post Mean) was 8.16 and for Control group (Pre & Post) 1.67. The result of the present study suggest that intervention was significantly helpful to improve the coping ability of Planful Problem Solving of Experimental group individuals when compare to Control group.

As coping responses have the capacity to distinctly influence the illness course in affective disorders, they form targets for psychological intervention. Beneficial effects have been reported for interventions incorporating adaptive coping in bipolar disorder. Coping style differences were observed between bipolar sub-types. Further consideration of such differentiating characteristics.
should serve to direct the focus towards specific targets for clinical intervention, reflecting nuances integral to the differing conditions (Fletcher, Parker & Manicavasagar, 2013). The findings of the present study also suggest in similar line with also indicates the significant improvement of coping ability areas in the persons who received Interpersonal and Social Rhythm Therapy (IPSRT) in comparison to the persons who were on treatment as usual.

**CONCLUSION**

Findings of this study reveal that the techniques incorporated into the Interpersonal and Social Rhythm Therapy program the provided a structured way of analyzing and managing the interpersonal, social, occupational, global functioning and life stressors problems. They also supply the information that the treatment of Bipolar Affective Disorder, Mania cannot be complete without the multi-model approach. However, the study has certain limitation. The sample size was small due to parametric tests for analysis was not done. There duration of the intervention was very less. Only male patients were selected which limits to its generalization for female group. Further research is required on larger sample using various groups of Bipolar Affective Disorder patients.

**Conflict of Interest:** None

**Financial Support:** Nil

**REFERENCES**


INTRODUCTION
The present era, characterized by a rapid increase in the rate of medical and social development, research on stress and adaption to change assumes particular importance in health and disease. Every disease cause a certain amount of stress, since it impose demands for adaptation upon organism, stress play some role in the development of every disease; effort for better or worse are added to the specific change in characteristic of the disease (Selye, 1983). Although, decades of research have found negative consequences of HIV/AIDS (King, 1993; Safren et al., 2003; Israelski et al., 2007; Leserman, 2008; Rzeszutek et al., 2012, 2015). The degree of perceived support and the need for support, displayed in the intensity of support seeking, can also facilitate the use of more adaptive stress coping strategies (Tedeschi & Calhoun, 2004). Poor social support and other factors have been associated with greater emotional stress (Folkman & Chesney et al., 1992; Krikorian & Kay et al., 1995; Vosvick & Gore et al., 2002; Vosvick & Gore et al., 2004). Stress, negative emotions, and social isolation influence the pace at which the disease progress (Cohen & Herbert, 1996). A number of psychosocial factors influence the course of HIV infection and AIDS (Straub, 2002). Social Support is also a factor in the progression of HIV sickness and AIDS. Lack of social support may increase the possibility of exacerbation of symptoms of AIDS more rapidly (Straub, 2002). However, studies have found, men with AIDS, particularly those with lowest levels of satisfaction with their social network, showed markedly higher level of depression (Straub, 2002). Another study showed the role of social support with HIV positive women received extensive

Research Article
Stress and Perceived Social Support among Asymptomatic, Symptomatic Persons Living with HIV/AIDS
Vijendra Nath Pathak¹*, and Priyanka Singh²

ABSTRACT
Stress, negative emotions, and social isolation influence the pace at which the asymptomatic, symptomatic (HIV positive) and AIDS living progresses. However, social support is related consistently to positive indicators of psychological well-being. Two hundred forty (240) diagnosed HIV patients: 80 asymptomatic, 80 symptomatic (HIV positive) and 80 AIDS (with 40 male and 40 female in each group) served as respondents to highlight stress and perceived social support among the groups. The age of the respondents ranged between 25 to 40 years. The psychometrically standardized questionnaires of Singh’s Personal Stress Source Inventory (Singh, 2004) and P.G.I. Social Support Questionnaire (Verma et al., 1998) were employed to meet the objectives. Preliminary analysis revealed more proportion of asymptotic patients in the lower age group, followed by middle age group, and least in the higher age group. Converse trend emerged in the AIDS respondents. Men and women in the three main groups of respondents (asymptomatic, symptomatic and AIDS patients) emerged to be more or less equal on stress and social support measures, and that the relationships between stress and social support measures among the three main groups emerged to be negligible. One-Way ANOVA revealed significant ‘between – groups’ effects on stress and social support measures. Post hoc mean comparisons revealed indicated significantly higher stress scores in AIDS than in symptomatic patients, and both the groups indicated significantly higher scores than in asymptomatic patients. Moreover, asymptomatic patients revealed significantly higher social support scores than in symptomatic patients, and both the groups indicated significantly higher social support than in AIDS. These findings indicate that studies related to HIV/AIDS patients should focus on stress reduction (and management) and to promote social support, which in turn, would not only help such patients but would go a long way in maintaining the quality of life and well-being of people living with various chronic illnesses.

Keywords: Stress, Perceived Social Support, Asymptomatic, Symptomatic & AIDS, PLHA.
clinical and anecdotal attention (Bor, Miller, Goldman, & Scher, 1993; Boyd- Franklin, Steiner, & Boland, 1995). However, more research is needed to examine the protective role of social support with HIV positive women. How families react to the stress of having an HIV positive family member may influence the psychological, emotional, and behavioural adjustment of HIV infected women. In general, the clinical and research literature suggests that several family interaction patterns influence how persons with HIV cope with stressful events (Hobfoll & Spielberger, 1992) and how family attempts to resolve conflict is considered to influence how family members cope with the stress associated with HIV/AIDS (McCubbin & Patterson, 1982; Hobfoll & Spielberger, 1992). Studies found that social support is associated with lower levels of negative affect and higher levels of positive affect among people with HIV/AIDS (Turner-Cobb et al., 2002; Remien et al., 2006; Simoni, Frick, & Huang, 2006). Studies have found that life stress is a common experience among persons living with HIV/AIDS (Catz, Gore, & McClure, 2002; Leserman, 2003; Siegel, Schrimshaw, & Pretter, 2005). The importance of social support in the psychological adjustment to living with HIV/AIDS is well documented (Hays, Turner, & Coates, 1992; Kelly & Murphy et al., 1993; Nott, Vedhara, & Power, 1995; Ingram, Jones, Fass, Neidig, & Song, 1999; Schrimshaw, 2002). Instead, mental health outcomes appear to be consequences of a complex interface between HIV sero status and other risk factors, including levels of HIV related symptomatology, lack of social support and self-image (McClure, Catz, Prejean, Brantley, & Jones, 1996; Dickey et al., 1999; Vosvick et al., 2004). Receiving needed social support is related consistently to positive indicators of psychological well-being (Hays, et al., 1990; Ingram et al., 1999).

Research more specifically focused on AIDS has demonstrated that more stress and less social support may accelerate the course of HIV or AIDS disease progression (Leserman et al., 1999).

Receiving positive social support may contribute to their well-being. Ross et al. (2009) evaluated the prevalence of major depression in women with HIV infection was higher in the symptomatic group than in the asymptomatic group. HIV+ve women of color, the family is not always supportive, and the women’s fears of rejection are often based on the real statements and behaviours of family members (Amaro, 1990; Minkoff & DeHovitz, 1991).

