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Editorial

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Psychodiagnostic Assessment: Today's Needs & Priorities

Tej Bahadur Singh

In the current set up Clinical Psychologist's area of professional practice is expanding in all priority areas of work i.e. Psychodiagnostic Assessment, Application of Psychotherapeutic techniques, Teaching- Training (especially supervision of interns & trainees after Pandemic), Research & Service delivery under Community oriented Research / Service project/s.

Now Psychodiagnostic Assessment by Clinical Psychologists is not confined to day-to-day routine assessment of Cognitive functions, Emotional stability, Behavioural problems and Pathologies leading to adjustment & relationship problems. Rather area of Psychodiagnostic work has currently increased, which can be classified as follows:

1. Assessment of children with Neurodevelopmental Disorders and Physically challenged children for disability quantification/certification.

With the increase in the number of referrals for the assessment of these special needs children; demand for their disability quantification / certification has become a priority of the Psychodiagnostic Assessment job of a Clinical Psychologist.

As nothing useful or meaningful happens in the life of a child with special need/s, till the time he/she has been assessed using appropriate assessment tool for disability quantification i.e., Mild, Moderate, Severe & Profound to initiate early intervention process to minimise developmental lag (Singh,1988 ;1989).

Disability quantification of this nature is compulsorily required for availing concession and facilities as per provisions of Governmental & Nongovernmental organisations, for the use by Medical Boards for disability certification and for admission in educational institutions.

Assessment guidelines & tools for such quantification/certification are available (NIMH,1988; Hirisave et.al.2002; Madhvan,2011; GOI. 2008; Kainthola & Singh, 1992; Thomas Kishore et. al.2019 & 2021) however a need has been felt to ensure availability of all possible tools to be used for certification with thoroughly worked out psychological properties & Indian normative data (Singh 1985; Singh & Kainthola,1988; Singh,1989a & 1989b).

2. Severe Psychiatric and Neurological illnesses & Disability Certification

Persons with severe mental illness like Schizophrenia, Bipolar Affective Disorder and severe Neurological conditions like Dementia, Alzaimers, brain injury and accidental trauma to the brain are the cases ; who are consistently in need of assessment for the purpose of disability certification (Pradhan et.al.1998 & 1999; Chadda et.al. 2000; Singh et.al.2010; Malhotra et.al. 2011a &2011b) which has increased the load of Psychodiagnostic Assessment, mostly required by Law, Police and caregivers for the purpose of nomination of guardianship or avaling concessions and benefits as per provisions of GOs & NGOs. As per Gazette notification by Government of India, these assessments and Certifications are carried out according to need and requirement of clients all over the country.

3. Psychodiagnostic Assessment in Psychiatric Setting as per referrals: A traditional routine Practice: This may be for the assessment of a specific function or overall diagnostic assessment required for the treatment and validation of clinical diagnostic formulation or for the confirmation or modification of initial OPD diagnosis.

Although as per need and demand there is an increasing number of cases seeking help for their mental health problems, which also needs expansion .There is no doubt that the need and scope of the Psychological assessments has been enlarged from the mental health assessments to all other possible medical and non-medical fields, like disability, career, scholastic performance, job performance, job suitability, stress related to different professions, assessments related to behavioural and psychological problems of different disorders, caregiver's burden, Quality of life, problems of LGBTQ community, suitability and eligibility for sex change surgery, assessment for organ donation.....so on and so forth. Further during COVID-19 Pandemic changed the scenario of Clinical Psychology practice which also affected Psychodiagnostic assessment. Major concern was that in the case of remote assessment, the objective and quality of assessment should not be compromised with all possible risks & benefits of remote assessment (Sharma,2020).

4. Rehabilitation Need Assessment: An Exploration of Remaining Positive Potentials

Rehabilitation need assessment is different from disability quantification. Intention of rehabilitation needs assessment is to ascertain remaining positive potentials; also known as assessment of functional level, of a Divyang , victim of severe psychiatric or neurological disorder and neurodevelopmental disorder. This is considered to be a great facilitative effort in formulating individual programme planning for special education and rehabilitation leading to vocational training and placement (Singh,1990; Singh et.al.2010, Singh, 2005)

Utilising the information of assessment, the intervention programme focuses on acquisition of Daily living, Social, Educational and Vocational skills with an aim to place a person in an educational institution and in gainful employment as per need considering his/her age.

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[*]Corresponding Email: editorijcp@gmail.com

5. Assessment of referred Medico-Legal cases not necessarily Forensic in nature

There had been substantial increase in referrals for expert opinion by law about cases of Marital discord and domestic violence , guardianship of mentally or physically challenged adults and certification required for availing concessions and facilities as per provisions of GOs and NGOs. These referrals are not likely to be Forensic in nature, which centres around deciding the criminal responsibility.

Progress in the area of training in the Clinical psychology profession is also geared up in India, as from initial two to three centres' now around forty centres are providing training. But the sad part is that the positions of trained Clinical Psychologists in Medical Colleges are almost diminishing across India. At one side the stigma regarding the profession is decreasing but at the other side the recognition required from fellow professionals is still awaited. Profession of Clinical Psychology in the last five decades has moved far, far ahead from a technician status .Working as merely technician by just administering and scoring the psychological tests, is not sufficient rather there is an urgrnt need to put our basic knowledge of psychological theories and understandings in the interpretation and applications of Psychological assessments with need based focus on intervention.

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Invited Paper

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Resilience in Child and Adolescent Psychopathology – The Indian context

Uma Hirisave[1*] and Uttara Chari[2]

ABSTRACT

Aims/Objectives: Resilience research in child and adolescent psychopathology is limited. This paper aims to explore factors that promote resilience, drawing-out pointers for clinical practice and research amongst child and adolescents with psychopathology in India. **Method:** A narrative review; studies for this paper were drawn from published and unpublished research, carried out at the National Institute of Mental Health and Neuro Sciences, India. Studies were chosen if at least one variable of assessment was resilience. Findings across studies were synthesized to elucidate common resilience promoting factors for children and adolescents in difficult circumstances. **Results:** Only 4 studies were available. The age range of participants across these studies was from 5 to 16 years, having adversities of impoverished socioeconomic backgrounds and diagnoses of emotional/behavioral disorders. The Structured Scenario with Questions-Adapted was the tool used to assess resilience. Findings suggested a positive association between resilience promoting factors and mental wellbeing. Children were noted to make greater use of resilience promoting factors than adolescents. There were no gender differences. Participants with emotional/behavioral disorders had fewer resilience promoting factors, than those from impoverished socioeconomic backgrounds. Resilience promoting factors were noted to lie within the child/adolescent (skills/inherent strengths) and external world (social supports). **Conclusion:** Psychopathology and resilience are not mutually exclusive. It is pertinent to examine resilience promoting factors for a given child/adolescent, albeit psychopathology, towards ensuring optimal mental health outcomes. Greater research is required in this domain, towards facilitating accurate understanding and effective interventions.

Keywords: *Resilience, child/adolescent psychopathology, review, India*

INTRODUCTION

While health goes beyond mere absence of illness, its corollary – illness does not negate the presence of health. The experience of psychopathology is one aspect of psychic health. The child/adolescent with mental health issues is also a developing human with inherent capacities and potentialities for psychic growth and mental wellbeing. This simultaneous presence of problem and potential is best captured in the concept of resilience.

Broadly, resilience is bouncing back or going forth, in the face of adversity. The varied definitions of resilience allude to it being an inherent capacity, process, and outcome; in the face of adversity. Mesmen et al. (2021), in their review define resilience as "a multisystemic dynamic process of successful adaptation or recovery in the context of risk or a threat" (p. 587). Conceptualized thus, inherent capacities are considered as factors that facilitate resilience, along with external supports; termed assets and resources respectively (Fergus and Zimmerman, 2005).

As an emerging area of study, resilience research in child and adolescent psychopathology is limited. A recent review of resilience and its clinical and epidemiological correlates in child and adolescent mental health resulted in 25 studies in a time period of 1.5 years (Mesmen et al., 2021). The numbers may be expected to be lesser in India, wherein the burden of child/adolescent psychopathology necessitates increased clinical and research focus in mitigating the same. However, ignoring resilience in child/adolescent psychopathology mitigation is counter-productive, as the presence of resilience promoting factors have been noted to be of utility in mitigating the effects of risks that have adverse mental health consequences.

Resilience promoting factors engage with poor mental health risk factors to mitigate psychopathology through three channels – compensatory, protective, and challenge (Zimmerman 2013). Thus, to reduce the burden of child/adolescent psychopathology in the country, it is pertinent to study resilience in this population.

The earliest study on child/adolescent resilience across the globe was the International Resilience Project, in the 1990s. This study, spanning 30 countries of all socioeconomic structure, utilized a qualitative approach to study resilience (Grotberg 1996). Children (0-11 years) were presented with unresolved scenarios of difficult life situations, and required to answer questions on feelings and behaviors of the characters in the scenario and the outcome. These were coded for "I have" (social supports), "I can" (skills), and "I am" (inner strength) resilience promoting factors (Grotberg 1996). This assessment approach was facilitative in drawing our culturally specific resilience promoting factors (Grotberg 2001). More recently, the International Resilience Research Project enrolled adolescents from Imphal, India in a multi-centric study, towards developing a self-report tool for resilience. It was noted that amongst Indian adolescents social cohesion was a resilience promoting factor (Ungar, 2008).

It is to be noted that both these studies evaluated resilience from a cross-cultural perspective. Whilst this is pertinent, there is a need to have an emic perspective in resilience

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amongst children and adolescents in India. This paper seeks to bridge this gap, via presenting a research review of studies carried out exclusively amongst children and adolescents in India. As a narrative review, it is more descriptive than analytical; elucidating pointers for clinical practice and further research.

METHOD

Studies for this paper is drawn from published and unpublished research that examined resilience in children/adolescents in India. These studies were carried out at the National Institute of Mental Health and Neuro Sciences (NIMHANS), India. Utilizing purposive sampling strategy, studies were chosen if one variable of assessment was resilience in children and adolescents.

Being a narrative review, findings on resilience across these studies were synthesized to draw out common resilience promoting factors for children and adolescents in difficult circumstances.

RESULTS

Table 1 displays the studies that were reviewed. There were a total of 4 studies. Participant ages across these studies range from 5 to 16 years, and across adversity contexts of impoverished socioeconomic backgrounds and emotional/behavioral disorders (inclusive of grief). As a resilience assessment measure, the Structured Scenario with Questions (SSQ), employed in the International Resilience Project (Grotberg, 1996, 2001) was utilized. The SSQ was adapted to index the scenarios to the Indian setting; hence termed SSQ-Adapted (SSQ-A).

Table 1: Details of studies reviewed

Researcher/Author (year)	Sample age	Sample number	Adversity
Chari and Hirisave (2017)	8-16 years	120	Impoverished socioeconomic background
Vijayaraghavan (2018)	5-7 years	30	Impoverished socioeconomic background
Chopra (2017)	8-16 years	63	Emotional/behavioral disorders
Vijayaraghavan (2018)	5-16 years	23	Death of parent in a road-traffic accident (grief)

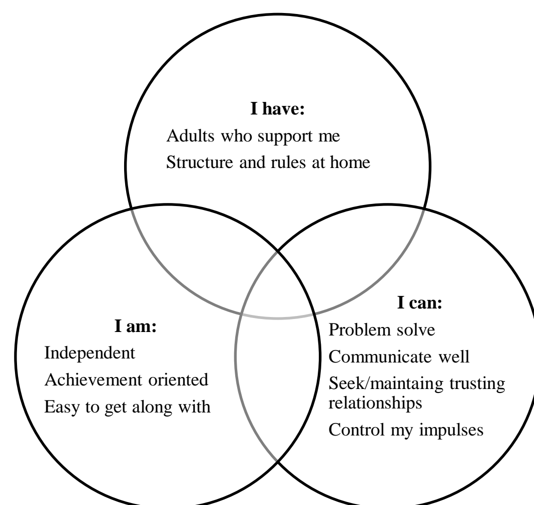
Across studies, there was a positive association between resilience promoting factors and functional outcomes. Children/adolescents from impoverished socioeconomic backgrounds demonstrated more resilience promoting factors than those with emotional/behavioral disorders. This was more for children with diagnosed emotional/behavioral disorders than those experiencing grief. Across both adversities, children were noted to make greater use of resilience promoting factors than adolescents. As such, across studies "I have" factors were prominent. This comprised supportive elders (parents/relatives/teachers/community members) and a structured home environment. The "I am" factors that emerged were being independent, achievement oriented, and being temperamentally appealing. The salient "I can" factors were being able to communicate effectively, problem solve, seek out trusting relationships, and demonstrate impulse control. There were no major gender differences that were noted.

DISCUSSION

Research in child and adolescent resilience in India is limited. On a recent paper, Nebhinani and Jain (2019) highlighted the gap in research in resilience in child psychopathology in the country. However, over the years, ancillary research in child and adolescent mental health in the country have alluded inherent strengths in this population, which included being temperamentally easy to get along with and adapt, empathic and pro-social, independent yet dependable, demonstrating adequate problem-solving skills, and having adequate self-worth (Akoijam, 2003; Hirisave, 2007; Kapur et al., 1994; Nithya poornima, 2005; Shanti, 1998; Vishwanatha, 2008). This inspired the initiation of studies towards specifically examining resilience in child and adolescent mental health.

The 4 studies, discussed in this paper, were all carried out at NIMHANS. An established cross-cultural resilience assessment tool, the Structured Scenarios with Questions (Grotberg, 1996, 2001) was adapted and utilized in these studies – SSQ-A. Narrative analysis of resilience-specific findings was carried out.

Figure 1: Resilience promoting factors



As expected, findings from these studies suggested that greater the availability of resilience promoting factors, better are the functional outcomes for children/adolescents facing adversities (impoverished socioeconomic background/emotional and behavioral issues). Despite psychopathology and risks, these children/adolescents were noted to thrive when equipped with internal assets and external resources. However, the experience of psychopathology may have been an additive adversity; in that there was lesser utilization of resilience promoting factors vis-à-vis typically developing children/adolescents from impoverished socioeconomic backgrounds. The absence of gender differences was a fortuitous finding.

Figure 1 displays the resilience promoting factors, as experienced by children/adolescents. Probably reflective of the collectivist and socially hierarchical society of India, social factors in the form supportive adults and structure/rules at home were facilitative of resilience – "I have" factors on the SSQ-A. This corroborates with familial/cultural cohesion being a resilience promoting factor for adolescents from India (Ungar, 2008). It is probable that these "I have" factors contribute to "I am" (inner strength) and "I can" (skills) resilience factors through the mechanism of social learning; specifically of being independent, achievement oriented, and of being effective in problem solving and maintaining trusting relationships. While being pro-social was an "I am" resilience promoting factor in the original cross-cultural study (Grotberg, 1996, 2001), it did not appear as a prominent finding in the studies at NIMHANS. Children/adolescents in India have consistently demonstrated high pro-social behaviors (Akoijam, 2003; Bhattacharya, 2020; Dolma, 2022; Shwetha, 2020; Vishwanatha, 2008). It is argued that being pro-social is more a norm – an inherent given – and not a factor that is specifically promotive of resilience for children/adolescents in India.

Clinical experience buttresses the findings of these 4 studies. For instance, children/adolescents in therapy demonstrate resilience in terms of problem-solving skills, decision making, empathy, and an optimistic view of future. As an illustration, a 7 year old boy whose father was battling a terminal illness, narrated through therapeutic story-telling, adequate knowledge of his father's health and prognosis, and living arrangement for himself and his mother post his father's demise. Likewise, a teenage girl asserted her independence and courage on a poem, regarding her experience of child sexual abuse. To quote a few lines from this poem, "Today she stops the crime. Now she has mental peace. She has confidence and no extra hidden baggage. She walks out of her house, a confident girl. In control of her world." In these narratives are embedded factors that promote resilience in the face of impeding loss of parent and a robbing of childhood innocence.

Put together, the findings from this small cohort of studies and therapeutic encounter assert that resilience co-exists with psychopathology for our children/adolescents. Masten (2011) proposes resilience to be "ordinary magic", a ubiquitous phenomenon; not exclusive only to the "invulnerable" child. This supposition is taken forward to assert that resilience exists even in vulnerability, such as in children/adolescents with significant mental health issues.

As a narrative review, there are multiple limitations such as the significantly small collection of studies, being cross-sectional design, with the use of an adapted tool. These limitations directly lend to suggestions for longitudinal studies, using more contextually-derived tools for assessment, with larger sample sizes, facilitating understanding the mediating/moderating influence of resilience in child/adolescent psychopathology.

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CONFLICT OF INTEREST

The authors declare no conflict of interest/competing interest

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Original Research Article

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A Comparative Study of Childhood Adverse Experiences, Parental Bonding and Social Support between Patients with and without Common Mental Disorders

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ABSTRACT

Introduction: Adverse childhood experiences (ACEs), perceived social support, and parental bonding were compared between treatment seeking patients with common mental disorders (CMD) and healthy controls.

Methods: A group of 80 CMD patients were compared to 80 normal Ss matched on relevant variables i.e. age (41 males, 39 females, with a mean age 34.45 years) healthy controls, sex and locale. Cases with Co-morbid mental disease and substance abuse/dependence were excluded. Adverse Childhood Experiences Questionnaire, Multidimensional Social Support Scale and Parental Bonding Instrument were used.

Results: Depression was reported in 55% of patients and 28% had anxiety. Patients had a significantly higher number of ACEs, poor social support and parental bonding. 80% patients had ACEs. Both groups expressed equally bonding with mother while CMD patients had poor bonding with their fathers. Other findings are discussed.

Conclusion: High prevalence of ACEs among CMD patients is common. Bonding with father is a key issue in CMD patients with ACEs. A routine screening of ACEs for CMD patients may be beneficial in planning focused psychological interventions.

Keywords: *CMDs, ACEs, parental bonding, social support*

INTRODUCTION

Out of the total world's population 29% has mental problems. This causes global disability, productivity loss, morbidity, and mortality (Steel et al, 2014). Common mental disorders (CMDs) are neurotic and non-psychotic affective disorders with a lifetime frequency of 10-40% (Golberg et al, 1992; Gustavson et al, 2018). CMDs are ubiquitous worldwide, but more than 2/3rd of people with mental health disorders lives in LMICs, where they account for nearly 17% of the total disease burden (WHO, 2003; Rathod, et.al, 2017; Naveed et al., 2020). Reducing CMD (depression, anxiety, and somatization) caused disability expenses (Finnes et al, 2019) is considered as a priority.

Studies have linked psychiatric diseases to adverse childhood events (ACEs), such as abuse or mistreatment, parental separation, parental substance use, family psychiatric diseases, parental incarceration, and witnessing intimate partner violence (Björkenstam et al., 2021; Easterlin et al., 2019). ACEs increase the risk for a broad range of mental health problems in children as well as adults, including poor mental health, substance abuse, self-harm, post-traumatic stress disorder, and suicide attempts (Gilbert et al., 2015; Riedl et al., 2020; Afifi et al, 2020; Thompson et al., 2019; Poole et al, 2017). ACEs accounted for 29.8% of all mental illnesses across 21 countries during the World Mental Health Initiative (WMH) (Kessler et al, 2010) including poor health habits (Kessler et al, 2010; Miller et al, 2011).

Early trauma contributes to maladaptive stress response systems, which explain detrimental mental and physical health trajectories throughout the lifespan (Fagundes et al, 2013). E.g., high levels of early life stress and childhood adversity also increase the chance of acquiring cardiovascular disease, obesity, and diabetes (Thomas et al, 2008). ACEs are associated with psychopathology over the lifespan, including adolescent-onset (Clark et al, 2010) and adult psychopathology (Oh et al, 2018). ACEs are linked to 45% of childhood-onset diseases and 32% of later-onset disorders, according to a major epidemiological study (Green et al, 2010). Further, since higher ACEs were associated with increased rates of unemployment, school non-completion and poverty (Pitkanen et al, 2021) which are also independent key risk factors for mental illnesses, the risk of developing psychopathology compounds.

Parenting plays a major socio-emotional function in a child's development (Esbjorn et al, 2013). Studies show that parenting style affects child development (Thergaonkar and Wadkar, 2007). This influence might be direct, like neglect, or indirect, like when mental health issues lead to less effective parenting (Hugues et al, 2019; Schaan et al, 2019). Similarly, social support is the help and attachment a person receives through their relationships, social groups, and interactions. Social support is characterized as "structural components" such as social networks and "functional components" such as perceived social support, which is further categorized as instrumental and emotional support (Reblin and Uchino, 2008). Mental illness is linked to social dysfunction, inadequate social networks, and relational problems. Poor received and perceived social support significantly affects onset, symptom control, hospitalizations, and mortality (Wang et al, 2018; Liu et al, 2017) as it safeguards mental health by promoting coping and competence, mitigating the consequences of social and

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environmental stressors (Ali et al, 2010). When given appropriate assistance, people may cope with stressful experiences more successfully, resulting in less psychological suffering (Singh and Kishore, 2018).

Mental disease is 10% prevalent in India (National Mental Health Survey, 2016). Despite mental health considered as an important health indicator in India, CMD was never been in any national programme (Chatterjee, 2008). No study has studied the function and context of ACEs in reported parental attachment and social support in adult Indians with CMDs. Fryers and Brugha (2013) found that hardship, child abuse or neglect, parenting and parent-child relationships, and disrupted and dysfunctional households were childhood determinants of adult mental illness. Few Indian research revealed ACEs in 70% of male and 68% of female depressive patients (Shah, Kedare, and Mehta, 2021) and reducing early traumas improved mood disorders by 22.9%. (Gururaj et al., 2016) but comparable controls were not included. In Asian countries, studies comparing prevalence of ACEs among patients of CMDs with healthy people are scarce. We compared childhood adversity, perceived parenting, and social support between CMD patients and healthy controls.

METHODS

A group of 80 CMD patients were compared to 80 age- and gender-matched healthy controls in cross-sectional research. 41 men and 39 women were in each group. Males and females between 18-60 years with depressive/anxiety/somatic/dissociative illnesses attending a tertiary care hospital were recruited as Ss of this study. Ss of normal controls were age- and gender-matched healthy OPD visitors who were not primary caregivers and scored 3 on the GHQ-12. Patients with a history of co-morbid severe mental illness, substance abuse/dependence, or devastating medical history were excluded.

The data analysis was performed on SPSS version 22.0 (SPSS Inc., USA). The ethical clearance of the study was obtained by an institute ethics committee vide reference number IECPG-17/27.2.2020.

Apart from socio-demographic and clinical information, the following tools were used:

General health Questionnaire – 12 (GHQ-12: Goldberg and Hiller, 1979): GHQ-12 Comprises of 12 questions regarding the general level of happiness, experience of depressive and anxiety symptoms, perceived stress and sleep disturbance over the previous 4 weeks. It measures response on a four-point scale (less than usual, no more than usual, rather more than usual, or much more than usual with 0-0-1-1 values). The reported Cronbach alpha coefficient is 0.9.

Adverse Childhood Experiences Questionnaire (ACE-Q: Felitti et al., 1998): This scale assesses various adverse experiences of childhood like premature death of parents, family dysfunction as divorce, physical, sexual and emotional abuse and neglect by parents or caregivers, violence and suicide in family, family alcohol or drug abuse, crime, etc. The Cronbach alpha for ACE-Q ranges from 0.73-0.91.

Multidimensional Social Support Scale (MPSS: ZImet, Dahlem and Farley, 1988). It measures perceived social support from family, friends, and significant others with 12 self-reported items. Each has four items. The seven-point Likert scale ranges from 1 = not at all to 7 = very much. Higher scale scores indicate stronger social support (12-84). Cronbach alpha is 0.77 to 0.93.

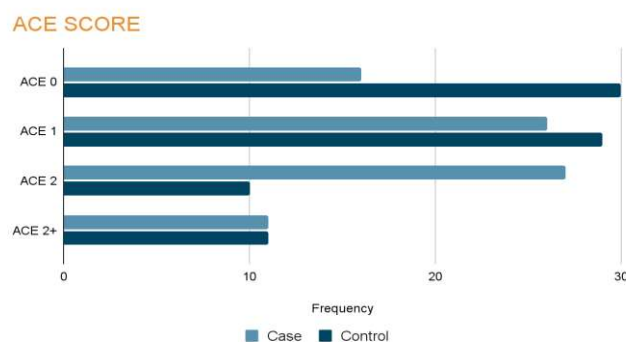
Parental Bonding Instrument (Parker, 1990): This self-report questionnaire contains 25 items on a 4-point Likert scale and asks participants about their parents' parenting techniques over the first 16 years of their childhood. Higher ratings imply more positive parenting. Parenting styles are ideal bonding (high care, low control), negligent parenting (low care, low control), affectionate constraint (high care, high control), and affectionless control (low care, high control).

RESULTS

133 patients were approached, however 48 (36.09%) were excluded: 8 did not satisfy age standards, 7 had concomitant serious mental illness, 12 and 4 had alcohol and opioid use in a dependent pattern, 8 and 3 had substantial medical conditions and organicity, and 6 did not consent. 5 individuals dropped out after consenting, leaving 80 with common mental diseases. 178 non-primary caregivers were contacted for healthy controls. 17 did not satisfy age criterion, 13-15-5 had history of mental illness, alcohol and opioid use, 8 had history of serious medical condition, 13 reported feasibility concerns for participation, 13 did not consent, and 14 had GHQ-12 score 3, leaving 80 in the control group.

The mean age of the CMD patients was 34.21 (SD±12.56) ± and controls was 34.69 (SD ±12.12) years and both groups were statistically equal (t = -0.91; p=0.93). Among patients, 48 subjects (69%) were married, and 29 subjects (36.25%) were never married while in the control group 49 subjects (61.23%) were married and 25 subjects (31.25%) were never married. The distribution of marital status between the groups was equal (χ^2= 1.30; p= 0.52). Similarly, there were significant differences between CMD patients and healthy controls on educational status (χ^2=3.10; p= 0.54), occupation (χ^2=4.29; p= 0.51), and monthly family income (χ^2= 4.35; p= 0.23).

Figure-1: ACEs in Patients (Case) and Control group



55% of CMD patients experienced depression, 28% had anxiety, 10% had somatic symptoms, and 6.25 had dissociative disorders. The average age of onset was 28.93 (10.25), ranging from 14 to 57. Mean sickness duration was 5.49 (6.40) years, ranging from 0.4 to 27 years. Mean treatment duration was 2.13 years (3.74 years), with 0 in treatment naive and poor compliance participants and 18 years maximum.

CMD patients (N=64, 80%) had more ACEs than healthy controls (N=50, 62.5%). Figure-1 showed ACEs. Patients had a significantly higher (t= 2.09; p<0.05) ACE score (1.56, 1.34) than controls (1.13, 1.28). The patient group (M= 53.93, ± 10.27) perceived significantly less social support (t= -3.32; p= <0.01) compared to the controls (M=58.75, ± 9.79). Healthy controls bonded much stronger with their fathers (t= -2.43; p= 0.01) than patients (M=69.96, 13.80), but not with their mothers. Total parental bonding scores for healthy controls (M=154.99, 17.65) were considerably higher (t= -2.22; p= 0.03) than for CMD (148.08, 21.60). Males exhibited substantially better connection with mothers (M=80.34, 7.83; t= 2.19, p0.05) and both parents (M=152.68, 17.33; t= 1.99, p0.05) than females among CMD patients (Table-1).

Table-1: Sample Profile

Variable:		Patients (n = 80) Mean (SD)	Control (n = 80) Mean (SD)	Comparison (p value)
Age		34.21 (12.56)	34.69 (12.12)	t = -0.91 (0.93)
Marital status	Married	48 (69)	49 (61.25)	χ^2= 1.30 (0.52)
	Never married	29 (36.25)	25 (31.25)	
	Others	3 (3.75)	6 (7.50)	
Education	Graduate	20 (25)	21 (26.25)	χ^2= 3.10 (0.54)
	Intermediate	24 (30)	15 (18.75)	
	Matric	14 (17.50)	18 (22.50)	
	Middle	14 (17.50)	18 (22.50)	
	Primary	8 (10)	8 (10)	
Occupation	Skilled	13 (16.25)	13 (16.25)	χ^2=4.29 (0.51)
	Unskilled	16 (20)	20 (25)	
	Homemaker	21 (26.25)	18 (22.50)	
	Student	16 (20)	15 (18.75)	
	Business	5 (6.25)	10 (12.50)	
	Unemployed	9 (11.25)	4 (5)	
Residency	Urban	46 (57.50)	57 (71.25)	χ^2= 3.29 (0.07)
	Rural	34 (42.50)	23 (28.75)	
Religion	Hindu	72 (90)	74 (92.50)	χ^2= 1.72 (0.42)
	Others	8 (10)	6 (7.50)	
Family Types	Nuclear	53 (66.25)	38 (47.50)	χ^2= 5.73 (0.02) *
	Joint	27 (33.75)	42 (52.50)	
Family Income (INR)	<15000	19 (23.75)	17 (21.25)	χ^2= 4.35 (0.23)
	15000-25000	32 (40)	44 (55)	
	25000-35000	13 (16.25)	10 (12.50)	
	>35000	16 (20)	9 (11.25)	
Age of onset (Years)		28.93 (10.25)	—	—
Duration of illness (Years)		5.49 (6.40)	—	—
Duration of treatment (Years)		2.13 (3.74)	—	—
ACEs		1.56 (1.34)	1.13 (1.28)	t= 2.09 (0.04) *
MPSS		53.93 (10.27)	58.75 (9.79)	t= -3.32 (0.01) **
PBI		148.08 (21.60)	154.99 (17.65)	t= -2.22 (0.03) *

*Significance level- p < 0.05. **- p<=.01

Table- 2: Gender Difference

Variable Scores	Case (n=80):Mean (SD)			Control (n=80): Mean (SD)		
	Male (n=41)	Female (n=39)	Comparison (p value)	Male (n=41)	Female (n=39)	Comparison (p value)
ACE	1.29 (1.10)	1.85 (1.53)	t=-1.86 (0.07)	1.24 (1.50)	1.0 (0.97)	t= 0.85(0.40)
MSPSS	54.07 (9.41)	52.87 (11.13)	t=0.52 (0.60)	59.56 (10.98)	57.90 (8.41)	t=0.76 (0.45)
PBI Father	72.34 (11.54)	67.46 (15.82)	t= 1.59 (0.11)	74.27 (10.65)	74.92 (9.28)	t= -0.29 (0.77)
PBI Mother	80.34 (7.83)	75.77 (10.71)	t= 2.19 (0.03)*	81.78 (8.83)	78.95 (10.58)	t= 1.30 (0.19)
PBI Total	152.68 (17.33)	143.23 (24.64)	t= 1.99 (0.05)*	156.05 (17.23)	153.87 (18.25)	t= 0.55 (0.58)

*Difference significant at p < 0.05.

Table-2 revealed that an increase in ACEs resulted significantly negative perceptions of social support (r= -0.27, p<0.02), bonding with father (r= -0.34, p<<0.01), and bonding with both parents (r= -0.34, p<<0.01) among the healthy controls. Whereas, higher ACEs scores lowered the bonding with father (r= -0.29, p<0.01), mother (r= -0.28,

p<0.01), and scores for both parents (r= -0.31, p<<0.01) for the CMDs patients.

DISCUSSION

Our study found a mean age of 34 for common mental disorders, compared to 45 in global and regional studies. It may be because we recruited patients between 18 and 60 years (Joag et al, 2020; Turner et al, 2020) and excluded older samples. 55% of CMD patients had depression, 28% had anxiety spectrum disorders, 10% had somatic symptoms, and 6.25 % had dissociative disorders in our study. In India, depression and anxiety disorders caused the most disease burden (ILSDB Initiative, 2021). We excluded substance use disorders, which are also considered mental disorders (Björkenstam et al., 2021). Mean age of onset of CMDs was 29, similar to anxiety or depressive disorder (Kessler et al 2007). In this study, a GHQ-12 score of 3 ruled out mental illness for healthy controls, similar to earlier Indian investigations (Joag et al, 2020).

The significantly higher ACEs among CMD patients compared to healthy controls in our study was consistent with literature reporting a strong association between ACEs and a broad range of mental health problems in children and adults, including depression, anxiety, and post-traumatic stress disorder (Cheong et al., 2017; Hughes et al., 2017; Poole et al., 2017; Björkenstam et al., 2021). Although CMD and control groups reported high adversities, 80% of CMD participants had ACEs. In India, 69% of children/adolescents experienced physical abuse, 53% sexual abuse, and 49% mental abuse, according to a 2007 report (MWCD, GOI, 2007) his survey though didn't measure adults' childhood memories as we did. Various studies show prevalence from 1 to 91%. (Damodaran et al, 2018). Indians have higher prevalence than westerners (Kessler et al., 2010). This discrepancy in prevalence may be attributed to sample type, sampling, and mapping tools. The discrepancy in prevalence could also be ascribed to samples from the outpatient department, which had a greater rate of childhood trauma than the general community sample (Devi et al., 2019). Studies reporting three or more ACEs increase depression risk sixfold (New York State Department of Health, 2018) and 75% of depressive patients have experienced ACE (Vitriol, et al., 2017; Campbell, Walker, and Egede, 2016) supported our findings. In this demographic, the disease is less sensitive to treatment, with fewer remission chances, higher relapse and recurrence risks, and a poorer prognosis (Liu, 2017). More ACEs worsened depression. Vitriol et al.; Coleman et al. Similar to earlier Indian studies (Kacker et al, 2007; Jangam et al, 2015), female CMD patients had greater ACEs.

Controls perceived higher social support than CMD patients. Two processes have been proposed to explain the positive impacts of social relationships and social support: the stress-buffering model, which works when people are stressed, and the primary effects model, which works regardless of stress level (Zimet et al, 1988; Kawachi and Berkman, 2001). Perceived social support may boost a person's help-seeking and coping processes by improving their situational appraisal and reducing negative emotional responses. Although the specific processes of perceived social support are unclear, its effect seems to be influenced by sociodemographic background, especially gender and marital status (Thoits, 2011). Stress enhances social support need, according to the stress-mobilizing hypothesis (Singh and Dubey, 2015). Stress and psychosocial suffering, especially depression, are highly correlated. This high comorbidity may explain a false link between depression and social support (Starr et al, 2014). Perceived social support can help people survive, cope with stressful experiences, and acquire problem-solving abilities (Gallangher and Brodrick, 2008). Social support impacted mental health moderately (Harandi et al., 2017; Vaingankar et al., 2020). 74% of mental patients had poor social support and 79% had poor medication compliance (Harfush and Gemeay, 2017), showing that poor social support may lead to poor medicine compliance, which may result in poor CMD treatment success (Nam et al., 2019). Studies also confirmed the links between ACEs and depression and the moderating effects of social support. (Cheong et al., 2017; Peltzer & Pengpid, 2018; Macalli & Ilter, 2020), similar to our finding.