Modern research on stress began with Walter Cannon’s description of the fight – or – flight reaction. Everyone deals with a certain amount of stress every day. But if you are an HIV+ve men and woman, stress can become overwhelming. Prolonged and excessive stress can depress your immune system and become the underlying cause of physical and emotional illnesses. Numerous studies have shown that stress can accelerate the progression of HIV.

In the light of the given literature, the objective of this research work was to investigate the stress and perceived social support among asymptomatic, symptomatic and AIDS patients from eastern U.P. in general and specifically the analysis of the impact of certain personal variables e.g., age and educational qualifications on stress and perceived social support among asymptomatic, symptomatic and AIDS patients investigated.

METHOD

A cross-sectional study conducted in the eastern U.P, India. Based on the results of previous researches across cultures and ethnic groups, factors investigated for their association with stress and perceived social support among asymptomatic, symptomatic and AIDS patients in India (age and education investigated).

Sample:

Two hundred and forty (240) HIV diagnosed patients: 80 asymptomatic, 80 symptomatic and 80 AIDS (with 40 male and 40 female in each group) were sampled from selected from hospitals and community care centers of Eastern Uttar Pradesh by employing purposive sampling technique. The age of respondents ranged between 25 to 40 years.

Inclusion Criteria:

- The diagnosed patients suffering from AIDS (both asymptomatic and symptomatic) whose CD4 was above 280, between the age range of 25 to 40 years, having minimum primary level education were selected for the present study.

Exclusion Criteria:

- Patients with a history of comorbid psychiatric problem, any other opportunistic infection except HIV/AIDS and above the age 40 years and less than 20 years, below the primary level education were excluded.
from the sample.

Tools:

Data was collected by using following tools.

1. **The Singh's Personal Stress Source Inventory** (Singh, A. K., 2004):

   The test consists of 35 items with three response categories: (i) Seldom, (ii) Sometimes (iii) Frequently; respectively scored as 1 (lowest stress), 2 (moderate stress), and 3 (highest stress). The reliability coefficient is reported to be high (0.79; Singh, 2004).


   This scale consists of 18 items with four response choices (full agreement to full disagreement). The reliability coefficient is reported to be highly significant and satisfactory (r=0.59).

Procedure:

Permission to administer the questionnaires was gained from community care centre and NGO committee. Consent was first sought from the eligible Asymptomatic, Symptomatic and persons suffering from AIDS. The participants were completely voluntary and anonymous. Participants were informed that all participation was voluntary, and the patients were assured that the information provided by them shall be kept confidentially and that they may withdraw from the study at any point of time. The distribution of questionnaires was held at the location of participants’ choice at their residence; community care centre or NGO’s clinics/centre.

Data Analysis:

Data was obtained, coded and analysed with descriptive statistical procedures. Baselines of age, gender and educational qualification is reported in Table-1. The relationships between stress and perceived social support scores for asymptomatic, symptomatic and persons suffering from AIDS were determined by using the Pearson correlation coefficient. ‘Gender’ (men and women) difference in the three main groups (asymptomatic, symptomatic and AIDS patients) were highlighted by applying ‘t’ test, and finally, One Way ANOVA and post hoc mean comparisons was applied for the patterns of mean differences on stress and perceived social support scores among the three groups (asymptomatic, symptomatic and AIDS patients). Statistical significance was defined as p < 0.05.

RESULTS

Table -1 ‘age groups’ shows (i) (61.2 %) asymptomatic, (13.8 %) symptomatic and (8.8 %) AIDS patients found to be in the age group 25-30 (ii). (36.2 %) asymptomatic, symptomatic (52.5 %) and AIDS patients (37.5 %) found to be in the age group 31-35 and (iii). (2.5 %) asymptomatic, symptomatic (33.8 %) and AIDS patients (53.8 %) found to be in the age group 36-40. Chi square was highly significant on age groups in the level of patients. ‘Education qualification’ shows (i). (5.0 %) asymptomatic (13.8 %), symptomatic and AIDS patients (18.8 %) found to be in the up to primary education (ii). (18.8 %) asymptomatic (36.2 %) symptomatic, and AIDS patients (55 %) found to be in the 6th to 10th level of education, (iii). (33.8 %) asymptomatic, (23.8%) symptomatic, and AIDS patients (22.5 %) found to be in the higher secondary level and (iv). (42.5 %) asymptomatic (26.2 %) symptomatic and AIDS patients (3.8 %) found to be in the graduation and above. The significant difference was found on the educational group of the patients. Preliminary analysis revealed more proportion of asymptomatic patients in the lower age group, followed by middle age group and least in the higher age group. Converse trend emerged in the AIDS respondents. The relationships between perceived stress and social support measures emerged to be negligible across the groups (asymptomatic, symptomatic and AIDS).

Table -1: Distribution of Patients According to Age and Educational Qualification

<table>
<thead>
<tr>
<th>Age Groups</th>
<th>Asymptomatic N (%)</th>
<th>Symptomatic N (%)</th>
<th>AIDS N (%)</th>
<th>N</th>
<th>Chi – Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-29 years</td>
<td>49 (61.2)</td>
<td>11 (13.8)</td>
<td>7 (8.8)</td>
<td>67</td>
<td>86.81*</td>
</tr>
<tr>
<td>30-34 years</td>
<td>29 (36.2)</td>
<td>42 (52.5)</td>
<td>30 (37.5)</td>
<td>101</td>
<td></td>
</tr>
<tr>
<td>35-40 years</td>
<td>2 (2.5)</td>
<td>27 (33.8)</td>
<td>43 (53.8)</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up to Primary</td>
<td>4 (5.0)</td>
<td>11 (13.8)</td>
<td>15 (18.8)</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>6-10</td>
<td>15 (18.8)</td>
<td>29 (36.2)</td>
<td>44 (55)</td>
<td>88</td>
<td>47.89*</td>
</tr>
<tr>
<td>Higher Secondary</td>
<td>27 (33.8)</td>
<td>19 (23.8)</td>
<td>18 (22.5)</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>Graduation &amp; Above</td>
<td>34 (42.5)</td>
<td>21 (26.2)</td>
<td>3 (3.8)</td>
<td>58</td>
<td></td>
</tr>
</tbody>
</table>

* p>0.01

Vijendra et al.,...... / Stress And Perceived Social Support Among Asymptomatic, Symptomatic ......
The study aimed to assess perceived stress and perceived social support among asymptomatic, symptomatic and AIDS patients. Under each of the three groups of respondents, equal proportion respondents of either gender (40 men & 40 women) were included as an ancillary variable in an effort to highlight ‘gender’ (men versus women) difference, if any, on measures of the dependent variables (stress and social support). The mean and SD values for the six groups: (asymptomatic, symptomatic and AIDS patients) X^2 ‘gender’ (male versus female) on stress and social support measures are shown in Table 2. The ‘gender’ (male versus female) difference within the three main groups of respondents (asymptomatic, symptomatic and AIDS patients) was highlighted by applying ‘t’ test. Results revealed non–significant ‘gender’ (male versus female) difference on stress and perceived social support measures, except for the lone instance of ‘gender’ (male versus female) difference (out of six comparisons) in AIDS patients on perceived stress measure; wherein male indicated higher stress (M = 87.95) scores as compared to female (M = 84.67).