Healthy controls had better father-child bonds than patients, but no difference with mothers. It may be ascribed to mother's apparent acceptance of child's mental health condition (Chiaying et al. 2014). Healthy controls had greater parental bonding scores than CMD patients. Rikhye et al (2008) found a link between childhood abuse and depression symptoms in adulthood. More forms of early adversity were associated with poorer levels of parental care and this might have the case with our sample perceiving poor bonding with parents. Our finding laid its support to the finding of mental health problems were connected to low parental support in earlier studies (Falissard et al, 2015; Macalli et al, 2018).

Limitation and Conclusion

Purposeful sampling was utilized to include CMD treatment seekers, hence findings may lack generalizability. Since the sample was collected during Covid-19, when outpatient visits were limited, it may have influenced patients' perceptions of social support and parental connection. ACEs patterns among different types of CMDs in a larger sample may be beneficial in the prevention and treatment of mental diseases by addressing each subgroup's individual needs (Curran et al, 2016) during psychological interventions.

Data Availability Statement

The data that support the findings of this study are available on request from the first author [PP]. The data are not publicly available due to breach of the privacy of research participants, however, can be accessed upon reasonable request.

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Group Cognitive Behaviour Therapy for Women with Mental Illness in Half - Way Home Setting: Case Reports

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ABSTRACT

Group cognitive behavioural therapy is considered one of the effective intervention modalities in various mental disorders and rehabilitation of the person with mental illness. The objectives of the study were a) to study dysfunctional attitude, severity level of negative symptoms and psychopathology of the mental illness among women with mental illness at half -way home and b) to see the effect of group cognitive behaviour therapy (GCBT) on the reduction of severity level of dysfunctional attitude, reduction in the severity level of negative symptoms and psychopathology among them. The sample consisted of four unmarried women (age range of 30 years to 47 years) with mental illness based on DSM-IV criteria and they were resident of half - way home, Bangalore. Multiple assessment approach was used. Dysfunctional Attitude Scale and Positive and Negative Syndrome Scale were used. Pre assessment results showed moderate to high level of dysfunctional attitude, negative symptoms and general psychopathology, and mild level of positive symptoms. GCBT was done with the duration of 90 minutes, once in a week for the period of approximately ten months. Qualitative analysis was done. Results of post intervention showed remarkable reduction in severity level of dysfunctional attitude, negative symptoms and psychopathology, reduction in procrastination behaviour, enhancement in motivation. It can be concluded that GCBT is effective intervention in women with mental illness for reducing severity level of their dysfunctional attitude and negative symptoms of illness.

Keywords: *Half Way Home, Group Cognitive Behaviour Therapy, Mental Illness, Dysfunctional Attitude, Negative Symptoms and General Psychopathology*

INTRODUCTION

Mental illness is chronic in nature and causing prolongs disability. It leads substantial limitation in a major life activity of a person such as performing daily routine activities, self-care, social relationship, occupation and work (Liberman et al.1998). It has been found that the chances of getting affected with severe mental disorders among people are approximately 1.9% and 0.8% among them were found affected with it. There are various factors such as stigma, gender differences play major role in the process of rehabilitation of the persons with mental disorders (Gururaj, 2015-16). Hence, comprehensive treatment approaches are needed for handling mental illness effectively and these severe mental illnesses require psychosocial rehabilitation. Psychosocial rehabilitation (PSR) is a process which facilitates the opportunity for them to reach their optimal level of independent functioning in the community (WHO, 1996; Udomratn, 2006) with the purpose of reducing stigma, minimization of the disabilities and emphasizing on individuals' choices on how to live successfully in the community.

PSR carries out in different setting such as day care centers, and residential setting/half way homes. These residential settings are helpful for relatively more functional patients and they can benefit from the support of long-term care (kalyansundaram, 2015). It focuses on daily living skill, social, occupational or vocational skill through various intervention modalities. It helps the residents to regain social, vocational and cognitive skills (Sidana, 2018). There are numerous training programs (non-computer based attention retraining, cognitive retraining and training in emotional regulation) found effective in improving attention, social functioning, work performance, verbal fluency, visual fluency, delayed recall and immediate verbal memory at half way home setting (Srinivas & Hemchand, 2012; Anuroopa & Hemchand, 2012).

In addition, Chatterjee and Hashim (2015) emphasized importance of bio-psycho-social treatment model, therapeutic community methodology, low cost and long-term treatment for chronic psychiatric disorders. Group cognitive behavioural therapy (GCBT) was found effective in major depressive disorder, general anxiety disorder, obsessive-compulsive disorder and co-morbidity of physical disease (Archer et al. 2016; Butler et al, 2018; Strauss et al, 2018). It is cost effective intervention method (Okumura & Ichikura, 2014; Tong et al, 2020). Similarly, Veltro et al (2006) found effective into the routine care in the psychiatric inpatient unit of the general hospital where rate of readmission/ admissions reduced and level of patients' satisfaction increased.

Multiple randomized controlled trials and meta-analyses suggested that CBT is a potent adjunct to pharmacotherapy in psychotic conditions. It is effective in dealing with persistent positive, negative symptoms of schizophrenia and improves medication adherence (Chatterji et al, 2015; Tarrier & Wykes, 2004; Gould et al, 2001; Drury et al, 1996). A group CBT programme for women in a secure psychiatric setting was done (Long et al, 2016). Participants showed improvement in the area of awareness (knowledge and insight) about illness, perception and emotional component (such as reduced fear and enhanced optimism), greater self-compassion and positive group therapeutic

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alliance. Moreover, online neurocognitive performance test was conducted. The result of the study showed improvement in activating and strengthens the rational thinking and weakens the dysfunctional thinking. There are plenty of studies conducted on the neurocognitive and mental illness but there is paucity of understanding the determinants of thinking and formation of attitudes in relation to the mental illness (Grant et al, 2018). These dysfunctional cognitive organization with poor neurocognitive performance and negative symptoms have been well-researched but there is paucity of research exploring the determinants of such beliefs and attitudes (Beck et al, 2018; Thirthalli, 2001). As appraisal of beliefs play very important role in the well-being of an individual.

Spiritual therapy combined with pharmacotherapy and psychosocial therapies led enhancement in mental health and quality of life among persons with mental illness (Sundar & Stanley, 2007). Traditional temple ritual treatment combined with modern psychiatric intervention at community care center and showed significantly reduction in psychiatric symptoms on the all sub scale of Positive and Negative Syndrome Scale and improved perception of quality of life (Salam et al, 2013).

Review of literature revealed very few studies done on women's mental health and illness in the half way home settings. On the other hand, stigma and legal issues interfere to achieve good quality of life (Kavita & Sekar, 2015) and gradually reduces social and work integration. As women are productive member of the society, they should be entitled with dignified and valued role (Chatterji, 2015). Rehabilitation Council of India (RCI) conducted a study on 70 million women in Delhi and found approximately 2,500 women are suffered with mental illness, they are homeless (on the street) and hopeless. Our country (like India) has nearly 150,000 mentally-ill and destitute women. Gender issues become more challenging as women are vulnerable to physical and sexual abuse and exposure to HIV. The National Commission for Women also highlighted various factors i.e quality of life, challenges and difficulties, stigma, discrimination and deprivation of homes in the women with mental illness and came up with holistic plans to implement for bringing change in their quality of life. Psychosocial rehabilitation for women with mental illness play pivotal role in achieving social and community inclusion where psychotherapies (group cognitive behaviour therapy) would be effective not only in exploring cognitive, affective and behavioural challenges but also making them aware of their own psychological process thereby enhancing their psychological well-being and quality of life. The present study was done in this direction.

Objectives

- To study the dysfunctional attitude, severity level of negative symptoms and psychopathology among women with mental illness (MI) at Half-way home (HWH)
- To see the effect of GCBT on the reduction in the severity level of dysfunctional attitude, reduction in the severity level of negative symptoms and psychopathology among women with MI at HWH

Hypothesis

- There would be positive change after GCBT in the dysfunctional attitude, reduction in negative symptoms and psychopathology among women with MI at HWH

METHOD

Sample: **Inclusion criteria**: The sample consisted of four unmarried women with schizoaffective, paranoid schizophrenia and paranoid schizophrenia with partial remission based on the criteria delineated in DSM -IV, in the age range of 30 to 47 years, from middle socio-economic status, hailing from urban background, educated to the graduation level. Women participants were on psychopharmacological medication and resident of Half-way home (longer stay from 2 years to 5 five years), Bangalore. Informed consents were obtained from all participants.

Clinical characteristics of participants: had insight, well orientated about time, place and surroundings, sad mood, minimal social interaction, less participation in the activities and disturbed daily routine at HWH.

Exclusion criteria: violent/hostility, self-harm and harm others, suicidal attempts, substance abuse, co-morbidity of intellectual disability, undergoing other therapeutic intervention.

Design: Multiple assessment approach

Administered Tools:

1. Dysfunctional Attitude Scale Form A (DAS-A) (Weissman & Beck, 1978)

2. Positive and Negative Syndrome Scale (PANSS) (Kay et al,1987)

Intervention Method: GCBT such as evidence against and for, downward approach, problem solving approach, advantage/disadvantage strategies, what-if, challenging absolutes, self-monitoring chart, deep breathing, home assignments and writing therapy note book etc used.

Analysis: Qualitative analysis done

Procedure:

Results of pre assessment scales were served as baseline. Participants showed moderate to high level of dysfunctional attitude, negative symptoms, general psychopathology and mild level of positive symptoms on the PANSS. Therefore, GCBT was done with the purpose of alleviating dysfunctional attitude, negative and general psychopathology with the duration of 90 minutes session, once in a week for the period of approximately ten months as details given in Table-1 and Table 2. The therapy sessions conducted in playful and interactive manner. Therapeutic program was done by licensed Rehabilitation Psychologist who had training on CBT from esteemed Institute of Mental Health.

Table-1: Outline of GCBT

Sessions	Description
Preliminary session	Establish Rapport, conduct in a quiet room at halfway home, empathetically and non-judgmental manner, sharing about their families, daily routine activities, liking and disliking etc
1 -2	Pre assessment of DAS, PANSS, Formulation of the Intervention Program and sharing with participants
3-4	Focus on readiness for change through reflective games and activities and cost and benefit analysis, focus on various areas such as strength and weakness, uniqueness of each person, need and motivation, employability Deep Breathing (DB)
5-7	Psycho-education based on CBT model of psychotic disorder, anxiety and depression (Smith et al,2003)
8	DB and Auto Suggestions (AS), Review of previous session, Dysfunctional Thoughts Records (DTR)
9 to 18	GCBT, Continued to maintain DTR, DB, AS and review of session
19	Mid assessment of DAS, PANSS
20-36	GCBT continue to maintain DTR, DB, AS and review of session
37	Post assessment of DAS, PANSS
Follow-up sessions	Fortnightly for two months to see the maintenance of positive outcome to therapy sessions.

Table-2: Tracker sheet of Therapy Sessions

Participants	Pre	Post
MN		
Feelings and Automatic Thoughts (Rate degree from 0 to 100%	Jealous, nervous, fear of travelling alone, I am going to make mistake, my sister should apologize to me, Jealous of sister's achievement, I am rejected, 80 to 90%	Confident, Drastically reduced fear, Can travel alone, It is ok if I make mistake, I will do it again and resubmit my work to them. 40%
Cognitive errors and Dysfunctional Assumptions on DAS	Should statement, she was totally agreeing that making mistakes will reduce attention from others, appraisal of fear of disaster on even a small risk, setting up high standards is needed for perfection	she found change in the level of assumptions that it is ok to make mistakes, small risk could be taken up in the life which may not lead disaster
CD		
Feelings and Automatic Thoughts (Rate degree from 0 to 100%	Afraid, depressed I am stuck and a victim, whether people at school will respect me or not, what-if I don't go to school, my illness become worse and end up with hospitalization, relapse, it should not happen, 60 to 70%	Relaxed, confident, felt peace of mind I can see other people's point of view, Now I am keen observer of situation, I can handle it, 40%
Cognitive errors and Dysfunctional Assumptions on DAS	Catastrophizing/ magnificent People feel happiness when they get appreciation, approval from others. Intelligent, good looking rich, and creative people can get happiness only. Setting up high standards is must for perfection and failure in one domain means complete failure in the life as a person	Happiness can be achieved without good looking, rich and intelligence. I can be happy without others admiration.
PQ		
Feelings and Automatic Thoughts (Rate degree from 0 to 100%)	Afraid, nervous, feeling low, I should complete the course with 100% marks, after finishing the course I should get the good job. I am afraid that who will marry me because I am getting older day by day, I should get the chance of winning the champion trophy in Olympiad because last year residents XY won, I am worthless, 80 to 90%	Slightly happy I can try to complete computer course and try to get job. I am looking forward to finish course, I wrote computer exam peacefully and tried well, I want decent office job where I can use my skill, 50 to 60%
Cognitive errors and Dysfunctional Assumptions on DAS	should /must statement, perfectionism Intelligent, good looking rich, and creative people can get happiness only.	It is difficult to be happy unless one is good looking, intelligent, rich and creative(neutral) To be good, moral and worthwhile person, I must help everyone who

Participants	Pre	Post
		needs it (disagree slightly), If others dislike you, you cannot be happy (disagree very much)
XX Feelings and Automatic Thoughts (Rate degree from 0 to 100%)	Anxious, stressful, sadness, confused People don't care us, I will always be alone, I can't face difficult situation, 80% to 90%	Relaxed, comfortable and enthusiastic, content,
Cognitive errors and few responses on Dysfunctional Assumptions on DAS	All or none thinking If I do not do well all the time, people will not respect me (totally agree), I should be good enough all the time for getting respect from other, admiration from others leads happiness in oneself, making mistakes is not good and I should be upset on it, unlovable and nonexistence in the world etc	Am able to overcome hurdles, able to overcoming day to day problem, 50% it is ok if I don't do well all the time, I can be happy and loved without others appreciation and loving attitude. I do have worth in the world.

RESULTS

The results of DAS, negative syndrome and general psychopathology subscale were described in result Table-3.

Table 3: Results of DAS and PANSS

Sl. No	DAS			NSS			GPS		
	Pre	Mid	Post	Pre	Mid	Post	Pre	Mid	Post
Participant XX	80%	67%	57%	49%	27%	10 %	39%	18%	6%
Participant MN	60%	52%	42%	59%	18%	6%	42%	16%	3%
Participant CD	50%	42%	38%	65%	22%	4%	43%	18%	3%
Participant PQ	55%	48%	43%	61%	41%	12%	38%	26%	15%

Table-3 showed results of pre, mid and post intervention. All the participants were having moderate to high (50% to 80%) dysfunctional attitude on the DAS, moderate negative symptoms (49% to 65%) and general psychopathology (38% to 43%). After the intervention, there was reduction in severity level of dysfunctional attitude, reduction in the severity level of negative symptoms and psychopathology among them.

DISCUSSION

Present study revealed that intervention program brought a positive change in participant's dysfunctional attitude, changes in their negative and psychopathology symptoms of the illness. Pre assessment revealed social withdrawal, lack of motivation and initiative, stress, poor attention, anxiety, preoccupation, depression, irritation, restlessness, impulsiveness on PANSS among participants. GCBT helped in improving communication skill and feeling of happiness, reduction in their frustration and stress level, improving concentration span, level of satisfaction and confidence, social skill and observation skill, work habits and work quality. In addition, primary case worker at half way home also reported improvement in their confidence level, accountability to take up new assignments, enhanced physical fitness, interpersonal skill, time management, money management, improved sleep pattern, increased helping behaviour, enhanced attitude for self-care. Case worker shared that participant MN and PQ finished her vocational training / computer course successfully and motivated for job. Participant CD got administrative job in her work place whereas participant XX appointed as a teacher in a school. GCBT helped in enhancing their ability at work and social skill. They felt adequate and valued in the work place and society. It can be said that improvement in their social competence led cognitive health and social health and vice versa. Tsang (2001) and Becker et al (2006) emphasized that for achieving the goal of vocational rehabilitation, social competence is paramount in person with severe mental illness and job requires a high standard of social interaction with clients, colleagues and managers. Those people have difficulty in maintaining interpersonal relationship frequently loses jobs. Social skill deficit increases obstacle to job acquisition and retention. They show high dysfunctional attitude and more negative belief about themselves which reduces future probability of delight, acknowledgement and achievement and limit psychological assets. These positive and negative symptoms of illness could reduce with the help of psychotherapeutic interventions and improve cognitions and social functioning.

A randomized controlled trial of GCBT, cognitive remediation therapy (CRT) and combined cognitive therapy (CBT) were evaluated and found that GCBT with remediation therapy is the efficient supplementary therapy in combination with pharmacotherapy in treatment of persons with schizophrenia. It is more effective on negative and positive symptoms and behavioural functioning than other types of therapy (Beigi et al, 2012). Similarly, group therapy model for person with schizophrenia worked out (Kapoor et al, 2018) where insight facilitation through integrated psychosocial interventions of cognitive behaviour therapy and social skills training were focused on. Out of 30 participants, 20 were females and 10 were

males, in the age range of 18- 55 years. Results showed an improvement in participants' understanding of illness, functioning and recovery.

Present study found that GCBT helped women participants to understand and reduction in their dysfunctional attitude, negative symptoms of mental illness and procrastination behaviour, enhancement in motivation which led social and community inclusion.

The study has been conducted on a limited sample of 4 women participants and also limit to the one rehabilitation centre from Bangalore city. It could be possible to conduct the study on a larger sample from different rehabilitation centre from the city for generalization of the results.

CONCLUSION

It can be concluded that GCBT is effective in reducing severity level of dysfunctional attitude, negative symptoms and psychopathology among women with MI at Half-way home.

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Posttraumatic Growth in Survivors of Domestic Violence

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ABSTRACT

Posttraumatic growth has been observed in_the aftermath of a number of traumas. A number of studies have highlighted its occurrence among survivors of domestic violence. The present study examined how demographic variables, posttraumatic stress disorder, and social support are associated with PTG in a sample (*n* = 121) of female survivors of domestic violence. Results showed that both PTG and PTSD may co-occur, however, the relationship between the two constructs cannot be established. Older and more educated women showed greater levels of PTG. More time elapsed since trauma indicated more PTG. No significant associations could be established among PTG, social support, and PTSD. Education and time since trauma are significantly related to greater PTG, whereas social support was unrelated to PTG. Relevant implications to facilitate PTG among survivors of domestic violence have been discussed. The limitations of the study and future directions for research and practice are suggested.

Keywords: Domestic Violence, Women, Posttraumatic Growth, PTSD, Social Support

INTRODUCTION

Violence against women (VAW) is a highly prevalent and a critical human right violation that affects millions of women worldwide. Globally, an estimated 736 million women, that is, one in three, have experienced some or the other form of violence either by their partners or non-partners (World Health Organization, 2021). In India, the National Family Health Survey (NFHS-4; 2015-16) states that 31.3% of women experienced some form of spousal violence. VAW in India is not limited to spousal or intimate partner violence. According to National Crime Records Bureau (NCRB; 2019), 30.9% of cases pertain to cruelty by husband or his relatives. Domestic violence (DV), therefore, refers to violence in a domestic or household setting, not limited to marriage or cohabitation. DV can range from physical, sexual and reproductive to verbal, emotional, and economic abuse. Research has indicated that the DV can have adverse effects on the well-being of women, including the development of disorders like posttraumatic stress disorder or PTSD (Campbell et al., 2009).

Trauma studies have only focused on the negative outcomes. However, with the advent of Positive Psychology, researchers have attempted to study the positive developments and changes after a trauma (Seligman & Csikszentmihalyi, 2000). The positive consequences of the traumatic events are gradually receiving as much attention as the negative consequences. Posttraumatic growth (PTG) can be defined as the person's subjective experience of positive psychological changes or outcomes after a traumatic incident or a highly challenging life crisis (Tedeschi & Calhoun, 2004). The individuals may reevaluate certain aspects in their lives and may report growth in five different domains: changes in personal strength, experiencing new possibilities, a changed sense of relationships with others, spiritual changes, and a changed philosophy of life (Tedeschi & Calhoun, 1996). PTG has been empirically recorded in various studies covering a range of traumas, like abuse, accidents, bereavement, cancer, injury, military combat, and parents of children with leukemia and disabilities (McMillen et al., 1995; Davis & McKearney, 2003; Sears et al. 2003; Linley & Joseph, 2004; Joseph & Linley, 2006).

There are studies which suggest that there exist gender differences in the self-reported PTG. In a meta-analysis of about 70 studies, women reported more PTG than men (Vishnevsky et. al, 2010). The statistics indicated that women face more gender-based violence than men (World Health Organization, 2021). Therefore, the present study aims to focus on women survivors of DV. PTG is commonly reported among survivors of violence (Frazier et al., 2001; Frazier et al., 2004). However, it is often seen that PTG may coexist with at least some degree of PTSD symptoms in survivors of various traumatic events (Tedeschi & Calhoun, 2004; Bonanno & Mancini, 2012). A number of studies tried to examine the association of PTG and PTSD but there have been inconsistent findings and no consensus has been reached regarding the association. Some found a positive association (Kleim & Ehlers, 2009), others have reported no relationship (Weiss, 2004; Klosky, et. al 2014), while some studies found a negative association between the two constructs (Frazier et al., 2001). The present study aims to find the association between PTG and PTSD.

There are a number of factors which are associated with the development of PTG, like, age, education, social support, and time since trauma (Boyle, et. al, 2016; Logan, et al., 2003; Cordova, et al., 2007; Ullman, 2014). Based on the review of the literature and paucity of research on PTG and DV survivors in India, this study aims to examine the presence of PTG and PTSD in DV survivors, the association of PTG and PTSD, and the focus on different factors associated with PTG. Four hypotheses were forwarded in the present study. First, both PTG and PTSD would be common in the present sample. Second, it was hypothesized that there would be a significant association between PTG and PTSD. Third, women survivors differ significantly on

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PTG with respect to demographic variables, like age, education, income, family type, family size, number of children, region, religion, and time since trauma, along with PTSD and social support. Fourth, whether the above mentioned demographic variables, along with PTSD and social support significantly predict PTG or not.

METHOD

Participants

Participants 121 women seeking help through the Police & Family cell of the court in Delhi; a group of total 121 ; who were previously in an abusive household were Ss of this study. They were victims of DV belonging to the age range 18 to 60 years (M = 33.87 years, SD = 10.41). The participants were included on the basis of their report of experiencing violence at home (e.g., physical, sexual or psychological). The type of violence reported by the participants was moderately (87.5%) and severely physical (42.5%), psychological (42.5%) and sexual (27.5%) in nature. Most of the participants belonged to the urban household (77.7%), nuclear family (48.8%), were well-educated (43.0% were graduates and 29.8% had at least a postgraduate degree), working part-time or full-time (53.7%), of middle to upper socioeconomic status (22.3% with an annual household income of INR 25000-50000 and 38.8% with an annual household income >INR 100000), and of some religious faith (67.8% identified with at least one religious category).

Procedure

Following the approval from the ethical & academic committees; participants were approached in various government and non-governmental organizations. Using the purposive sampling technique, the sampling inclusion criteria included women who were former victims of DV, 18 years of age or older, with some basic English reading skills. In addition to writing their responses; participants were also given an option to fill their responses online. Prior to the administration of the measurement tools, the consent form was signed. Participants were also told about ending their involvement in the study at any time if they face any kind of discomfort. A sheet of demographic information was filled up by the participants after signing the consent form. The participants were then asked to complete a battery of self-report inventories. Since the nature of the study is quite sensitive and the presence of distressing topics in the first quarter of the survey, it was made sure that the participants were provided a list of mental health and counseling resources, along with the contact information of the principal investigator.

Measures

Demographics. A demographic sheet was prepared so as to collect basic background information. Information about the type of violence inflicted was collected via a questionnaire which is adapted from WHO multi-country study on women's health and life experiences questionnaire version 10 (WHO, 2003).

Posttraumatic Growth. A 10-item Post Traumatic Growth Inventory-Short Form (PTGI-SF; Cann et al., 2010; Tedeschi & Calhoun, 1996) was used to measure PTG. The PTGI-SF measures five domains of PTG, that is, Relating to Others (e.g., 'I have a greater sense of closeness with others'), New Possibilities (e.g., 'I established a new path for my life'), Personal Strength (e.g., 'I know better that I can handle difficulties'), Spiritual Change (e.g., 'I have a better understanding of spiritual matters'), and Appreciation of Life (e.g., 'I have a greater appreciation for the value of my own life'). Each subscale consists of 2 items and rated on a 6-point Likert scale, ranging from 0 (I did not experience this change) to 5 (I experienced this change to a very great degree). The PTGI-SF yields a total score by summing all the 10 scale items and five subscale scores. The PTGI-SF displays strong evidence for internal reliability and relationship with the full form of the PTGI, and particularly with the sample of women who were dealing with similar stressful experiences (Cann et al., 2010). Among the current sample, the Cronbach's alpha coefficient for PTGI-SF was 0.88 and for the subscales it ranged from 0.69 to 0.90.

Post Traumatic Stress. For screening the Posttraumatic Stress Symptoms (SPTSS; Carlson, 2001) a self-report measure was used as a screening instrument for PTSD symptoms. This tool has been used with people who report single, multiple or no traumatic events, with no focus on any specific traumatic event. The SPTSS is not meant for definitely diagnosing PTSD. An effective clinical judgment is required to make an accurate diagnosis.. The SPTSS is reported to have a good internal reliability and construct validity, particularly among the sample that experienced violent sexual and physical abuse (Carlson, 2001). Among the current sample, the Cronbach's alpha coefficient for the full scale was 0.96 and for the subscales, it ranged from 0.83 to 0.92.

Social Support. The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, 1988) is a 12-item, self-report measure of assessing social support. It is designed to measure perceptions of social support type and quality. The MSPSS has a 7-point response format ranging from 1 (Very Strongly Disagree) to 7 (Very Strongly Agree). It comprises of 3 subscales with 4 items each which are Family (e.g., 'My family really tries to help me'), Friends (e.g., 'I can count on my friends when things go wrong'), and Significant Other (e.g., 'There is a special person who is around when I am in need'). Significant Other refers to a 'special person' which is not defined in the items so as to allow respondents to interpret this as a person who is relevant to them, such as a romantic partner, teacher, counselor, or any other important person in their lives (Canty-Mitchell & Zimet, 2000). The mean scores are calculated for the total scale (ranging from 1 to 7) and all three subscales (ranging from 1 to 4). A higher score indicates higher quality of social support. Adequate reliability, validity, and factor structure of the MSPSS have been demonstrated across multiple populations (Dahlem et al., 1991; Kazarian & McCabe, 1991; Zimet et al., 1988). Among the current sample, the Cronbach's alpha coefficient for the full scale was 0.88 and for the subscales, it ranged from 0.92 to 0.97.

Statistical Analysis

All statistical analyses were conducted using the Statistical Package for the Social Sciences (SPSS, version 26.0). The assumption of normality was satisfied through the Kolmogorov-Smirnov Test of Normality. Pearson's r correlation was used to conduct intercorrelations among the study variables. ANOVA and t-test were used to find differences among the study variables. Simultaneous Multiple Regression Equation was calculated to identify the multivariate correlates of the dependent variable of the

study, i.e., PTG. Multicollinearity diagnostics were evaluated to test the risk of the predictor variables very closely linearly related. The collinearity statistics for all variables fell within the acceptable standards, with all Variance Inflation Factor (VIF) values below two (Tabachnick & Fidell, 2013). The statistical tests used were two-tailed and the significance values were set at 0.05.

RESULTS

The descriptive statistics for all study variables are presented in Table 1. Almost all the participants experienced PTG to at least some degree. From Table 1, it can be interpreted that the mean PTG score for the overall sample was approaching moderate levels ($M = 27.15$, $SD = 9.8$), however, there is no established standard in the literature regarding the cut-off scores for the PTGI-SF. In the present sample, most of the participants had low to moderate levels of social support and only 10.3% of women reported high levels of social support. The mean SPTSS score was 5.83 ($SD = 2.49$). Using the criteria suggested by Carlson (2001) for meeting the DSM-IV criteria for each symptom cluster, approximately, 70% of the participants were said to have full PTSD, whereas 27.5% of the participants were said to have partial PTSD.

Table 1

Sample Demographics Characteristics and Descriptive Statistics of Study Variables

Characteristics/Variable	%	M	SD	Characteristics/Variable	%	M	SD
Age		33.87	10.41	Employment			
Domicile				Employed full-time	53.7		
Urban	77.7			Employed part-time	8.3		
Rural	22.3			Self-employed	6.6		
Marital Status				Seeking opportunities	6.6		
Unmarried	43.0			Unemployed	17.4		
Married	21.5			Freelancing	1.7		
Engaged	3.3			Prefer not to say	3.3		
Separated	15.7			Income			
Divorced	14.0			Less than INR 10000	21.5		
Widowed	2.5			INR 10000-25000	6.6		
				INR 25000-50000	22.3		
				INR 50000-100000	10.7		
				More than INR 100000	38.8		
				Family Type			
				Nuclear	48.8		
				Single-parent	18.2		
				Joint	14.9		
Education				None	19.2		
High School	21.5			Family Size			
Bachelor's Degree	43.0			1-2 members	25.6		
Master's Degree	29.8			3-4 members	59.5		
PhD or higher	3.3			More than 5 members	14.9		
Prefer not to say	2.5			Violence inflicted by			
Time since violence				Parents	34.7		
0-4 weeks	8.3			Siblings	13.2		
1-6 months	7.4			Relatives	9.9		
6-12 months	14.0			Partner	37.2		
1-4 years	19.0			Spouse	38.0		
4-8 years	19.8			In-laws	15.7		
More than 8 years	31.4						
Type of Violence				PTGI			
Psychological	42.5			Total		27.15	9.8
Moderately physical	87.5			Relating to Others		4.15	2.12
Severely physical	42.5			New Possibilities		5.28	2.77
Sexual	27.5			Personal Strength		6.8	2.66
SPTSS				Spiritual Change		4.4	2.66
Total		5.83	2.49	Appreciation of Life		6.5	2.67
Re-experiencing		5.85	2.77	PTSD[a]			
Avoidance		5.81	2.56	Full PTSD	70		
Arousal		5.87	2.52	Partial PTSD	27.5		
MSPSS				None	2.5		
Total		3.29	1.42	MSPSS[b]			
Significant Other		3.21	2.16	Low	43.6		
Family		3.18	2.07	Moderate	46.2		
Friends		3.49	1.73	High	10.3		

Note: N=121. PTGI, Posttraumatic Growth Inventory; SPTSS, Scale for Posttraumatic Stress Symptoms; PTSD, Posttraumatic Stress Disorder; MSPSS, Multidimensional Scale for Perceived Social Support. [a] Values obtained using SPTSS (Carlson, 2001). [b] Values obtained using scoring criteria given for the MSPSS by the author (Zimet, 2016).

Table 2

Intercorrelations of Study Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 PTGI	1	-	-	-	-	-	-	-	-	-	-	-	-	-
2 PTGI-I	.661**	1	-	-	-	-	-	-	-	-	-	-	-	-
3 PTGI-II	.819**	.466**	1	-	-	-	-	-	-	-	-	-	-	-
4 PTGI-III	.833**	.473**	.700**	1	-	-	-	-	-	-	-	-	-	-
5 PTGI-IV	.651**	0.303	.396*	0.286	1	-	-	-	-	-	-	-	-	-
6 PTGI-V	.782**	.348*	.479**	.650**	.427**	1	-	-	-	-	-	-	-	-
7 SPTSS	-0.03	-0.192	-0.139	0.073	-0.027	0.144	1	-	-	-	-	-	-	-
8 Reexperiencing	-0.073	-0.267	-0.141	-0.011	-0.025	0.131	.950**	1	-	-	-	-	-	-
9 Avoidance	0.005	-0.121	-0.094	0.105	-0.048	0.156	.959**	.857**	1	-	-	-	-	-
10 Arousal	-0.026	-0.176	-0.178	0.107	0.005	0.118	.943**	.868**	.850**	1	-	-	-	-
11 Time Since Trauma	.484**	0.231	.507**	.436**	0.136	.397*	0.047	-0.018	0.086	0.05	1	-	-	-
12 Age	.456**	.370*	.391*	.354*	0.198	.424**	-0.05	-0.083	-0.007	-0.06	.313*	1	-	-
13 Social Support	0.056	.351*	0.164	0.012	-0.126	-0.131	-0.278	-0.256	-0.319*	-0.91	0.187	0.03	1	-
14 Education	.458**	.445**	.328*	.378*	0.267	.346*	-0.002	-0.079	0.063	-0.01	0.145	.514**	-0.128	1

Note: N=121. PTGI, Posttraumatic Growth Inventory; PTG-I: Relating to Others; PTG-II: New Possibilities; PTG-III: Personal Strength; PTG-IV: Spiritual Change; PTG-V: Appreciation of Life; SPTSS, Scale for Posttraumatic Stress Symptoms; MSPSS, Multidimensional Scale for Perceived Social Support. * $p<0.05$; ** $p<0.01$.

The intercorrelations of the study variables are presented in Table 2. PTG was significantly related to all its subscales, Relating to Others (r = .661), New Possibilities (r = .819), Personal Strength (r = .833), Spiritual Change (r = .651) and Appreciation of Life (r = .782) (all ps < .001). PTG was also found to be positively related to both age (r = .460) and time since violence (r = .456), significant at 0.01 level. Age and educational level were found to be positively related with PTG and its subscales except Spiritual Change. PTG was not significantly related to other variables (all ps < 0.05).