Table 2: Mean and SD Values for the Six Groups: (Asymptomatic, Symptomatic and AIDS Patients) X^2 ‘Gender’ (Male Versus Female) on Stress And Social Support Measures

<table>
<thead>
<tr>
<th>Groups</th>
<th>Asymptomatic</th>
<th>Symptomatic</th>
<th>AIDS</th>
<th>Stress</th>
<th>Social Support</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male N=40</td>
<td>Female N=40</td>
<td>Male N=40</td>
<td>Female N=40</td>
<td>Mean =80</td>
</tr>
<tr>
<td></td>
<td>M±SD 64.82±4.11</td>
<td>M±SD 63.90±3.68</td>
<td>M±SD 77.80±11.05</td>
<td>M±SD 76.30±7.54</td>
<td>1.05</td>
</tr>
<tr>
<td>Total</td>
<td>N = 80 M±SD 30.86±3.64</td>
<td>M±SD 77.05±9.43</td>
<td></td>
<td>0.70</td>
<td>NS</td>
</tr>
<tr>
<td>Social</td>
<td>Male N=40</td>
<td>Female N=40</td>
<td>Male N=40</td>
<td>Female N=40</td>
<td>Mean =80</td>
</tr>
<tr>
<td></td>
<td>M±SD 31.67±2.40</td>
<td>M±SD 30.05±4.45</td>
<td>M±SD 28.67±5.34</td>
<td>M±SD 28.02±4.30</td>
<td>28.35</td>
</tr>
<tr>
<td>Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Following these observations, ‘gender’ variable was pooled under the three main groups of respondents (asymptomatic, symptomatic and AIDS patients). The mean and SD values for the three groups (asymptomatic, symptomatic and AIDS patients) on stress and perceived social support measures are shown in Table 3. Between groups difference was attempted by way of applying One - Way Analysis of variance (Table-1). Results revealed significant ‘between – groups’ effects on stress (F = 223.79, df = 2,237 p =0.00) and social support (F = 20.92, df =2,237 p =0.003) measures.

Table 3: Mean and SD Values for the Three Groups (Asymptomatic, Symptomatic and AIDS Patients) on Stress and Perceived Social Support Measures

<table>
<thead>
<tr>
<th>Groups</th>
<th>Stress</th>
<th>Social Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asymptomatic N-80</td>
<td>64.36±3.91</td>
<td>30.86±3.65</td>
</tr>
<tr>
<td>Symptomatic N-80</td>
<td>77.05±9.44</td>
<td>28.35±4.83</td>
</tr>
<tr>
<td>AIDS</td>
<td>86.31±5.09</td>
<td>26.70±3.71</td>
</tr>
</tbody>
</table>

df = 2,237

F = 223.79, **

p = 0.001

F = 20.92, **

p = 0.003

The patterns of mean difference on stress and social support measures are shown in Table 4.

Table 4: Tucky’s Test Showing the Patterns of Mean Differences in Significant ‘Groups’ Effect on Perceived Stress and Perceived Social Support

<table>
<thead>
<tr>
<th>Measures</th>
<th>Groups</th>
<th>Mean</th>
<th>Asymptomatic</th>
<th>Symptomatic</th>
<th>AIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>Asymptomatic</td>
<td>64.36</td>
<td>X</td>
<td>12.69*</td>
<td>21.95*</td>
</tr>
<tr>
<td></td>
<td>Symptomatic</td>
<td>77.05</td>
<td>-</td>
<td>X</td>
<td>9.26*</td>
</tr>
<tr>
<td>Social Support</td>
<td>Asymptomatic</td>
<td>30.86</td>
<td>X</td>
<td>2.51*</td>
<td>4.16*</td>
</tr>
<tr>
<td></td>
<td>Symptomatic</td>
<td>28.35</td>
<td>X</td>
<td>1.65*</td>
<td></td>
</tr>
</tbody>
</table>

AIDS patients indicated significantly higher stress scores (M=86.31) than in symptomatic (M=77.05) patients, and both groups indicated significantly higher along score than in asymptomatic (M=64.36). Asymptomatic patients revealed significantly higher social support (M=30.86) than in symptomatic patients (M=28.35), and both the groups indicated significantly higher social support then in AIDS (M = 26.70).

DISCUSSION

In the present study, preliminary analysis revealed more proportion of asymptomatic patients in the lower age group, followed by middle age group, and least in the higher age group. Converse trend emerged in the AIDS respondents. Previous study showed that HIV infections are spreading most quickly within youth populations aged 15–24.
are living with HIV/AIDS, (Hargreaves et al., 2002; De Walque, 2002; & UNAIDS, 2003). Educational qualifications were more proportion of asymptomatic patients in the up to primary, followed by 6 to 10, higher secondary, and least in the graduation and above. Some previous study support, that uneducated young people are less likely to understand the information regarding HIV/AIDS education provided and less confident in accessing services and discussing in open and free manner about HIV epidemic (Global Campaign for Education report, 2004, Blane, 2000, World Bank, 2002). Findings revealed that ‘gender’ (male versus female) difference was not significant in the three main groups (asymptomatic, symptomatic and AIDS patients), except for the lone instance of ‘gender’ difference (out of six comparisons), wherein men indicated higher stress scores as compared to women in AIDS patients on perceived stress measure. One - Way ANOVA and post hoc mean comparisons revealed that AIDS patients indicated significantly higher stress scores than in symptomatic patients, and both groups indicated significantly higher stress scores than in asymptomatic. Furthermore, asymptomatic patients manifested significantly more social support than in symptomatic patients, and both the groups indicated significantly more social support than in AIDS patients. These observations find corroborative evidences from literature. Studies reveal that life stress is a common experience among persons living with HIV/AIDS (Catz, Felton, & McClure, 2002; Leserman, 2003; Siegel, Schrimshaw, & Pretter, 2005). The social stigma attached to HIV or AIDS often demands more about obtaining needed health care and support services (Campbell, 1999) as also such secrecy may increase their social isolation and affect their health (Cole, Kemeny, Taylor, Visscher, & Fakey, 1996). Poor social support and other factors are observed to be associated with greater emotional stress (Folkman & Chesney et al., 1992; Krikorian & Kay et al., 1995; Vosvick & Gore-Felton et al., 2002; Vosvick & Gore-Felton et al., 2004). The importance of social support in the psychological adjustment to living with HIV/AIDS is well documented (Hays, Turner, & Coates, 1992; Kelly & Murphy et al., 1993; Nott, Vedhara, & Power, 1995; Siegel, Karus, & Raveis, 1997; Ingram, Jones, Fass, Neidig, & Song, 1999; Schrimshaw, 2002). In the general population, there is substantial empirical evidence that stress and poor relationships affect peoples’ adaptive functioning and negative health outcome (Row, 1996; Sherbourne, Hays & Wells, 1995; Taylor, Repetti & Seman, 1997). Ross et al. (2009) evaluated the prevalence of major depression in women with HIV infection. Higher depression was observed in symptomatic group than in the asymptomatic group. Studies report that social support is associated with lower levels of negative affect and higher levels of positive affect among people with HIV/AIDS (Lackner, Joseph, Ostrow, & Eshleman, 1993; Turner-Cobb et al., 2002; Remien et al., 2006; Simoni,Frick, & Huang, 2006).