ANOVA and t-test were conducted to examine the differences among different groups on PTG. To examine the differences among age, education and time since violence, ANOVA and post hoc analysis was carried out. There was a significant effect of age on PTG, $F(2,118) = 4.911$, $p = 0.013$, $\eta 2 = 0.210$, indicating that older women (women aged between 46-55 years) showed more PTG as compared to younger women (women aged between 18-34 years). A significant effect of education on PTG was found, $F(4,116) = 2.596$, $p = 0.049$, $\eta 2 = 0.229$, indicating that women who are more educated (graduation and above) tend to show more levels of PTG. There was a significant difference of time since violence on PTG, $F(5, 115) = 4.555$, $p = 0.003$, $\eta 2 = 0.210$, indicating that with the passage of time (12 months to 8 years), more levels of PTG can be seen among the survivors of DV. No significant differences on PTG were obtained with respect to other demographic variables.

Table 3 presented the results of simultaneous multiple regression models for the dependent variable of PTG. The demographic variables of age, education, and time since violence were entered as predictors. The model was found to be statistically significant, $F(3, 117) = 8.033$, $p < 0.001$, $R^2 = 0.401$ and the amount of variance explained in PTG increased to 40.1%. In this model, time since trauma (β = 0.314, p = 0.049) and education (β = 0.367, p = 0.026) significantly contributed to the variance in PTG. Specifically, more time after trauma and higher education both are associated with greater PTG.

Table 3

Summary of Regression Analysis Predicting to Posttraumatic Growth as measured by Posttraumatic Growth Inventory (PTGI)

Predictor	PTGI	
	Beta	t
Age	0.136	0.870
Time	0.394	2.989*
Education	0.331	2.202*
Multiple R	0.633	
F	8.033***	
Variance accounted for	40.1%	

Note: Age was coded: 1, 18-27 years; 2, 28-34 years; 3, 35-45 years; 4, 46-55 years, Education was coded: 1, High School; 2, Bachelor's Degree; 3, Masters Degree; 4, PhD or higher; 5, Prefer not to say, Time was coded:1, 0-4 weeks; 2, 1-6 months; 3, 6-12 months; 4, 1-4 years; 5, 4-8 years; 6, more than 8 years. PTGI, Posttraumatic Growth Inventory. * $p<.05$; ** $p<.01$; *** $p<.001$.

DISCUSSION

The present study aimed to examine posttraumatic growth and associated factors in the survivors of domestic violence. This study adds substantially to the literature as it appears to be one of the few studies to quantitatively examine PTG among women survivors of DV in India. The findings suggested that women despite facing violence by their partners and non-partners can experience PTG. Almost all participants in the present study experienced PTG to at least some degree. Mean scores suggest that PTG score for the overall sample was approaching moderate levels. As indicated in the previous research, PTG may coexist with PTSD symptoms (Tedeschi & Calhoun, 2004; Bonanno & Mancini, 2012). The findings also suggest the same, as in the present sample, about 70% of the participants were said to have full PTSD. This supports our first hypothesis about the presence of both PTG and PTSD among the women survivors of DV.

Second, it was hypothesized that there would be a significant association between PTG and PTSD in the present sample. Prior research has yielded mixed results regarding the relationship between PTG and PTSD (Kleim & Ehlers, 2009; Frazier et al., 2001; Weiss, 2004; Klosky, et. al 2014) and researchers have not reached a consensus on the type of association between the two constructs. As per our findings, there was no significant relationship between PTG and PTSD. It was contrary to the hypothesis of the present study. However, the findings were consistent with the other equivocal findings within the literature. Klosky et al. (2014) found that there is a null relationship between PTSD and PTG among adult survivors of childhood cancer. Another study on sexual assault victims by Ullman (2014) found no relationship between the two constructs. Therefore, studies focused on survivors of DV should try to better establish the relationship between PTG and PTSD. More studies are needed to be conducted before any definite conclusions can be made.

The third hypothesis was that women survivors differ significantly on PTG with respect to age, education, income, family type, family size, number of children, PTSD, region, religion, social support and time since trauma. This hypothesis was partially accepted as women survivors showed different levels of PTG with respect to age, education, region and time since trauma. Older women showed more PTG as compared to younger women. A possibility could be that older women tend to have more time to process their trauma which in turn gives more room for growth. This is consistent with research on sexual and physical assault and child sexual abuse (Grubaugh & Resick, 2007; McMillen et al., 1995). This also explains why time since trauma plays a crucial role in the development of PTG. There is some indication that with the passage of time, the perception of growth can be fostered among survivors of DV. A study on PTG among treatment-seeking female assault victims by Grubaugh and Resick (2007) showed similar results. Another important factor where women differ significantly on PTG was education. Results suggest that more educated women show more levels of PTG as compared to less educated women which indicates that greater educational resources help in mobilizing during the time of trauma to effect a greater net growth as compared to those with fewer educational resources. The results of the present study are consistent with a different sample of women who were HIV-positive (Updegraff et al., 2002). Other studies have also reported associations between increasing education and increased benefit-finding (Davis et al., 1998).

Lastly, it was hypothesized that demographic variables along with PTSD and social support were significant predictors of PTG. In the regression analysis, it was found that only time since trauma and education significantly predicted PTG. It indicates that more time after a traumatic event has occurred and higher education leads to higher levels of PTG. This is supported by prior research on HIV-positive women (Updegraff, et. al, 2003). Social support is considered an important resource in various models of PTG (Schaefer & Moos, 1998; Tedeschi & Calhoun, 2004). However, it is interesting to note that in the present study, social support is not a significant predictor despite numerous evidence in the literature. In our study, it was found that social support was significantly negatively correlated with one of the dimensions of posttraumatic stress symptoms, i.e., Avoidance. It indicates that women attempt to try to avoid distressing memories, thoughts, or feelings as well as external reminders such as having conversation with people in their social circle about the traumatic event. Hobfoll (1988) also had pointed out that one's social network can either be a risk or resource. In the situations when it poses a risk factor, one's social support can be a source of additional stress on the individual. This may also indicate that the trauma may have occurred with the social network of the individual.

Implications, Limitation, and Future Directions

DV often accompanies lasting negative effects which can lead to a number of physical and psychological issues. It becomes important for service providers like physicians, clinicians, social workers, therapists, and counselors to possess a detailed understanding of the issue of DV along with the laws which claim to protect the rights of a woman. It also becomes imperative to understand the positive outcomes as a result of violence and that both positive and negative factors may co-exist as a result of trauma. Study results indicate that PTG may co-occur with PTSD and there may not always be a relationship between the two. Social support is considered as one of the most important environmental resources for the development of posttraumatic growth. However, before relying on factors like social support, the service providers must ensure that the violence has not occurred in the individual's immediate social network. There are a number of factors which may be associated with higher levels of PTG, for example, age, education, and time since trauma. Since it was found that PTG occurs more in older women, it becomes critical for the service providers to assess violence and start intervention efforts at an earlier stage by providing necessary personal and social resources.

The present study posed a number of strengths, however, there are also limitations that should not be overlooked and be considered when interpreting the results. The main limitation is that the present study has a cross-sectional and retrospective design which makes it difficult to make any

directional claims about the relationship between study variables. Another limitation emerges to the self-report method of data collection which may increase the risk of reporting error and socially desirable responses. A final limitation is the lack of representativeness of the study sample to the overall population, given that only women survivors were approached keeping in mind the aims and objectives of the present study. However, males also experience DV so the future research must have an inclusive and balanced sample to get an overall picture of PTG after DV. Further, with respect to time since trauma, a significant finding was achieved. However, it fails to recognize the time of occurrence of growth. Multiple studies have shown that growth may occur at different points of time, for example, during the stay-and-leave process, once the decision to leave was made, or after actually having left the relationship (Young, 2007; Smith, 2003). Therefore, future longitudinal research may work on the time of occurrence of PTG in survivors of DV. Future research may also help survivors to understand the directionality of PTG and test theoretical models of PTG to better understand it with respect to DV.

CONCLUSION

The present study is one of the fewer studies that examine posttraumatic growth among survivors of domestic violence. The work highlights the co-occurrence of both the positive and negative outcomes as a result of trauma, without any significant association between the two. The study also highlighted the importance of age, education and time since trauma in the development of PTG. Further, social support which is considered a key predictor of PTG was found unrelated. It indicates that the social network of the survivors of DV must be carefully examined by the service providers. These efforts may lead to promote greater levels of PTG among survivors of DV.

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Psychosocial and Socio-Demographic Facets as Key Components in Infertility

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ABSTRACT

Background: Infertility is "a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse." (World Health Organization-International Committee for Monitoring Assisted Reproductive Technology, 2013). Infertility causes various negative impacts resulting into psychosocial disturbances. **Aim:** To explore the varying degrees of anxiety, depression, stress, marital quality and fertility quality of life with the relationship between these variables in patients from different socio-demographic profiles undergoing fertility treatment. **Sample and Research Design:** 60 people of both the genders between the age group of 20-50 years with the diagnosis of infertility were included in a cross-sectional study. **Tools:** Depression, Anxiety, Stress scale (DASS), Marital Quality Scale and FertiQol scale. **Results and Conclusion**: Pearson correlation coefficient, independent sample t-test and percentages showed that majority of the sample was suffering from moderate level of depression, normal level of anxiety and mild level of stress. Significant negative relationship of depression and stress was found with fertility quality of life. Significant gender difference in scores of depression, stress and fertility quality of life was found showing that women suffer worse than men. Other major findings will be discussed in the paper.

Keywords: *Adolescence, Compensatory Health Beliefs, Alcohol and drug abuse behaviour*

BACKGROUND

Fertility is a term commonly used to indicate the reproductive performance of women. On the other hand, infertility is "a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse". Infertility is of two kinds, Primary infertility and Secondary infertility. Primary infertility is defined as absence of a live birth for woman who wants a child and the couple has been in a union for at least 12 months, without the use of contraceptives. Secondary infertility occurs when there's absence of a live birth for women who wants a child and have been in a union for at least 12 months since their last live birth, without the use any contraceptives (World Health Organization- International Committee for Monitoring Assisted Reproductive Technology, 2013). Latest researches have shown that the number of couples seeking treatment for infertility has exponentially increased due to multiple factors such as older maternal age, development of new and highly successful techniques for infertility treatment, and the awareness of these treatment options in people. While many couples presenting for infertility treatment have high levels of psychological distress associated with infertility, the process of assisted reproduction itself is also associated with increased levels of anxiety, depression and stress. The increasing numbers in opting for fertility treatment has raised awareness and inspired researches into the psychological consequences of infertility and its impact. Studies have shown that the association between psychiatric illness and infertility is present. Researchers have also seen the prolonged exposure to complicated infertility treatments on mood and wellbeing. Women portray a decrease in anxiety and depression when infertility treatment successfully resulted in a successful pregnancy. But the high anxiety among infertile women can have negative effects on the patient (Joelsson et al.,2016). Parenthood is one of the major steps in adult life for a couple. The stress of the non-fulfillment of a desire for a child is related to consequential emotional reaction such as anger, depression, anxiety, marital conflicts, sexual dysfunction, and social isolation leading to poorer quality of life. Both infertile males and females experience a sense of loss of identity and may have feelings of being defective and incompetent. They may suffer depression, which is a mood disorder that leads a persistent feeling of sadness and loss of interest. Studies show that depression was more in infertile women than in fertile women. The severity of depression was positively correlated with age of women and duration of infertility. Low socioeconomic status, low educated and rural background were major risk factors for severity of depression for infertile women (Verma et al. 2016). The physiological mechanism of depression could directly affect infertility such as high prolactin levels, dysregulation of the hypothalamic-pituitary-adrenal axis, and thyroid dysfunction. Hans Selye, modern day father of stress defined stress in 1956 as "the nonspecific response of the body to any demand for change. Stress is also associated with similar physiological changes as anxiety and depression, higher levels of cumulative stress associated with recurrent depression or anxiety may also be a causative factor to infertility. Infertile couples experienced a high level of stress, and that, there was no gender difference in infertility related stress (Sreshthaputra, Sreshthaputra and Vutyavanich ,2008). Researchers have shown that females report and are diagnosed with anxiety disorders more frequently than males. This is indicative of differences between men and women in their health-service-seeking behavior. Males and females experience infertility differently as females have more problems in the areas of self-esteem, personal life, health care systems, and

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occupation. (Draye, 1988). Symptoms of anxiety disorders often develop during early adulthood. Anxiety disorders can severely restrict an individual's day to day functioning. Individuals with an anxiety disorder have excessive and unrealistic feelings that interfere with their lives in their relationships and all the other areas of their lives. Infertile women were younger in age and had significantly worse psychological wellbeing than fertile participants. Depressive symptoms and anxiety symptoms in infertile women were associated with age, social concern; sexual concern and maternal relationship stress (Lakatos et al., 2017). Marital quality is often used in a colloquially that includes marital adjustment as well as happiness and satisfaction. It also includes adjustment, companionship, consensus, marital success. Relationship satisfaction in a couple is higher when neither spouse self-identified as having a fertility problem. Studies have revealed that Women's relationship satisfaction resulted in a strong influence on their partners' relationship satisfaction, but no likewise relationship between men's relationship satisfaction and their spouse's satisfaction is present. In couples suffering from infertility, higher the social support, higher are levels of relationship satisfaction for women but not for men was present (Greil et al., 2007). Indicators of adjustment are conflict, communication, and sharing of activities which differs in terms of experience in each partner. Males and females referred for fertility treatment cope with their infertility issues individually, and coping is related to infertility stress and marital adjustment. The maladaptive strategies increase infertility stress, such as escape/avoidance and accepting responsibility (Peterson et al., 2006). A lot of times when a couple is suffering with infertility, their communication shuts down. This is caused due to the feelings of responsibility or guilt for the infertility, and the couple isn't able to share it through.The financial burden of expensive fertility treatment also takes a toll on the marital life of the people. Quality of life is defined as "the individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals" (World Health Organization, 2003). It is a subjective, multidimensional concept as it defines a standard for emotional, physical, material and social wellbeing where an individual or society can measure themselves. In the field of healthcare, quality of life is measured in terms of how an ailment affects a patient on an individual level. Fertility quality of life assesses the impact of fertility problems in many life sections, for example, on general health, self-perceptions, emotions, partnership, family and social relationships, work life and future life plans. It also measures the environment and tolerability of fertility treatment**.** Fertility Quality of life significantly differs between infertile couples in urban and rural settlement as the quality is poorer in rural settlement. (Dong, 2006). Studied have also shown Quality of Life scores were better in patients who had secondary infertility and who had a higher educational level (Karabulut et al., 2013).

Various researches in the past and present have postulated that as much as infertility is a physical ailment, it also has a psychological burden on couples that are suffering from it. It may influence the quality of life and also result in poor marital quality in couples. Thus, the psychosocial aspect of infertility is required to be explored in the Indian context among different socio demographic profiles for the purpose of formulating specific psychological interventions and modules suitable for every population suffering from this issue.

METHODOLOGY:

Aim: The aim of this study is to explore the varying degrees of anxiety, depression, stress, marital quality and fertility quality of life with the relationship between these variables in patients from different socio-demographic profiles undergoing fertility treatment.

Research Questions:

1. To assess the degrees of anxiety, depression, marital quality and fertility quality of life in participants undergoing fertility treatment.
2. To explore the relationship of Depression, Stress and Anxiety with marital quality and fertility quality of life.
3. To assess the gender difference in the experience of anxiety, depression, marital quality and fertility quality of life of participants undergoing fertility treatment.
4. To assess the difference in domicile (rural/urban) in the experience of anxiety, depression, marital quality and fertility quality of life of participants undergoing fertility treatment.
5. To assess the age group difference in the experience of anxiety, depression, marital quality and fertility quality of life of participants undergoing fertility treatment.
6. To assess the difference in type of infertility (primary/secondary) in the experience of anxiety, depression, marital quality and fertility quality of life of participants undergoing fertility treatment.

Sample and Study Design:

It is a cross sectional study using purposive sampling method. The study uses a correlation design. The sample size was calculated to be 60 based on the inclusion and exclusion criteria of the study. The inclusion criteria of the study were participants that were married males and females in the age range of 20-50 years with fluency in both English and Hindi language belonging to rural and urban settlements. Participants included were those with a diagnosis of Primary or Secondary Infertility undergoing fertility treatment due to with male factor, female factor and

unknown factor infertility. The exclusion criteria of the study were participants that were separated or divorced with current and past history of any other physical ailment and neurological/ psychiatric disorder. The study also excluded those participants that were diagnosed with infertility but were not undergoing any fertility treatment.