CONCLUSION

In the current study, no ‘gender’ (male versus female) difference could be observed in the three main groups (asymptotic, symptomatic and AIDS patients) of respondents. AIDS patients indicated significantly higher stress scores than in symptomatic patients, and both groups indicated significantly higher stress scores than in asymptomatic and that of asymptotic patients manifested significantly more social support than symptomatic patients, and both the groups indicated significantly more social support than in AIDS patients. These findings indicate that studies related to HIV/AIDS patients should also focus on stress reduction (and management) and to promote social support, which in turn, would not only help such patients but would go a long way in maintaining the quality of life and well-being of people living with various chronic illnesses.

IMPLICATIONS

The magnitude of burden imposed by HIV/AIDS highlights the need for more effective management of this distressing condition in a country like India where a few decades earlier joint family system was prevalent in the form of a strong social support network which was good means of stress management. Findings of this research would be highly beneficial for the clinical psychologists, pain specialist, counsellor and medical health professionals for effective management of HIV/AIDS patients.
LIMITATIONS

Every research has its own limitations. In the context of the present study, following limitations have been identified by the researcher.

1. More socio-economic and demographic variables may add significantly to get rich inputs.
2. Larger sample size representing different geographical areas may strengthen the validity of the present findings.

Conflict of Interest: None
Financial Support: Nil

REFERENCES


Vijendra et al.,...... / Stress And Perceived Social Support Among Asymptomatic, Symptomatic.....


Impact of Socio-Demographic Factors on Self-Esteem among College Students of Jammu Province.

Piyali Arora¹

ABSTRACT

Self-esteem is the inner belief about self. It is the overall opinion and value of a person. Developing good self-esteem involves self-respect, self-acceptance and an appreciation of self-worth that help individual to fight challenges under any adverse situation. State of Jammu and Kashmir, situated in extreme northern part of India amidst nature’s bountiful beauty is threatened by prevailing cross-border sponsored terrorism and complex political scenario that create psychological challenge to civilian and as well as the youth population. Youth suffer more as there is constant perception of scarcity of job and low self-entrepreneurship opportunity. The educated youth have lot of doubt regarding their future and how to face the competitive world outside. Thus, the aim of the study is to analyse the level of self-esteem among the college students studying in Jammu province. The study used descriptive research design and purposive sampling method on 100 boys and 100 girls student from various degree college of Jammu province (Jammu and Kashmir state). Semi structured socio-demographic scale was constructed to assess socio-demographic parameters. The students’ level of self-esteem was assessed by using a 10-item scale developed by Rosenberg (1965). The statistical analysis was done on the data using SPSS 16.0. The level of significance was fixed at 0.005 (p<0.05). Significant low self-esteem is revealed among students under various socio-demographic parameters.

Keywords: Self-esteem, Self-worth, Youth, College Students, Stress

INTRODUCTION

Self-esteem is crucial and is a cornerstone of a positive attitude towards living. It plays an important role in every human life because it affects how an individual think, act, and even how the individual relates to other people (Perera, 2007). Rosenberg (1965) pioneer researcher in this field addressed that individual with high self-esteem are those who considers themselves worthy, but not egotism. On the other hand those with low self-esteem signify self-rejection, self-dissatisfaction, and self-contempt Self-esteem has been defined in terms of worthiness and competence. Further, it is described, self-esteem as the general value that an individual place for himself.

College is the time when most students are developing their sense of identity and independence. They feel capable to take decisions like adults and develop sense of right judgment. Students try to find things out about themselves and also try to find out what college life is all about. In addition to all of this, students make friends and want to be "accepted" by peers. This is the time when self-esteem become important. Self-esteem is a central concept that is related to academic achievement, social functioning and psychopathology of children and adolescents. Studies indicated that children with low self-esteem are less successful at school, less accepted by their peer and related to child psychopathology, including anxiety, depression and eating pathology (Tajeddini, 2014)

The educated youth of today are exposed to a considerable amount of stress, that include internal and external pressures exerted by the environment to thrive and succeed economic hardships, worries about vague futures, societal problems, opportunities, etc. The youth population in the state of Jammu & Kashmir experiences vague apprehension for future and feel deprived as this state is in constant turmoil.
of terrorism and disturbed political scenario. This worrying situation led to study on the topic of self-esteem, because it is believed that low self-esteem affects all facets of an individual life.

**METHODOLOGY**

**Sample:**
The study was conducted on 200 undergraduate students studying Bachelor of Arts, Bachelor of Science and Bachelor of Commerce courses from recognized Government Degree Colleges of Jammu, India, all belonging to Jammu province. Student age ranged between 18-20 years.

**STUDY TOOLS**

**Socio-Demographic Questionnaire:**
A semi-structured socio-demographic questionnaire was used to obtain background information from the participants. It was comprised of questions pertaining to students' age, gender, locality, religion and family income.

**The Rosenberg Self-Esteem Scale (RSES; Rosenberg 1965):**
Student's self-esteem was measured by Rosenberg Self-Esteem Scale. It has five positive descriptions and five negative descriptions. The Rosenberg Self-esteem Scale was rated on a 4 point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). The researcher reverse scored five items that were negative in nature so that higher scores would indicate higher level of self-esteem. The scale ranges from 0-30. Scores between 15 and 25 are within normal range; scores below 15 suggest low self-esteem.

**Statistical Analysis:**
The data obtained was analyzed using Statistical Package for the Social Sciences (SPSS) version 16.0 for Windows (SPSS Inc., Chicago). The group differences was examined using Chi-square test ($\chi^2$) for the categorical variables and independent ‘t’ test used for the continuous variables.

**RESULTS**
Scores obtained on various measures presented in result section. Table 1 shows the distribution of the respondents on various socio-demographic parameters.

---

**Table 1: Comparison of Socio-demographic Characteristics of Undergraduate Students.**

<table>
<thead>
<tr>
<th>Study variables</th>
<th>Undergraduate students (n=200)</th>
<th>$\chi^2$</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, Mean (SD)</td>
<td>19.18±0.85)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>97±48.5)</td>
<td>32.34</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Female</td>
<td>103±51.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domicile (% )</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>61±30.5)</td>
<td>4.78</td>
<td>.029</td>
</tr>
<tr>
<td>Urban</td>
<td>139±69.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Border Village Areas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doda</td>
<td>14±22.9)</td>
<td>47.34</td>
<td>.056</td>
</tr>
<tr>
<td>Poonch</td>
<td>15±24.6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R.S. Pura</td>
<td>21±34.42)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Samba</td>
<td>2±3.27)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kathua</td>
<td>9±14.7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religion, Mean (SD)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hindu</td>
<td>57±28.5)</td>
<td>32.202</td>
<td>.865</td>
</tr>
<tr>
<td>Muslim</td>
<td>48±24)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sikh</td>
<td>41±20.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christian</td>
<td>16±8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>38±1.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;15,000/-</td>
<td>56±28)</td>
<td>7.89</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>&gt;15,000/-</td>
<td>144±72)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Among the total respondents, 48.5 % of them are male and 51.5 % are female. There was significant difference regarding catchment of students belonging to rural and urban region. Sixty nine percentage of students were from urban region and 30.5% from rural as the center of data collection was mainly from city colleges. Students belonging to rural region were mostly from border areas of Jammu which included students from Doda district 22.9%, Poonch district 24.6%, R. S. Pura district 34.42%, Samba district 3.27% and Kathua district 14.7%. Students were distributed among all religion, there was no significant difference between the group. The distribution of the respondents by their family income shows that among the total respondents, 72 % of respondents’ family income was more than 15,000 per month and 28 % earn less than 15,000 per month. This could possibly be because majority of the students were from urban locality where there is more scope of earning compared to periphery or rural region.
Table 2: Comparison of Self-Esteem of Students with Their Socio-Demographic Parameters