Measures:

1. Socio demographic form: This form was designed by the researcher and contained questions about demographic information and essential details of the patients undergoing infertility treatment.
2. Fertility Quality of Life (FertiQoL): It was developed by Boivin et al. (2002). It is the first international instrument to measure fertility quality of life (FertiQoL) in males and females experiencing fertility problems consists of 36 items that assess core (24 items) and treatment-related quality of life (QoL) (10 items) and overall life and physical health (2 items). Cronbach reliability statistics for the Core and Treatment FertiQoL (and subscales) were in the range of 0.72 and 0.92 and thus satisfactory.
3. The Depression Anxiety Stress Scale 21(DASS 21): It was developed by Lovibond and Lovibond (1995). It is a 21 item self-report questionnaire curated to measure the severity of a varying symptoms common to both Depression and Anxiety. Each item is scored from 0 (did not apply to me at all over the last week) to 3 (applied to me very much or most of the time over the past week). The reliability scores of the scales in terms of Cronbach's alpha scores rate the Depression scale at 0.91, the Anxiety scale at 0.84 and the Stress scale at 0.90.
4. Marital Quality Scale (MQS): It was developed by Dr. Anisha Shah (1995). It is a 50 item, 12 factors and four points rating self-report scale developed to assess quality of marital life and standardized on normal population in India. It has forms for both males and females. Higher scores indicate poorer marital quality. The scale involves factors such as Understanding, Rejection, Affection, Despair, Decision making, Discontent, Dissolution Potential, Dominance, Self-Disclosure, Trust and Role Functioning. The scale provides two types of scores a total score and on the 12 factors. The scores obtained are between 50 to 200. Higher scores indicate poorer marital quality. The scale has high internal consistency (coefficient alpha=0.91) and high test-retest reliability r=0.83 over a 6-week interval). It also has good content and construct validity.

Procedure: In the initial period, ethical clearance for conducting this study was obtained from Amity Institute of Behavioural and Allied Sciences, Amity University Rajasthan. Informed consent was obtained from the concerned department and authorities of Nishant Fertility Centre and Evaa Fertility and Gynaecology Centre, Jaipur in order to carry out the research. Informed consent was also obtained from every participant. Participants were selected for the study on the basis of the inclusion and exclusion of the study. In the second phase,Socio-demographic details were taken by the researcher using the socio-demographic form. FertiQol, MQS and DASS 21 were self-report measures which were filled out by the participants. A brief clinical interview was administered with respondents post assessments to further understand the participant's responses on the tests and brief psychological counselling was provided to each participant under supervision of a clinical psychologist. Data was analyzed using IBM-SPSS version 22. Descriptive analysis and inferential analysis were used to study the trends. Frequency and Percentage distribution was used to describe the socio-demographic and biological variables of infertile participants. It was also used to describe the severity of psycho-social variables. Pearson Correlation Coefficient was computed to assess the relationship between the psychological (Depression, Stress and Anxiety) with social (Marital Quality and Fertility Quality of Life) variables of infertile participants. Independent sample t test was used to compare the mean across each psychosocial variable Depression, Anxiety and Stress, Marital quality and Fertility quality of life across gender, age, domicile, and type of fertility.

RESULT:

Table 1

Socio-Demographic details of the Sample

Variables	Sub variables	Frequency N	Percentage (%)
Gender	Male Female	28 32	46.7% 53.3%
Age	20-35 36-50	31 29	51.7% 48.3%
Domicile	Urban Rural	32 28	53.3% 46.7%
Type Of Infertility	Primary Secondary	43 17	71.7% 28.3%

Note. N=60.

Table 2

Frequencies and Percentages of participants on the varying severity in Depression, Anxiety, Stress, Marital Quality and Fertility Quality of Life

Variable	Severity	Frequency N	Percentage (%)
Anxiety	Normal	45	75%
	Mild	1	1.66%
	Moderate	12	20%
	Severe	2	3.33%
	Extremely Severe	0	0%
Stress	Normal	44	73.33%
	Mild	9	15%
	Moderate	5	8.33%
	Severe	1	1.66%
	Extremely Severe	1	1.66%
MQ	Good	1	1.66%
	Mildly affected	37	61.66%
	Moderately affected	20	33.33%
	Severely affected	3	5%
FQL	Poorer FQL	30	50%
	Better FQL	30	50%

Note. N=60. FQL=Fertility Quality of Life. MQ=Marital Quality

Table 3

Pearson correlation of Depression, Stress, Anxiety with Marital Quality and Fertility Quality of Life

Variables	Marital Quality	Fertility Quality of Life
Depression	0.11	-0.66**
Stress	0.24	-0.45**
Anxiety	0.14	-0.206

Note. N=60

**p*> 0.05. ***p*>0.01

Table 4

t- test results comparing Males and Females on the study variables

	Male(N=28)		Female(N=32)		
Variables	*M*	*SD*	*M*	*SD*	*t*
Depression	12.14	7.56	17.68	8.69	-2.61**
Anxiety	3.78	5.63	3.93	4.77	-0.11
Stress	6.50	6.52	11.81	9.34	-2.51**
FQL	53.36	8.92	47.04	11.37	2.37*
MQ	89.28	14.98	89.73	12.23	-0.12

Note. N=60. M= Mean. SD= Standard Deviation. FQL=Fertility Quality of Life. MQ=Marital Quality

**p*> 0.05. ***p*>0.01

Table 5

t- test results comparing respondents from Urban and Rural settlements on the study variables

	Urban(N=32)		Rural(N=28)		
Variables	*M*	*SD*	*M*	*SD*	*t*
Depression	15.37	8.92	14.78	8.33	ns
Anxiety	4.50	5.42	3.14	4.77	ns
Stress	9.62	7.43	9.00	9.72	ns
FQL	49.81	8.86	50.19	12.81	ns
MQ	90.50	14.48	88.40	12.37	ns

Note. N=60. M= Mean. SD= Standard Deviation. FQL=Fertility Quality of Life. MQ=Marital Quality

**p*> 0.05. ***p*>0.01

Table 6

t- test results comparing respondents from the two age groups on the study variables

	Age 20-35 (N=31)		Age 36-50 (N=29)		
Variables	*M*	*SD*	*M*	*SD*	*t*
Depression	14.83	10.32	15.37	6.39	ns
Anxiety	3.54	4.99	4.20	5.38	ns
Stress	10.58	9.98	8.0	6.61	ns
FQL	51.70	11.09	48.17	10.13	ns
MQ	91.06	14.03	87.87	12.87	ns

Note. N=60. M= Mean. SD= Standard Deviation. FQL=Fertility Quality of Life. MQ=Marital Quality

*p> 0.05. **p>0.01

Table 7

t- test results comparing respondents with Primary and Secondary Infertility on the study variables

	Primary Infertility (N=43)		Secondary Infertility (N=17)		
Variables	*M*	*SD*	*M*	*SD*	*t*
Depression	14.46	9.35	16.70	6.16	ns
Anxiety	3.02	4.28	6.00	6.55	ns
Stress	8.81	9.91	12.23	6.03	ns
FQL	50.89	11.35	47.72	8.75	ns
MQ	89.02	12.13	90.79	16.73	ns

Note. N=60. M= Mean. SD= Standard Deviation. FQL=Fertility Quality of Life. MQ=Marital Quality

*p> 0.05. **p>0.01

RESULT AND DISCUSSION

For many people, becoming a parent means that their hopes and dreams have come true. Transition to parenthood is a joyous and exciting time for young couples. When they face difficulties conceiving, the couples seek treatment for infertility. While many couples presenting for fertility treatment have high levels of psychosocial distress associated with infertility, the trying process of assisted reproduction itself is also associated with its physical and emotional challenges. Results of the present study throw light on the challenged faced. Table 1 describes the socio-demographic profile of the sample. From the total sample of 60 the total number 46.7% were males and 53.3% were females. 51.7% belonged to age groups 20-35 and 48.3% were from 36-50 age group. Furthermore, 53.3% participants belonged from the urban and 46 % belonged from the rural settlements. Primary infertility constituted for about 71.7% and 28.3% constituted for secondary infertility from the sample. Table 2 describes the descriptive of participants on the varying degrees of Depression, Anxiety, Stress, Marital Quality and Fertility Quality of Life. The results show that 20% of the total participants were experiencing normal or subclinical depression, 15% were in mild, 41.66% were in moderate, 15% were in severe and 8.33% were in the category of extremely severe level of depression. On the levels of anxiety, results show 75% of the sample experienced a normal level of anxiety,1.66 were experiencing mild,20% were experiencing moderate,3.33% were experiencing severe and none of the participant was found to be are experiencing very severe anxiety. For stress, the results show that normal level of stress was experienced by 73.33% of the participants, mild severity of stress was experienced by 15%, moderate severity was experienced by 8.33%, severe stress was experienced by 1.66% and extremely severe level of stress was experienced by 1.66% of the total subjects. Other researches have shown similar findings. Researches have shown that females undergoing infertility treatment experienced a lot of distress in all the areas of their lives (Alam,2017; Link and Alam,2008). The results also demonstrate that for Marital Quality, 1.66% of the sample were found to be having a good marital quality with their spouses, 61.66% of the sample's marital quality was mildly affected. 31.33% of the sample's marital quality was moderately affected, and 5% have severely affected marital quality. Literature also has suggested the same that infertility related stresses had a negative influence on women's psychological health and marital quality (Wang,2007). In terms of Fertility Quality of Life it was found that 50% of the subjects have a poorer quality of life and 50% have a better Quality of Life. The findings are supported by other studies which found that infertility affected a couple's life in the areas of their psychological wellbeing, sexual relationships, quality of life and marital relationships (Onat,2012; Luk, 2014). Results from Table 3 demonstrated that there is a significant negative correlation between the scores in depression and fertility quality of life.The findings are backed by several other studies. Maroufizadeh et al. (2008) found that Quality of Life in infertile patients was a result of not only their own depression but also their spouses' depression. Similarly other researchers also found a significant inverse relationship between depression and quality of life (Verhaak et al.,2010; Mori et al., 2017). The results from the table also shows that no significant correlation was found between the scores of depression and marital quality. The findings corroborate with available literature that high levels of agreement between partners related to the stresses

they experience help them successfully manage the impact of these stressful life events and that infertility does not reduce marital satisfaction (Peterson,2003; Amiri 2016). Results also show no significant correlation between anxiety and fertility quality of life The results contradict several studies such as a study by Sut, (2014) which concluded that infertility significantly reduces quality of life in women by increasing their anxiety levels. The reason for the contradiction could be because except for a normal to mild level of anxiety and anticipatory worries in most of the people undergoing fertility treatment related to the treatment outcomes and over the period of treatment cycles, the other physiological and physical symptoms of anxiety are not prevalent. The results also indicated no significant correlation between anxiety and marital quality. This is contradicting to other researches, such as from research by Tüzer et al. (2010) where they concluded that marital adjustment has predictive power on anxiety and depressive symptoms of infertile men, especially when the infertility is due to male factor. However, in the present study it was seen that marital satisfaction didn't affect the person's anxiety but the person's owns apprehensions and fears related to their infertility did. Table also indicates that there is a significant negative correlation between stress and fertility quality of life. The findings are in line with other studies where fertility quality showed a higher negative correlation with stress and that women with co-morbidities had worse quality of life (Chi et al.,2016; Jagdish et al., 2017) It was also seen in the current study that the nature of the invasive treatment, family pressure and financial burden of fertility treatment were putting the couples under a lot of stress. Results also demonstrate that there is no significant correlation between stress and marital quality. The findings are in line with the findings by Onat(2012) and Repokari et al. (2007) where it was determined that infertility related stress did not have a negative influence on Marital Relationship and that the shared stress of infertility may actually stabilize marital relationships and bring the couple closer. In the current study it was seen that the people coming for treatment with their spouses saw the treatment as a team task and a hope and their final try to conceive. As, for the treatment a couple would come together and were able to go through the treatment experiences together which brought them closer. They were able to share their feelings with each other and be more open, caring and emotionally vulnerable to each other due to the treatment. Table 4 indicated the t test results to compare between the mean scores of the study variables between males and the females. Significant difference was found between the scores of depression, stress and fertility quality of life between males and females. The findings showed that mean scores of females were higher than males on depression, stress and fertility quality which suggested that women struggle with more depression, stress and poorer fertility quality of life than males. The findings are in line with several studies which have stated that commonly in infertile couples males have a better and higher Quality of life (Marzieh et al.,2017) and that infertility stress triggers are stronger for women than men (Wischmann et al.,2001;Kim et al.,2016: Dong et al.2016;Sethi et al.,2019). The results showed no significant difference in the mean scores of anxiety and marital quality between males and females. Similar findings in literature are present as Wilson et al. (2014) have also stated that for both the sexes no gender difference was found in the anxiety scores and marital satisfaction over treatment cycles of infertile couples. Table 5 indicated the t test results to compare between the mean scores of the study variables between the urban and the rural domicile in the sample. Results showed no significant difference between the mean scores in urban and rural population on all the study variables indicating that the experience of depression, stress, anxiety, fertility quality of life and marital quality is not much different in rural and urban population. Similar was stated in other researches where there was no significant distribution between rural and urban group in their psychiatric morbidity (EL-Sherbin,2007; Gemeay,2015; Sethi et al.,2016). The findings are also corroborated in a study by who found in their study found no statistical difference in the psychological health of women living in urban areas and rural areas. Table 6 indicated the t test results to compare between the mean scores of the study variables between the two age groups 20-35 and 36-50. Results showed no significant difference between the mean scores across all the variables in the two age groups. The result findings are corroborated with findings by Onat and Beji (2017) and Amiri et al. (2017) where no reported significant relationship between ages in infertile women was found (Amiri et al., 2017) and that of anxiety among infertile females was not affected by duration of marriage (Olive et al., 2014). Table 7 indicated the t test results to compare between the mean scores of the study variables between the two groups of primary infertility and secondary infertility and found no significant difference between the two groups. The findings are supported by various other studies that have used standardized measures of anxiety and stress to conclude that no differences in level of distress was found between women experiencing primary and secondary infertility (Downey and Mc Kinney,1992; Edelmann et al.,1994; Newton, Sherrard, and Glavac 1999).In the current study it was seen whether it be primary or secondary infertility, having experienced infertility and the constant disappointments of not being able to conceive and invasive fertility treatment impacts everyone the same.

CONCLUSION

Infertility creates a huge influence on the lives of the infertile couples and makes them emotionally disturbed. It is a condition that may invade the person's body, mind, personality and their occupation. The common emotional responses to infertility are depression, stress, anxiety, anger, guilt. The extent to how the emotional responses incapacitates relies on various determinants, including the communication pattern in the couple, the importance of the

child to the couple's identity, the social support and understanding of close family and friends. As much as infertility is a medical condition, it also has a psychological impact on couples that are suffering from it. It does influence the quality of life and also result in poorer marital quality in couples. Thus, it is more beneficial to broaden our view and assess the overall impact infertility has on a couple's life. The aim of the current study was to explore the varying degree of anxiety, depression, stress, marital quality and fertility quality of life of people undergoing fertility treatment among all gender, age group, domicile and type of infertility. The results indicated that varying degrees of negative states such as depression, anxiety and stress are experienced by people with infertility problems at every phase of treatment. It was determined that there is an associative relationship between depression and fertility quality of life and stress and fertility quality of life and thus it was determined that depression and stress are the two most prominent emotional states causing distress to the people with infertility and consequentially affecting their quality of life and marital quality and the poor quality of life and marital satisfaction and further deteriorating the mental health of these individuals. Gender differences were found in the study establishing that females experiencing more depression and stress and a worse fertility quality of life than men. Study also determined that socio-demographic factors like domicile, age and the type of infertility do not differ significantly on the psychological and social experience of infertility and go through similar experiences and the emotional state experienced by these people is universal.

Clinical Implications: Comprehensive clinical care within infertility services is of particular importance to the promotion of emotional well-being and prevention of psychiatric co morbidities among people affected by infertility. The study highlights the importance of moving beyond the medical diagnosis of infertility to holistically understand the psychosocial aspects of infertility within each socio demographic frame and to provide suitable mental health services before and during the fertility treatment. There is a need for mandatory psychological evaluation of each person coming for fertility treatment along with a modified and individualized psychotherapeutic plan to deal with the emotional needs of patients before and during their fertility treatment using various forms of individual couple and family therapy. On a primary level, awareness programs related to sex education, fertility and infertility, myths and social stigma around infertility, ART techniques etc. should also be encouraged in both rural and urban sectors.

Strengths: The strengths of the study are that it gives a comprehensive psycho –social view towards infertility experience of a person and the cause and effect play between the psychological and social factors. The study is also not gender biased and includes both males and females who are undergoing fertility treatment as many of the previous literature have focused on only females. The study also includes a range of socio-demographic variables to view with infertility as a broader concept without stereotyping any socio-demographic variable. Strength of the study is that it is one of the very few Indian studies as not sufficient studies related to the psycho social aspects of infertility are present in Indian context.

Limitations: Limitations of the study is that the sample size was 60 participants, which needs to be broadened to arrive at a more conclusive result and more generalizability of the findings. Another limitation of the study is that each participant was assessed irrespective of the stage of treatment cycle they were at which could cause discrepancy in findings as the psychosocial factors may differ over the course of the treatment. Another limitation of the study was that that there were unequal number of participants in primary and secondary infertility as a smaller number of participants with secondary infertility were coming to the clinics for fertility treatment. Other limitations are that subset of demographic, medical, and psychological variables, and other variables not currently examined in this study which could also be related to the results and also that the duration of the infertility and its treatment are varying from participant to participant and thus affecting the results. Sampling method and potential for self-selection bias were also the limitations.

Future Directions: Increasing the sample size of the study would lead to more conclusive and generalizable results. It would also be beneficial for the enrichment of the study results to conduct it as a longitudinal study over the entire course of the treatment. Not much is known about people who do not go for fertility treatment and how the treatment affects their mental health. Among those who do go forward with treatment, the psychological and social factors that influence persistence with and decisions to discontinue treatment are unknown which need to be studied. The psychological aspects of treatment including experiences of invasive investigations or of witnessing their partners undergoing discomforting procedures should also be studied qualitatively. It is also important in future to study the efficacy of psychological treatment on improving the mental health condition of the atients undergoing these treatments.