<table>
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<th>Study variables</th>
<th>Self esteem</th>
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<td>Gender, Mean (SD)</td>
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<tr>
<td>Male</td>
<td>15.12±5.27</td>
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<td>12.38±6.08</td>
<td>12.38±6.08</td>
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<tr>
<td>Religion, Mean (SD)</td>
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<tr>
<td>Hindu</td>
<td>17.55±6.02</td>
<td>17.47±4.46</td>
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<td>20.48±5.21</td>
<td>18.42±5.88</td>
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<tr>
<td>Sikh</td>
<td>18.42±5.88</td>
<td>18.01±3.43</td>
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<tr>
<td>Christian</td>
<td>18.42±5.88</td>
<td>18.01±3.43</td>
<td></td>
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<td>Others</td>
<td>18.01±3.43</td>
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<td>Domicile, Mean (SD)</td>
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<td>4.73</td>
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<td>Urban</td>
<td>17.38±4.23</td>
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<td>Border Village Areas, Mean (SD)</td>
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<tr>
<td>Doda</td>
<td>17.55±6.02</td>
<td>18.29±7.24</td>
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<td>Poonch</td>
<td>15.48±5.21</td>
<td>19.35±4.38</td>
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<tr>
<td>R.S Pura</td>
<td>19.35±4.38</td>
<td>17.95±6.22</td>
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<tr>
<td>Samba</td>
<td>17.95±6.22</td>
<td>17.95±6.22</td>
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<tr>
<td>Kathua</td>
<td>17.95±6.22</td>
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<tr>
<td>Family Income, Mean (SD)</td>
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<td>&lt;15,000/-</td>
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<td>&gt;15,000/-</td>
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Table 2, showed comparison of self-esteem of students with their socio-demographic parameters. Self-esteem of female students were significantly low compared to male students with the p value <.001 level. There is significance difference in self-esteem in respect to with family income. The p value <.001 level reveals that students with lower family income has low self-esteem. Self-esteem of students from rural region was significantly low compared to students of urban domicile with the p value <.001 level.

**DISCUSSION**

The study testifies that the youth of Jammu and Kashmir experience low self-esteem under some of the socio-demographic conditions. Female experience low self-esteem compared to male which highlighted the status of women in the society even if they compete equally in educational qualification with male, they are still restricted in their belief system regarding their capability, curb their decision making ability to feel them inhibit to gain the confidence to compete in the patriarchal society.

The study result further indicated that youth in the rural areas especially in the border areas undergo lot of stress and develop low self-esteem due to feeling of insecurity. People who live in the border areas are the worst sufferers due to constant life threats of terrorism, cross border firing and shelling, lack of education facility, employment and good quality of life opportunities. People constantly fear war like situation which brings loss of security, unpredictability and the lack of structure in daily life.

The poor economic status also has contributed a lot to their low self-esteem as they have of cope up with bare minimum conditions of living. Socio-economic position has a clear impact on developing self-esteem, especially during the important stage of youth. At this period of life, the self-esteem of young people undergoes important changes, influenced not only by socio-economic status, but also by variety of other intrapersonal, interpersonal and socio-cultural determinants (Finkenauer, et al., 2002, Sood et al, 2013).

The educated youths of Jammu and Kashmir are the future of the State and it is their responsibility to play a role in its development. They have to rise up to build a wholesome personality in them. Government need to extend opportunities for the growth and development of the youth and need to come up with proposals for the working of their welfare and provide a secure future.

**REFERENCE**


INTRODUCTION

Art, literature, photography, motion pictures albeit diverse in nature, but all comes with a singular goal of providing entertainment to the individuals on the receiving end. Whether one looks at it through the connoisseur’s spyglass or that of the layman’s, it is guaranteed that some iota of thought will always be evoked by that piece of work. But what one fails to consider in most of the cases is that whatever be the issue dealt with there, it always provides insight into the nature of humankind and that of the human mind. Come to think of it, psychology is as much a part of such pieces of art as the eyes are to our body, the thoughts to our brain. Not that the layman’s point of view is always seeking psychological explanations of these works, but at times people do ponder upon the very root of such works, what thoughts might have led the creator into creating something. And more importantly upon the work itself. The pieces of art and creation are always imbied with shades of human nature. The very psychological shades that sets us apart from the fauna kingdom. Psychological interpretations are thus at times quite eye opening for us and helps us to enrich our cognitive frameworks, to add those extra shades of vibrancy that augments our experience and experiencing.

PSYCHOLOGY AND MINDHUNTER

The human psyche has a penchant for the cryptic; trying to see the unseen, know the unknown. Mystery feeds our brain like nothing else. And next to that comes the realm of criminality and crime-fighting. Human beings have always been enticed by the world of crime, the contrivances behind it, the gears that are put into motion by the convolutions of those psychopathic synapses. And trying to persevere with the winds of change, criminal and forensic psychology has also spread their wings afar. Since the McNaughton rules, people as well as the judicial system has progressively acknowledged the role of psychology behind the crimes. The recent Netflix Original Series MINDHUNTER brings to us an amalgamation of psychology and crime in an impeccable blend.

The significance of mental health or the lack thereof has been aptly put forward by MINDHUNTER. Rarely do we get to see a TV series that deals with this important facet that has been flouted time and again by others that focus mainly on the means and physical clues. They get engrossed with the maneuverings of ‘How’ so much that they forget to untangle the enmeshed entanglement of ‘What led to this’ or simply the ‘Why’. Mindhunter is based on the book of the same name by the authors John Douglas and Mark Olshaker who penned it to capture the essence of criminal profiling used to solve a string of murders in the 1970s USA, and the birth of the famous term ‘Serial Killer’. Mindhunter deals with the efforts of the two special agents of the Behavioural Science Department of the Federal Bureau of investigation (FBI) to create the definitive behaviour profiling procedure that would help the judicial system to root out crime from the society. As ambitious as it may sound, the agents, especially Special Agent Holden Ford, wears the project on his sleeve as he sloughs through the channels of bureaucracy, while dishing out his insights on the several cases from various police...
the modus operandi were to interview the perpetrators of some famous serial killings in order to get insight into the criminal cognizance. The eventual goal was to collate all the gathered data in order to successfully fathom the criminal psyche in an attempt to educate the society at large in identifying such traits so that they can be nipped in the bud. Agent Ford, and his partner Agent Bill Tench receive help from Dr. Wendy Carr, a professor out of Boston, who is hired by the FBI to run point on the whole project. Things doesn’t go so smooth as agent Ford starts improvising in his techniques way too much for the others to handle that in due course leads them into a very tricky position within the FBI bureaucracy. Trusts are broken and the fate of the project ultimately dangles, on the verge of tipping into the vast abyss of bureaucratic graves.

THE DYNAMICS IN MINDHUNTER

What’s stimulating with this new series is the way Psychology has been used and rendered for the mass to follow. The psychodynamic interplay has been beautifully etched across the screen as the inner conflicts of the characters play out one after the other. We begin with the character of Special Agent Holden Ford. He shows a personality which can only be subsumed as a dynamic playground of alexithymia and psychopathy on one hand and a moral righteousness on the other, fighting with each other with only an intent to kill. Although he is bent on analyzing most of the individuals that encroaches his circle of attention he pays little attention to his self when it is pointed out by those with him. He is ever ready to put himself in the killer’s shoes to think from his perspective and ad-lib his interrogation techniques, sometimes much to the discomposure of his associates and at times disconcerting to the interviewee too. In one particular instance he ends up being sued by a convict as he had supposedly gained control in the first place, albeit the scenario has far altered and the convict was actually had.

Bill Tench comes across as a character with fewest shades to play with. He is a lifer at FBI, experienced, and knows his way around the bureaucratic matters. He is a loving father, a dedicated husband and committed to his work. He shows an appropriate range of emotions and has a sense of loyalty to his department when in need. However, towards the end his character achieves some gray shades too as the Office of Professional Responsibility asserts his involvement in implicating Ford’s methods as not in accordance with FBI standards. Nevertheless, he speaks out the few golden words that sets the tone for the series when he questions “How do we get ahead of crazy if we don’t know how crazy thinks?”

Dr. Wendy Carr’s character is one that would reflect ethos of feminism in this series imbibed with erstwhile patriarchal undertones. Being a psychologist, she is an avid exponent of Freud’s principles and is not ashamed to explore her sexuality. Being in a lesbian relationship in the 70s America is quite a mettle for her. However, the vagaries of her character gets an interest-
ing although queer twist when she freaks out by finding ants in a can of tuna fish while she has otherwise no problem in surfing through photos of grisly dead bodies during the project work. Apart from these her black and white outlook on office politics and professional conduct in the gray area of crime and crime-fighting is equally remarkable and bordering on the lines of naivety at times.

Holistically speaking agents Ford, Tench and Professor Carr can be reflected as the pillars of Freud's triad of personality. Holden represents the narcissistic ID, running after indulgences that would otherwise solidify his own personal notions of superiority and the reverence he thinks he deserves for being right always. Agent Tench portrays the Reality principle or the EGO, aiming for an equilibrium between Holden's methods, the police work of the different states, as well as the methodology of assessment devised by Professor Carr. He shows the characteristics of being the EGO when he indulges Holden in improvising while interrogating, and also when he denies to accompany him to meet Brudos. Professor Carr perfectly fits the scenario as the SUPER-EGO, the guiding force of the project, keeping Holden and Tench in line with her well organized and ethically bound methodology.

SYMBOLS IN MINDHUNTER

Symbols have time and again provided a kaleidoscopic view on the quirks of life. The expressions of our everyday life can be considered as symbols aptly when they speak to us far more that what meets our eyes. Jung pointed out that “every psychological expression is a symbol if we assume that it states or signifies something more and other than itself which eludes our present knowledge” (“Definitions”, CW 6, Par. 817). The use of symbols has seen a rich history in humankind right from the ages of Da Vinci till the present day. Mindhunter aspires to be called ‘Psychological’ in the truest sense. It sticks to using the established norms of symbols while creating an aura of mystery to enthrall the viewers while moving in fits and starts towards the unfinished end. The poster itself sets the mood as it depicts a Rorschach card like inkblot spewing blotches of blood while placing a woman’s face, expressing what can be considered as the throes of pain, in between. This aptly brings out the plight of women in an era of patriarchy slowly giving way to the winds of change and the resentments of those who felt that they were losing ‘control’. Throughout the opening credit are shown stills of a female rotting corpse which further proves the point. The opening credits also illustrates someone (most likely Holden Ford) fiddling with a tape recorder. This might point to the act of dissection of the mind through the arts of conversation, thus justifying the title of the series. Conversation thus has been warranted as the most powerful tool for a psychologist to understand and explain crimes, to move through the uncharted waters ‘when motives become elusive’.

Mindhunter portrays the degradations of the society through the acts of a paraphilic killer who supposedly gets off by touching female shoes and in facts starts masturbating while holding a stiletto right in the middle of their conversation. Throughout the series the grayish overtone of the screen is reminiscent of the 50s film noir that portrayed the plights of the women and the need to reevaluate the social structure and cultural norms. In fact, in most of the episodes a man is shown, unrelated to the central narrative, casing people’s houses, moving about places, and gathering up the nerves to prepare the self for something to come. It can be speculated from his actions that he is a killer in the making, especially from the final scene of the final episode that puts him outside his house, burning page after page of artistic portrayal of dominating and torturing females. Sex as a symbol has been used in a varied way. From Holden’s perspective, sex has been shown to be an act of submission as he gives in to the caprices of his girlfriend. On the other hand, from the outlook of the killers, sex has been portrayed as an element of asserting dominance. One of the serial killers, Ed Kemper, asserts that his lack of control in the face of his dominating and punitive mother led him to harbor and indulge in necrophilia acts just to assert that repressed control, to finally feel that power. The way the four serial killers have been portrayed also begs attention. Ed Kemper is an organized individual in his life of crime, extremely narcissistic, to the point of calling himself an ‘extremely accomplished murderer’. Monte Rissell is brimming with mockery as he expounds girls as deserving to be killed thus justifying his own acts as a form of deliverance. Jerry Brudos appears to be the most jovial in disposition of the four killers interviewed. While he does display a hard edge in the beginning, he is quick to comply once his paraphilia is indulged. However, it is the character of Richard Speck that is bound to give one the chills. The acid mouth spewing profanities at an accelerated rate while confessing about his crimes as being just for crimes’ sake with no ulterior motives, provides us
with a textbook portrayal of Cleckley’s conception of psychopathy. His swift killing of a bird in episode 9 proves the point that violence can be unprovoked and unexpected from a psychopath.

ATTACHMENT ISSUES
The attachment system has not been overlooked while setting a scene for the emergence of the heinous acts of crime. In episode 4 a killer confesses that if his father would’ve been present for him during childhood then his life would’ve been rather different. This makes us ponder about the parental values that people follow and the lack of importance at times committed to it. Moreover, Agent Tench, who proclaims of having a lack of attachment towards his own father, is very skeptical while following a different path with respect to his behaviour towards his own adopted son. While he aspires to be different from his own father, he shuns away contact from his own son when the latter has difficulty opening up to him or reciprocating his affectionate advances. He eventually proclaims his adopted son to be ‘not much fun’. It can thus be aptly concluded that crimes that emanate as a result of these social scenarios can only be viewed as a defense mechanism of displacement against the aggression that accumulates in the individual’s unconscious due to faulty attachment patterns in childhood. A defense that when combined with the defense of acting out leads to the perpetration of crime in most cases.

MINDHUNTER: A WAKE-UP CALL TO THE WORLD FROM PSYCHOLOGY?
Mindhunter is an appealing yet unpleasant call to the society to wake up to the importance of accepting the role of Psychology behind the machinations of human behavior. “As an elevated, intellectual crime procedural, Mindhunter works quite well. It indulges a perhaps uniquely American fascination while also attempting to explain it, rescuing the series from simply being yet another leering bit of murder exploitation” (Lawson, 2017). Mindhunter simultaneously sends a social message to the masses to wake up to the call of the winds of change. The times are changing. We need to evaluate the social norms that border on the line of patriarchy. “Mindhunter becomes a window into the rot at the heart of the white American male. The series finds horror not by detailing the broken bodies of victims, but the banality of this misogyny and how easily it blooms” (Bastien, 2017). The Walls of Psychology are ever expanding as new bricks of insight are attached to it every passing moment. Although it may still be considered ‘for the backroom boys’ in most cases, it is no longer laughed upon. Gone are the times of dealing with the HOWs of the crime. It’s time to focus on the WHYs. Since prevention is always better than cure why not try the psychological pathway to that. Psychology has time and again been largely ignored, kept under the veils of obscurity. But it’s time to make a change, a time to outgrow our human banalities, a time to consider that the human mind is not just another brick in the wall. It has its own vagaries that requires due importance and evaluation. It is time to ask ourselves, have we grown up? Have we struck a chord between our conscious and the unconscious? Only then will we be able to advance as a society towards a Darwinian evolution. As “It is the face of his own evil shadow that grins at Western man from the other side of the Iron curtain.” (Jung, 1964).