CONFLICT OF INTEREST

The authors declare no conflict of interest/competing interest

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Compensatory Health Beliefs as the Predictor of Alcohol and Drug Abuse Behaviour among Adolescents

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ABSTRACT

Aims / Objectives: Alcohol and drug abuse is a global problem affecting almost every nation. According to World drug report (2018) drug usage is at its peak among 18–25-year-olds. Adolescence is the most sensitive and crucial stage of development wherein physical and psychological changes are at its peak. Deliberating upon the causative factors of alcohol and drug abuse among adolescents, the factors could be many, compensatory health belief (CHB) has also been documented as one of the contributory factors. To present research study made an attempt to explore the relationship between compensatory health beliefs and alcohol and drug abuse behaviour among adolescents. **Method:** The target population of the study was adolescents with the age group of 15-19 years. The sample of present study comprises of 500 (N=500) adolescents males and females coming from the state of Haryana, India. Compensatory Health Belief Scale (Knauper, Rabiau, Cohen, & Patriciu, 2004) and Alcohol and Drug Attitude Scale (Singh & Saini, 2010) were used to assess the compensatory health belief and attitude towards alcohol and drug. **Results:** The findings of the present study revealed significant positive correlation between CHBs and attitude towards alcohol and drug abuse behaviour among adolescents.

Keywords: *Adolescence, Compensatory Health Beliefs, Alcohol and drug abuse behaviour*

INTRODUCTION

Alcohol and drug abuse is a global problem affecting almost every nation. As mentioned in the World Drug Report (2018) released by United Nations in the year 2016, more than 4 in every 10 people worldwide were less than 25 years old, 26 per cent were between 0 and14 years and 16 per cent were between 15 and 24 years of age. Plethora of research studies documented in the past suggest that in early i.e., between 12–14 years old bracket to late i.e., between in 15–17 years old bracket, adolescents are in a critical risk period and likely to start substance use. The available data depicts that drug usage is at its peak among 18–25-year-olds. As per the World drug report, 2018, this is the generally prevailing scenario observed in countries in most of the regions and for most of the drug types.

Adolescence is the most sensitive and crucial stage of development wherein physical and psychological changes are at its peak. During this period of development, the propensity to get engaged in behaviour that impact health in negative manner is more (Curtis,1992; Truner et al.,1993). Deliberating upon the causative factors of alcohol and drug abuse among adolescents the factors could be many, compensatory health belief has also been documented as one of the contributory factors.

Compensatory health beliefs (CHBs) is the cognitive schema which suggests that the negative consequences of unhealthy behaviours like alcohol consumption can be compensated for or neutralised by performing healthy behaviours like consuming plenty of water and fruits. They are just the assumptions that the harmful effects of undesired behaviour can be neutralised by performing health promoting behaviours in excess. According to Kronick & Knauper (2010), CHBs have been explained as temptations elicited behaviour or indulgence in behaviour where a person surrenders to a temptation. Further, they added that CHBs probably reduce cognitive dissonance by justifying unhealthy behaviour choices with the intention of engaging in other healthy behaviour. As a resultant to it people get engaged in unhealthy behaviour without feeling guilty of its unhealthy effects. Over the time consequent effect of such is pathogenesis of diseases (Knauper, Rabiau, Cohen, & Patriciu, 2004; Rabiau et al., 2006).

In addition, According to Pinel, Assanand, and Lehman (2000) People are quite aware of behaviours that have negative health consequences, such as excessive alcohol consumption, and while they have attempted to lead a healthy lifestyle, their efforts have been inadequate. Considering this the present study makes an attempt to explore the relationship between compensatory health belief and the extent to which it determines the alcohol and drug abuse behaviour.

Objectives:

- To explore the relationship between compensatory health beliefs and alcohol and drug abuse behaviour among adolescents.

Hypothesis:

- There shall be a significant relationship between compensatory health beliefs and alcohol and drug abuse behaviour among adolescents.

Methodology:

1. **Sample:**

The target population of the study was adolescents with the age group of 15-19 years. The sample of present study comprises of 500 (N=500) adolescents males and females coming from the state of Haryana, India.

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Table 1: Outcomes of Descriptive statistics and Inter correlation matrix of the dimension of compensatory health belief and alcohol and drug abuse behaviour (N=500)

Variable	Mean	S.D	SU	E/S	ST	WR	TCHB	ADA
SU	19.80	4.35	1	.290**	.260**	.396**	806**	.328**
E/S	12.64	3.51		1	-.005	.317**	636**	.504**
ST	14.62	2.64			1	.246**	501**	-.003
WR	9.79	2.38				1	676**	.309**
TCHB	56.85	8.67					1	.453**
ADA	90.13	20.04						1

***** Correlation is significant at the 0.01 level.***

Note: **SU**-Substance use, **E/S**-Eating/sleeping, **ST**- Stress, **WR**- Weight regulation, **TCHB**- Total compensatory health belief, **ADA**-Alcohol and drug attitude.

2. Measuring Instruments:

Compensatory Health Belief Scale (Knauper, Rabiau, Cohen, & Patriciu, 2004): The Compensatory Health Belief Scale (CHBS) devised by Knauper, Rabiau, Cohen, & Patriciu (2004) consists of 17 items measuring compensatory health beliefs of an individual. The scale further has four subscales namely *substance use, eating/sleeping, stress* and *weight regulation*. Based on Likert scaling method it is a five-point scale the items on the scale are scored from 1 to 5. The higher score indicates the higher compensatory behaviour on the particular dimension. The test possesses good psychometric properties with the test-retest reliability 0.75 and internal consistency Cronbach's alpha 0.80.

Alcohol and Drug Attitude Scale (Singh & Saini, 2010): The Alcohol and Drug Attitude Scale is a 28 item self-report inventory developed by Singh and Saini (2010) to measure the attitude towards alcohol and drug use among adolescents. The statements on the scale are to be answered as strongly disagree, disagree, can't say, agree, strongly agree. The positive items on the scale are scored from 1 to 5 and reverse items are scored as 5 to 1. The higher score indicates the positive attitude towards use of alcohol and drug use. The test possesses good psychometric properties with reliability of 0.82 established by using Cronbach's alpha coefficient. The experts reported that the scale has good face validity and content validity.

Procedure:

After establishing the rapport the participants were briefed about the nature and purpose of the study. A consent form from the participants of the study was obtained and participants were assured of the confidentiality. Compensatory Health Belief Scale (Knauper, Rabiau, Cohen, & Patriciu, 2004), and Alcohol and Drug Attitude Scale (Singh & Saini, 2010) were administered on the participants of the study. The scores on respective measures were obtained as per the scoring standards and the data obtained was put to statistical analysis and inferences were made.

Results:

The data obtained from the study was analysed with the help of SPSS (version 25.0). The descriptive statistics (mean and standard deviation) and Pearson's product moment coefficient of correlation was applied to explore the relationship among the variables of the present study. The simple and multiple linear regression was further applied on the data to explore the compensatory health belief as the predictor of alcohol and drug abuse behaviour among adolescents. The outcomes of the present study are presented in Table No. 1, 2 and 3.

Table 2: Outcomes of multiple linear regression of dimensions of compensatory health belief and alcohol and drug abuse behaviours among adolescents (N=500).

Predictors	B	SE B	β	t	Sig.
Constant	42.311	5.362		7.890	.000
SU	.827	.196	.179	4.231	.000
E/S	2.350	.231	.412	10.164	.000
ST	-.593	.300	-.078	-1.976	.049
WR	1.064	.359	.126	2.964	.003
R^2	.306				
F	54.556				.000

Dependent Variable: Alcohol and Drug Attitude

Note: **SU**-Substance use, **E/S**-Eating/sleeping, **ST**- Stress, **WR**- Weight regulation, **ADA**-Alcohol and drug attitude.

Table 3: Summary of Regression Analysis for Compensatory Health Belief Predicting Alcohol and Drug Abuse Behaviour (N=500).

Predictor	B	SE B	β	t	Sig.
TCHB	1.047**	.092	.453	11.336	.000
R^2	.205				
F	128.514				<.001

Dependent Variable: Alcohol and Drug Attitude

Note: **TCHB**-total compensatory health belief

The findings obtained from the present research study as presented in the table 1establish significant positive correlation (r = .453, p<.01) between compensatory health belief and attitude towards alcohol and drug abuse among adolescents. The table 3 showing regression further depicts compensatory health belief as a significant predictor [F (1,498) =128.514, p<.01] of alcohol and drug abuse attitude among adolescents.

The dimensions of substance use of compensatory health belief and alcohol and drug attitude as demonstrated in the Table 1 establishes the significant positive correlation between the substance use and alcohol and drug abuse behaviour ($r = .328, p<.01$). The Table 2 also depicts it as a significant predictor ($\beta =.179, t = 4.23, p <.01$) of alcohol and drug abuse attitude among adolescents.

The findings of the present study as presented in Table 1 further establish significant positive correlation ($r =.504, p<.01$) between the eating/sleeping dimensions of compensatory health belief and alcohol and drug attitude among adolescents. The multiple linear regression further (Table 2) depicts the same as a significant predictor ($\beta = .412, t =10.16, p <.01$) of alcohol and drug abuse attitude among adolescents.

The findings of the present study (Table 1) conclude the significant positive correlation ($r =.309, p<.01$) between weight regulation dimension of compensatory health belief and alcohol and drug attitude among adolescents. The findings obtained from the multiple regression analysis as presented in the Table 2 also depicts weight regulation as a significant predictor ($\beta = .126, t = 2.96, p <.05$) of alcohol and drug abuse attitude among adolescents.

DISCUSSION

The principle objective of the present research was to explore the relationship between compensatory health belief and alcohol and drug abuse behaviour. From the findings of the present study it is inferred that higher the compensatory belief higher will be the attitude towards alcohol and drug abuse. Thus, this provides the understanding of the fact that adolescents who have the compensatory health belief system have the tendency of exhibiting compensatory health behaviour and will be more engaged in alcohol and drug abuse. The findings also suggest that higher the levels compensatory belief more will be the inclination towards substance use. The present findings are in line with the findings of Knauper et al., in 2004 wherein they concluded that CHBs might contribute to negative health outcomes i.e. alcohol and drug use among adolescents. Furthermore, the present findings can be supported by the study conducted by Hein, S. (2014) wherein with the sample of 113 students they concluded that people with higher compensatory belief are inclined to drink more alcohol. Furthermore, the present findings are also supported by the findings of Radtkea, Scholzb, Kellera, & Hornung (2012) where they established significant positive correlation between conditional risk perception and the amount of cigarettes smoking per day.

The significant positive correlation between the sub dimension of eating/sleeping dimension of CHB and attitude towards the alcohol and drug use is in line with the findings of the Ross and Ivis (1999) where in their study they established binge eaters who exhibited compensatory behaviour were found to be engaged in substance use of all kind. Furthermore, the present findings are also supported by the findings of Bloom, Farris, DiBello, & Abrantes (2019) they suggest that individuals who possess compensatory health belief exhibit compensatory behaviour in smoking pattern and manage their appetite and eating behaviour by increased used of e-cigarettes in their daily smoking assuming that e-cigarettes will also serve this function.

The present study establishes the fact that higher compensatory belief on the dimension of weight regulation higher will be the attitude towards alcohol and drug use. This finding from the present study has appeared to be unique in itself which provides and understanding of that the individuals who exhibit CHB in weight regulation are more inclined towards alcohol and drug abuse. There is a need to conduct further studies for the verification of the findings.

CONCLUSION

The present study is one of its kind which made an attempt to investigate the use of compensatory health belief model in relation to alcohol and drug abuse among adolescents. The findings establish that compensatory health belief is significantly related with alcohol and drug abuse among adolescents. The findings further provide the understanding of the fact that proper intervention should be done to change the belief system so as to prevent the alcohol and drug abuse behaviour among adolescents in a manner that their health gets improved and they could make better health choices.

LIMITATIONS

The main limitation of the present study is its sample size. Nonetheless, the results obtained in the current study are supported by previous studies. Though there is need of large sample with different age groups and areas for the generalizability concerns. Further, the findings suggest intervention studies aimed at the understanding and changing the belief system.

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The authors declare no conflict of interest/competing interest

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Meta-Emotion Status in Coronary Heart Disease Patients

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ABSTRACT

Background: It is well established that negative emotions like anxiety, anger, and depression play a major role in cardiac problems. Negative affectivity is a basic personality trait that refers to the A tendency to experience negative emotions is a personality trait and it impacts on the emotional status of coronary heart disease (CHD) patients. Meta-emotions are known as emotional reactions about one's own emotions. CHD patients who have a tendency to both experience negative emotions and inhibit self-expression have possibility of emotional distress. The objective of this study was to shed light on the status of meta-emotions in CHD patients with hypertension, CHD patients without hypertension and control group. **Materials and Methods:** Two hundred respondents (28 to 78 years old) [100 CHD patients (50 patients with hypertension and 50 patients without hypertension) and 100 individuals without CHD here referred as 'Control'] from Varanasi city of Uttar Pradesh were purposively sampled for the conduct of the present study. The present study employed a biographical sheet and the Hindi version of Meta-emotions Scale (MES-H; Jaiswal et al., 2019) based on MES (Mitmansgruber et al., 2009). MES-H consisted of 19 items having two sub-scales - Positive Meta-emotions and Negative Meta-emotions. Mean and SD values were calculated and one-way ANOVA was used to elucidate the state of meta-emotionsin CHD with hypertension, CHD without hypertension patients and control groups individuals.**Results:** One–way ANOVA manifested significant 'Between Groups' effects for Negative Meta-emotions in three groups. Post hoc mean comparisons indicated that CHD with hypertension group and CHD without hypertension manifested significantly higher negative meta-emotions in comparison to controls. Moreover, non-significant 'Between Groups' effects also indicated CHD with hypertension group and CHD without hypertension and control groups did not differ significantly to positive meta- emotions.

Keywords: *Positive Meta-emotions, Negative Meta-emotions, Meta-emotions, Coronary Heart disease*

INTRODUCTION

Coronary heart diseases (CHD) have emerged as the foremost health issues in the twenty-first century (Bonow, 2011), and are also the major cause of mortality and morbidity in the community. In developed countries, people over 60 years of age face this disease. However, people in India have been found to suffer from CHD during the fifth decade of their life or earlier also. Although most of the studies biological risk factors and lifestyle have been studies as possible cause of CHD, however, psychological and psychiatric factors have also been found to play significant role in the aetiology, advancement, duration, and outcome of CHD (Albus, 2010). The most important factors are depression (Stafford et al., 2009; Janszky et al., 2010; Stapelberg et al., 2012), anxiety (Roest et al., 2010), and stress (Cramer, 1991). Now it is well known that psychological factors have an important role in physical chronic diseases, mainly coronary heart disease (Rafia, 2012). Jäger and Bartsch (2006) conceptualise meta-emotions as emotions individuals have about their own emotions; similarly, Mitmansgruber et al. (2009) described "meta-emotions as emotional reactions about one's emotions" and they emphasize that meta-emotions play important role in emotional regulation. Bartsch et al. (2010) stated that meta-emotions are emotions that have other emotions as their considerate object. Meta-emotion deals with the phenomena that are far away from the scope of the primary emotions. They involve affective reactions toward the primary emotion and motivation both, to change the usual course of the primary emotion (Bartsch et al., 2008, p.16). In comparison to metacognitions Meta-motions are also of two types – adaptive and maladaptive meta-emotions. Maladaptive or dysfunctional or negative meta-emotions (e.g., anger, anxiety and shame) reflect non-appreciation in the form of experiential avoidance or suppression (Neff, 2003). Examples of adaptive or positive meta-emotions include joy, compassion, curiosity and interest. Such adaptive meta-emotions reflect and support one's own emotions with potentially wellbeing-enhancing effects (Neff, 2003). Based upon their study, conducted by Mitmansgruber et al., (2009) advised that meta-emotions may have role in wellbeing and concluded that lowering negative meta-emotions might be rewarding to maintain wellbeing and to have an accommodating attitude towards one's own emotions like mindfulness and acceptance.

OBJECTIVES

The objective of this study was to shed light on the status of meta-emotions in CHD patients with hypertension, CHD patients without hypertension and control individuals.

HYPOTHESIS

CHD patients with hypertension and CHD patients without hypertension will exhibit higher levels of negative meta-emotions and lower levels of positive meta-emotions than control participants.