Conflict of Interest:
We Have No Conflict of Interest To Declare

ACKNOWLEDGEMENTS:
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REFERENCES
Existentialism is a movement within philosophy that emerged in the late 19th and early 20th century in Europe and which became prominent in the post-world war era. The philosophy emphasized the role of the individual in defining one’s own existence and tackling the burden of freedom and choice in an irrational world. The broad category of existentialism includes many philosophers from differing backgrounds, who considered the nature of human condition as the core philosophical problem for study (Burnham & Papandreopoulos, 2011). In sum, existentialism is a philosophy of the value and meaning of human existence, and its roots can be traced back to three pioneers, Kierkegaard (1813-1855), Dostoevsky (1821-1881) and Nietzsche (1844-1900) (Panza & Gale, 2008). Kierkegaard wrote on the inherent absurdity of human existence and argued for the need of an irrational yet faithful commitment to the Christian life. Nietzsche’s historic Ubermensch represented individual freedom in inventing one’s own values and terms of life (Wrathall & Dreyfus, 2006). These early works inspired a generation of writers and philosophers in the 20th century who recognized themselves as existentialists, most notable of which were Martin Heidegger, Jean Paul Sartre, Albert Camus, Simone de Beauvoir, Martin Buber, Gabriel Marcel, etc.

The advent of Edmund Husserl’s (1859-1938) phenomenology led to the formulation of a concrete methodology for investigation into human existence and condition. It enabled existentialism to gain momentum and establish grounds within the field of psychology, particularly in psychotherapy. Existential psychotherapy was directly based in philosophy rather than psychology and grew alongside the humanistic school in the third force movement of the 1950-60s (Deurzen, 2010). Existential psychotherapy is not a specific and organized set of techniques or rules of therapy, but rather a set of principles that function as guidelines and meaning structures in defining the practice of therapy (Kim, 2001; Spinelli, 2006). In other words, existentialist therapists recognize the therapeutic relationship itself as the psychotherapy, which needs to be reinvented by every therapist with each new client (Deurzen, 2010; Oliveira, Sousa & Pires, 2012). Existential psychotherapy is based on the premise that inner conflict within an individual is caused due to the person’s confrontation with the ultimate questions of existence: death, freedom, isolation and meaningless (Yalom, 1980; May & Yalom, 1995, Kim, 2001; Zafirides, 2013). The anxiety inherent in facing one of the four concerns is one of the basic issues in existential psychotherapy, alongside taking responsibility for one’s own fate and actions. The therapist avoids the role of an expert but instead helps clients to reconstruct their way of being in the world by reflecting upon lived experiences and exploring the meaning of their choices (Oliveira, Sousa & Pires, 2012).

Irvin Yalom (1931-) is considered the most influential and opulent contributor to the field of existential psychotherapy, particularly for his book Existential Psychotherapy (1980), which served as guidelines for later existential therapists to follow. Other notable figures in the field were Viktor Frankl (1905-1997), Rollo May (1909-1994), Ludwig Binswanger (1881-1966), Medard Boss (1903-1990), etc all of whom developed their own theories of existential psychotherapy, in relative obscurity of each other (Zafirides, 2013). Although, they believed in similar principles of therapy based on existential philosophy, their ideas were mostly heterogeneous (Keshen, 2006). In any case, recognizing
oneself with existential psychotherapy requires acknowledging the question of “Which thinker/theorist needs to be considered?”. As existential psychotherapists tend to devalue any structured theory of therapy or manualization of techniques, there has been little interest in combining the ideas of various thinkers into a single conceptual framework of existential therapy. Thus, due to its inherent philosophy, existential psychotherapy has remained largely disorganized and discernible (Norcross, 1987; Spinelli, 2006). Even at present, existential psychotherapy exists as a collection of themes and remains on the fringes of mainstream psychotherapy with limited recognition.

In comparison to other fields within psychology and psychotherapy, the boundaries of existential psychotherapy are loosely defined. Although it is believed that existential therapy emanated from dissatisfaction with an overly reductionist and deterministic psychoanalytic theory of Freud, Norcross (1987) criticizes existential therapy of primarily defining itself against other therapies, often in negative and reactive ways, such that it lacks a concrete definition of its own (Zafirides, 2013). Unlike structured approaches such as cognitive and behaviour schools, existential psychotherapy embodies a way of thinking and a set of themes which can be integrated into other therapies (Smith, 2012). However, it doesn’t blend well in such pluralistic approach settings, as the mainstream techniques generally emphasize working towards a defined goal during therapy (Cooper, 2014). Thus, the existential stance doesn’t fit in too well in an eclectic orientation of therapy unless the existential worldview is held lightly. However, existential principles have been borrowed in the formation of other therapy techniques, particularly in the person centered approach of the humanistic school and gestalt approaches as well (Deurzen, 2010). Existential therapy is also widely recognized as somewhat synonymous to humanistic therapy. Although they share some central themes and principles, they are very different from each other. Humanistic therapy focuses on human potential whereas existential therapy focuses on reality and conditions of existence.

Existential psychotherapy also opposes the disease or illness model characteristic in modern psychopathology. According to existential therapists, diagnosis and treatment is primarily dependent upon patients’ subjective and embedded experience such that objective manuals such as DSM are largely irrelevant (Trotter, 2014). They are also mindful of the difference between circumstances for understanding and theories of cause and effect (formulation) such that they remain skeptical of simplistic etiologies of mental disorders prevalent in psychopathology (Owen, 2004). In short, there are no ‘cases’ in existential psychotherapy; one man’s pathology may as well be another man’s normalcy (Dean, 2003).

One of the limitations of existential psychotherapy has been its lack of systemic theorizing and empirical evidence of efficacy and effectiveness (Deurzen, 2010). Inherent in its philosophical underpinnings as discussed above, existential therapy is resistant to empirical investigations that tend to dehumanize and objectify human experience by reducing them to numbers or aggregates. Empirical testing is usually based on concepts of reductionism and determinism, which are antithetical to existential/phenomenological understanding of human experience (Norcross, 1987). Moreover, existential therapists themselves have reservations in using experimentation to generate conclusions regarding effectiveness of the therapy process (Lantz, 2004). Conducting empirical research is proportional to creating a manualized model of therapy process, both of which goes against the basic principles of existential psychotherapy (Keshen, 2006). Furthermore, even for an existentially oriented researcher, there is a dearth of appropriate idiographic or phenomenological research designs, which compounds the lack of empirical support for existential therapy (Norcross, 1987).

Another limitation associated with existential psychotherapy has been its limited scope of applicability in therapy settings. It is often criticized as being overly intellectual such that it works best only with higher functioning individuals capable of self-reflection and evaluation, and with relatively milder problems (Renata). The type of setting is also integral in deciding for an existential approached therapy, as it is only appropriate with clients who are willing to commit to long term therapy and spend many sessions with the therapist (May & Yalom, 1995). It is also more appropriate with clients facing some boundary issues; for example, confronting death, sudden isolation, life cycle milestones, etc. Moreover, existential psychotherapy does not have a noble reputation among the general public with various misconceptions that exist regarding its working. Existential therapy is considered pessimistic, atheistic and too philosophical to begin with. May (1991) defended the pessimistic claim by arguing that certain amount of pain and suffering is required in order to reach happiness and peace, and that the hedonistic principle to life doesn’t necessarily always work. In terms of the claim of it being too philosophical, there is no way around it, as the principles of therapy is rooted within the existential philosophy.
The issue of religion within existential psychotherapy remains a sensitive topic of discussion with many criticizing existentialists in general of being atheistic. It is true that a large segment of existentialists advocate an atheistic stance which have been openly expressed in their writings (ex. Nietzsche “God is dead”, Yalom, Sartre, Camus etc). Atheistic existentialists regard the meaning making process as central to existence and reject any a priori meaning of life, such as the one religion seems to supply (Helminiak, Hoffman, Dodson, 2012). They largely reject the idea of an all observing deity who judges the faults and weakness of humans and regard humans as entirely free (Bretherton, 2006). However, a large faction within existentialism are devout Christians as well. Kierkegaard was an orthodox Christian and reflected his religious beliefs in his writings, often citing the leap into uncertainty of life as finding one’s God. Christian theologian Paul Tillich and Jewish theologian Martin Buber are also notable figures within existential psychotherapy, who integrated their religious beliefs into the principles of existentialism. Rollo May was also known to incorporate his classical religious studies into the practice of psychotherapy (Helminiak, Hoffman & Dodson, 2012). Thus, existentialist psychotherapy is in no way atheistic and the negative public image is owed particularly to the prominence of the few atheistic individuals within the school. Although religious contradictions might come up during therapy, it doesn’t necessarily impede the process in any way. While religion is definitely an important source of the meaning making process of any individual, the central issues of the existential philosophy are much larger than religion alone.

Existential philosophy and psychotherapy are definitely unique compared to the established approaches within psychology. It looks at human life and understanding from a subjective stance and values the individual will as a central component. Although it may not serve well to rigorous testing or fit in with dominant values of society, it exists as a dark horse in the field and functions as an alternative to mainstream epistemology within psychotherapy. It provides an avenue for deep reflection into each of our own lives and issues that we are too frightened to deal with. In a way, it exists on a higher plane to the prevailing knowledge within psychotherapy, and despite its flaws and inherent contradictions, its underlying presence reveals a haunting fact that we know nothing about the human condition and there is still room for a lot more to be learnt. Despite all the speculations and theorizing over the years, there is a good chance that we have been wrong all along and we exist as clueless beings unaware of our higher purpose or meaning. As it is said bluntly said, “Nothing has cured the human race, and nothing is about to.”

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1968 - 2018
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Names of Hon’ble Member are presented in Alphabetical Order
* Heavenly Abode
Applications form for Membership of
Indian Association of Clinical Psychologists

INDIAN ASSOCIATION OF CLINICAL PSYCHOLOGISTS
(REGISTERED IN 1968 AS PER SOCIETIES REGISTRATION ACT XXI OF 1860 REG. NO. 3694)
APPLICATION FORM FOR MEMBERSHIP

Class of Membership (please select the class of membership being applied for):
(Fellow / Professional Life / Professional Annual / Associate Life / Associate Annual)

Name (Block Letters): ………………………………   Age: …….    Gender: …………

Residential Address (Block Letters): ……………………………………………………………
………………………………..……………………………………...
………………………………………..……………………  Pin: ………………..……….

Email ID: ……………………………………………..

Mobile No.: ……………………………..               Landline No.: …………………

Designation of the Present Post and Official Address:
……………………………………………………………………………………
………………………………………..…………………  Pin: ……………....

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<td>Any other</td>
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Particulars of professional experience (Specify: Practice / Teaching / Research in the field of Clinical Psychology)

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<th>PLACE OF WORK</th>
<th>FROM</th>
<th>TO</th>
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*Please send all relevant certificates / documents as scanned soft copy by e-mail and self-attested hard copy by regular mail, along with your application. After provisional acceptance of the application, applicant will be advised to make the payment online following which the applicant will be elected. Do not send a DD / Cheque by post along with the application.

Other Jobs or Position Held:
Particulars of other professional affiliation:
1. **Professional Membership:**
   M. Phil. Clinical Psychology or M. Phil Medical and Social Psychology or M. Phil. Mental Health and Social Psychology or the former Post Graduation Diploma Course that is Diploma in Medical and Social Psychology / Diploma in Medical Psychology of National Institute of Mental Health and Neuro-Sciences, Bengaluru or Central Institute of Psychiatry, Ranchi or any other Institution with the prescribed equivalent course for M. Phil. or Doctorate in Clinical Psychology with a prescribed residential course and research as on the pattern of NIMHANS, Bengaluru.

2. **Fellowship:**
   i. Professional Life membership of the Association for a minimum period of two years.
   ii. Ten Years of Experience in the field.

3. **Associate Membership:**
   Graduation in Psychology/ Law/ Medicine/ Psychiatry or Post Graduation degree in any other Social Sciences or Humanities or Psychiatry

Note: Annual Members will be given a soft copy of the certificate only.

### Membership Fees: (April, 2015 onwards)

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<tr>
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<tr>
<td>Professional Members (Annual Subscription)</td>
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<tr>
<td>Associate Members (Annual Subscription)</td>
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I, _________________ Certify that the particulars given above are true to the best of my knowledge.

I am interested in the aims and objectives of IACP and undertake to abide by the rules and regulations during the tenure of my membership.

I am attaching the copies of my professional degree certificates to substantiate the qualification required for the membership category applied for.

Preferred mailing address (Write in capital Letters): Email Id: ____________________________

Email Id: ___________

Place: ____________________________ Date: ____________________________

Signature of Applicant

The application form should be sent to The Hon. Gen. Secretary, IACP on address given in IACP website www.iacp.in

Email: iacpsecretary@gmail.com

**FOR OFFICE USE ONLY**

Received Rs. ____________________________ which includes membership fees/life membership instalment or full in the mode given above ____________________________ as per article ____________________________ of IACP memorandum under the approval of Executive Council meeting held on ____________________________.

Place: ____________________________ Date: ____________________________

Signature

(Secretary IACP)

Remarks Admitted/Not admitted ____________________________ Class of Membership ____________________________

---

I am thankful to:

Prof. (Dr.) P. K. Chakraworty, Dr. K. Kumar, Dr. A. K. Srivastava, Dr. Rakesh Kumar, Dr. Sanjukta Das, Dr. Manjari Srivastava, Dr. Shweta, Dr. D. K. Sharma, Dr. Kuldeep Kumar, Dr. Masroor Jahan, Prof. (Dr.) Amool R. Singh

For reviewing the manuscripts for the volume 45 (1 &2), 2018

Editor, Indian Journal of Clinical Psychology