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METHODS

Sample

Two hundred respondents (28 to 78 years old) (100 CHD patients [50 patients with hypertension and 50 patients without hypertension) and 100 individuals without CHD here referred as 'Control'] from Varanasi city of Uttar Pradesh were purposively sampled for the conduct of the present study. One hundred respondents suffering from hypertension with CHD (N=50) and without CHD (N=50) were identified in the out-patient wards of Galaxy Hospital, B.K. Heart Hospital and Arunodaya Hospital of Varanasi city and age-matched 100 healthy respondents were selected for the conduct of the study. The mean disease history of CHD with hypertension patients and CHD without hypertension patients were 50.90 years and 4.42 years respectively. Finally, 200 respondents (100 CHD patients and 100 Control individuals) were purposively sampled for the conduct of the study. The mean age (±SD) of participants was 55.93±9.60 years (Control = 55.24±8.95 years; CHD with hypertension = 58.26±10.13 years; CHD without hypertension = 57.96±10.10 years). The whole sample comprised of 89% men and 11% women (Control = 90% men, 10% women; CHD with hypertension = 100% men, 0% women; CHD without hypertension =94% men, 6% women), 98.5% married and 1.5% unmarried participants (Control = 97% married, 3% unmarried; CHD with hypertension = 100% married, 0% unmarried; CHD without hypertension = 100% married, 0% unmarried), 30.5%, 56.5% and 13% participants respectively with rural, urban and semi-urban background (Control = 24% rural, 61% urban and 15% semi-urban; CHD with hypertension = 34% rural, 52% urban, 14% semi-urban; CHD without hypertension = 40% rural, 52% urban, 8% semi-urban), and 59.5% and 40.5% participants respectively from joint and nuclear family structure (Control = 58% joint, 42% nuclear; CHD with hypertension = 70% joint, 30% nuclear; CHD without hypertension = 52% joint, 48% nuclear). Informed written consents were obtained from all participants. Participants received no incentives for participation in the study.

Instruments

A detailed biographical sheet was prepared to record necessary information for every participant by the researcher to select the appropriate sample. This information helped to control the extraneous variables and select the appropriate control participants with similar status.

Meta-emotion Scale (MES; Jaiswal et al., 2019; Mitmansgruber et al., 2009)

The present study employed MES-H, the Hindi version of Meta-emotion Scale, (Jaiswal et al., 2020; Mitmansgruber et al., 2009). Original Meta-emotions Scale (Mitmansgruber et al., 2009) had 39 items. MES-H was standardized and validated on Hindi speaking sample after exploratory and confirmatory factor analysis by AMOS that resulted in Meta-emotions Scale (MES-H) comprising 19 items comprising the ten items of positive meta-emotions like interest and compassionate care and nine negative meta-emotions like anger, contempt, anxiety, sadness, shame or guilt (Jaiswal et al., 2019). All items are rated on a 6-point scale (1 = "is not at all true for me" to 6 = "is completely true for me"). Participants were asked to rate each statement not as they think they should react, but as their actual experiences were. The scale generates scores for the following two sub-scales - (1) Positive Meta-emotions (2) Negative Meta-emotions.

Procedure

First of all, good rapport was established with the respondent, kept relaxed and pleasant to elicit the most frank or candid answers possible, advised not to dwell for too much time on any given item, were informed that there is no right or wrong answer to any item, and to give his overall reaction, and to respond quickly and the way they really feel.

Statistical Analysis

The obtained data were analyzed by SPSS version 20. Mean and SD values were calculated for the three groups of participants and the data were analyzed by one-way ANOVA to elucidate the state of meta-emotions in the three groups (CHD patients and control group) and controls.

RESULTS

Table 1: Mean ± SD values of positive meta-emotions and negative meta-emotions for CHD with hypertension, CHD without hypertension and Control groups

Measures of meta-emotions	Groups	N	Mean
Positive meta-emotions	CHD with hypertension	50	44.40 ± 12.27
	CHD without hypertension	50	46.98 ± 12.54
	Control	100	42.45 ± 10.24
Negative meta-emotions	CHD with hypertension	50	36.460 ± 10.33
	CHD without hypertension	50	38.820 ± 11.18
	Control	100	31.630 ± 9.52

The mean and S.D. values of positive meta-emotions and negative meta-emotions for CHD with hypertension, CHD without hypertension and control groups are shown in Table 1. One-way analysis of variance highlighting group (CHD with hypertension, CHD without hypertension and control group) differences on Positive Meta-emotions and Negative Meta-emotions measures of MES manifested significant 'Between Groups' effects for negative meta-emotions (F (2/ 197) = 9.434, *p*< 0.01) and non-significant 'Between

Groups' effects for Positive meta-emotions (F (2/ 197) = 2.674, p > 0.05). Post hoc mean comparisons for significant between-group effects for negative meta-emotions indicated that patients of CHD with hypertension group and CHD without hypertension groups displayed significantly higher levels of negative meta-emotions in comparison to controls. Furthermore, patients of CHD with hypertension group and CHD without hypertension groups and controls did not differ significantly from each other with respect to positive meta-emotions.

DISCUSSION

Generally, cardiac events significantly and positively correlate with negative emotions, including symptoms of anxiety, anger, and depression (Denollet et al., 1998). One of the basic personality traits is negative affectivity which refers to the tendency to experience negative emotions. This trait of negative affectivity overlaps with neuroticism and trait anxiety, and comprises the subjective feeling of tension, worry, anxiety, anger and sadness (Watson & Clark, 1984) and significantly affects the emotional status of CHD patients. CHD patients who have a tendency to experience negative emotions and inhibit self-expression both together, are at risk for emotional suffering (Denollet & Potter, 1992). Recently in a review on negative emotions, measured as anxiety, hostility/anger, and depression, highlighted these negative emotions as risk factors for CHD (Kubzansky and Kawachi, 2000). Anger in men is has also been reported to positively correlate with an increased risk of coronary problems and coronary mortality (Koskenvuo, et al., 1988; Kawachi et al., 1996).

Some studies have shed light on the specific mechanisms through which negative affect might increase the risk of developing coronary heart disease. It is well known that negative affect underlies high negative emotions such as anxiety and depression (Watson and Clark, 1984; Polk et al., 2005), thus, physiological responses related to negative emotions may associate with coronary heart disease. Depression has been reported to cause a number of pathophysiological changes like autonomic nervous system dysfunction (including elevated heart rate, variable low heart rate, and inflated heart rate as reaction to physical stressors) (Carney et al., 2005), hypothalamic-pituitary-adrenal axis dysregulation (such as increased cortisol secretion) (Grippo & Johnson, 2002), enhanced inflammatory processes (Miller et al., 2002) and accelerated progression of atherosclerosis (Stewart et al., 2007; Paterniti et., 2001). Heijmans et al., (2004) reported that patients suffering from chronic disease such as coronary heart diseases encounter disease-related stressors.

A possible psychological mechanism may also be hypothesized for the role of negative meta-emotions in the causation of coronary heart disease. Since negative meta-emotions are negative emotional reactions towards one's primary emotions and CHD patients have been found to have high negative meta-emotions, as such, there is a possibility that CHD patients would tend to react negatively to their emotions leading to increase in their negative emotions like anger, contempt, anxiety, sadness, shame or guilt, etc., and this will lead to emotion regulation deficits in CHD patients. Role of meta-emotions in emotional regulation has been emphasized and negative meta-emotions are positively correlated with the severity of depressive symptoms (Mitmansgruber et al., 2009). Natasha (2016) has also demonstrated that higher depression is associated with negative-negative meta-emotional experiences, and negative-negative meta-emotions are negative emotional reactions towards one's negative primary emotions. Available reports indicate a possible link between negative affect and coronary heart disease through health-related behaviours (Kawachi et al., 1996). Exaggerated negative emotional reactions towards primary emotions indicate dysfunctional emotional behaviour patterns. Neff (2003) has proposed that positive meta emotions contribute to psychological well-being and according to Mitmansgruber et al., (2009) negative meta-emotions exert negative effects psychological stability and wellbeing. The findings of the present study provide evidence for a possible linkage between negative meta-emotions and coronary heart disease.

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CONFLICT OF INTEREST

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Resilience, Emotion Regulation and Life Satisfaction: A Comparative study of Institutionalized and Non- Institutionalized Elderly of Uttar Pradesh

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ABSTRACT

India like many other developing countries in the world is witnessing the rapid ageing of its population. With the emergence of industrialization and globalization there have been many transformations that have had an impact on different sector of society. Changes in family structure, economic compulsion of the children, neglect and abuse usually compel the elderly to live alone or to shift from their homes to some institution or old age homes. Keeping these changes in mind, present study is an attempt to find out whether these changes which occur globally do affect the elderly who are living in eastern part of UP in India. Adding to this, the present study also examines and compares the institutionalized and non-institutionalized elderly with respect to their level of resilience, emotion regulation as well as life satisfaction. Furthermore, gender differentiation among elderly has also been assessed in terms of resilience, emotion regulation and life satisfaction. A cross-sectional study was conducted with elderly (N=400), aged 60 years and above. Connor-Davidson Resilience Scale, Emotion Regulation Questionnaire and Life Satisfaction Index were used to collect data. Data analysis has been carried out by using descriptive statistics i.e., mean, SD and t-test. Some significant results were reported.

Keywords: *resilience, emotion regulation, life satisfaction, elderly, old age homes*

INTRODUCTION

The joint family system predominates in India, where caring for elderly family members is never seen as a burden. With changing demographics, the joint family system is becoming more and more difficult to maintain. However, with the increasing influence of urbanization, industrialization and many more modern establishments have come into the existence, it has eroded some changes in the traditional Indian value system in recent times. These changes have been manifested in various spheres of the society like joint family system is disintegrating into several dispersed nuclear families (Madan, 1999). Changes in economic values are also evident and it has given rise to emphasis on individualism, privacy and desire to live independently in new generation. The older adults' living arrangements have been directly impacted by this. They are either compelled to live alone or to leave their own homes and move into some other settlements or old age homes, due to changes in family structure, children working away from home, economic burden on the children, lack of care and respect, and abuse from the family members (Kumar et al.,2012; Mundey et al., 2011; Mishra, 2008).

Essentially, ageing is the last phase of growth. This serves as an illustration of both the notion of life and how one person has lived their own life. Diener (1985) defines life satisfaction as an overall assessment of feelings and attitudes about one's life at a particular point in time ranging from negative to positive. With growing age, average life satisfaction may not change much, but certainly the contributing factors do. Older adults do not assign much value on things like status and money in comparison to younger people but elderly tend to assign more value to the quality of their relationships with their spouses, children as well as grandchildren, relatives, neighbors, as well as their friends (Ackerman & Ackerman, 2021). There are several factors like lack of personal autonomy and independence, poor quality of care, loss of meaning and sense of belongingness in life as a result of policy of institutions, stiffness in general routine, that adversely affects the life satisfaction of elderly residing in OAHs (Medeiros et al., 2020; Brooker; 2008; Berglund, 2007).

Emotion regulation refers to the processes that influence which emotions one has, and when and how they are experienced and expressed (Gross, 1998). Cognitive reappraisal and expressive suppression are the two major strategies of emotion regulation (Gross & John, 1998). Cognitive reappraisal refers to the effort to reinterpret an emotional reaction in such a way that it changes its meaning as well as its emotional impact. On the other hand, expressive suppression refers to as inhibiting behavioral expressions of an emotion (Gross, 2002). On comparing younger adults with older adults, the later are better at controlling their emotions (Gross et al. 2009). Older adults have better skills of regulating their emotions due to which they are able to neutralize their emotional responses and experience emotional stability and wellbeing as well in comparison to younger adults (Brady et al., 2018; Isaacowitz et al., 2017).

Earlier, resilience has been studied by the developmental psychologists. Later on, resilience in adults and elderly has been addressed only after the emergence of the positive psychology. Psychological risks associated with ageing include exposure to stressful life events such as death of loved ones, accidents, illness and disability, poverty, abandonment, family conflict, domestic and urban violence, chronic tension related to social roles. The need for paying

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more attention to resilience during adulthood and in later life is currently highlighted by the rising costs of healthcare and increased life expectancy without the compression of morbidity and vulnerability. Resilience in later life refers to the capacity to change and accommodate aging-related changes (Fontes & Neri, 2015).

Review of literature indicated that elderly people who live in family settings are satisfied with their lives overall than elderly people who live in OAHs (Sandilya et al., 2021; Hayat, Khan & Sadia, 2016; Waddar et al., 2015). Additionally, older adults who live with their family report higher levels of life satisfaction, perceived health, and self-esteem than their counterparts who live alone (Shin & Shok, 2012). Significant gender differences have also been reported in terms of life satisfaction. Elderly males are satisfied with their lives than senior citizens who are female (Munawar & Tariq, 2017; Singh, 2016; Nagarathnamma, 2007). Women were more likely than men to report using a variety of emotion regulation techniques, and use of most of the techniques declined with age, with the exception that women used suppression more often than men did (Hoeksema & Aldoa, 2011). Comparative studies of institutionalized and non-institutionalized elderly revealed that elderly living in community have higher resilience in comparison to those elderly who are living in institutions (Azeem & Naz, 2015). Furthermore, when it comes to gender differences regarding resilience, studies revealed that men were found to be more resilient sex in older age (Seidal, 2009; Demakkos, 2008 & Hardy, 2004).

Due to changes in family demographics and a rising trend of dual career families in India among the younger generations, the needs and demands of older adults are badly ignored and their survival in their own homes become very difficult. All of these circumstances forced older people to move from their houses to institutions or old age homes. On the other hand, there are some elderlies who are independent and in order to live the last phase of their life peacefully are willingly moving to OAHs. These changes are taking place globally and India is no exception to these changes. Therefore, the goal of the proposed study is to determine whether these worldwide changes have any impact on the psychological state of elderly especially in context to eastern part of Uttar Pradesh, India with reference to the proposed variables. To know the interplay of these variables would be of immense importance for institutionalized as well as non-institutionalized elderly.

Evaluation of studies found that psychological elements, particularly in relation to the elderly, influence is the area that still needs to be studied. Moreover, there is scarcity of comparative literature conducted between institutionalized and non-institutionalized elderly residents of North-Eastern part of UP. Findings of these comparative studies could definitely provide some useful insight about the elderly's status in our society which would be helpful for clinicians, psychologists and policy makers who could develop some interventions and implement rehabilitation programs in accordance with the need of the marginalized population. Therefore, following objectives and hypotheses have been formulated in order to address these issues.

METHOD

Objectives:

1. To assess and compare resilience, emotion regulation and life satisfaction of institutionalized and non-institutionalized elderly.
2. To examine gender differentiation regarding resilience, emotion regulation and life satisfaction of institutionalized and non-institutionalized elderly.

Hypotheses:

1. Non-institutionalized elderly would be more resilient, better able to regulate their emotions and would be more satisfied with their life than those elderly who are living in institutional set-up.
2. There would be significant gender difference in terms of resilience, emotion regulation

and life satisfaction of elderly irrespective of their residence.

Sample

A cross-sectional study was conducted with elderly aged 60 years and above. In the present study, the total sample consisted of 400 elderly sample, out of which 202 elderly (male=114, female=86) ere those living in institutions and remaining 198 elderly (male=110, female=88) were those residing in community/non-institutionalized.

Measures

1. Connor-Davidson Resilience Scale (Connor & Davidson, 2003):

Conner-Davidson Resilience Scale (CD-RISC) is a twenty-five-item scale measuring the resilience on five-point Likert type rating scale. Each statement has five alternatives from "not true at all= 0" to "nearly all of the time=4". The obtained Cronbach alpha of the scale is 0.87.

2. Emotion Regulation Questionnaire (Gross & John, 2003):

The Hindi version of ERQ developed by Khetrapal, Gupta, and Baijal (2007) was used to evaluate cognitive reappraisal and expressive suppression. The 10-item version was used in the study to measure expressive suppression and cognitive reappraisal. A seven-point Likert scale was used to score each item (1 = strongly disagree to 7 = strongly agree). Reappraisal and suppression both obtained .88 Chonbach's alpha reliabilities.

3. Life Satisfaction Index (Havighurst, 1971)

The life satisfaction index is a twenty items scale which measures life satisfaction on three-point rating scale. Each statement has three alternatives ranging from "agree" (1) to "uncertain" (3). The reliability for the scale in the Indian sample has been established by Anantharaman in 1980 which is .80.

Procedure

In the present study, data collection has been done using standardized questionnaires. In order to approach the elderly living in OAHs, certain OAHs have been identified.

Permission regarding data collection was taken from the managing authorities of OAHs. After seeking the consents of the participants, rapport was established. By keeping in mind, the convenience of elderly participants, questionnaires were administered individually. All the necessary instructions regarding the questionnaires were given and wherever needed they were guided independently. For the ease of elderly participants, questionnaires were read aloud. Further, for approaching the non-institutionalized elderly, certain localities were identified and approached using house to house survey. Remaining procedures were almost similar to those of institutionalized elderly. Finally, participants were praised for their assistance and support.

RESULT

The aim of the present study was to assess and compare resilience, emotion regulation and life satisfaction of institutionalized and non-institutionalized elderly. Furthermore, it also intended to examine gender differentiation regarding resilience, emotion regulation and life satisfaction among institutionalized and non-institutionalized elderly. Results have been analyzed using descriptive statistics i.e., mean, SD and t-test.

Table 1: Mean, SD and t-value on the scale of Resilience, Emotion Regulation and Life Satisfaction of institutionalized (N=202) and non-institutionalized elderly (N=198).

		Institutionalized Elderly (N=202)		Non-institutionalized Elderly (N=198)		
S. No.	Variables	Mean	SD	Mean	SD	t-value
1.	Resilience	52.52	13.57	65.88	15.27	9.20***
a)	Hardiness	14.48	4.24	18.02	5.28	8.20***
b)	Optimism	14.30	3..31	18.02	3.43	7.76***
c)	Resourcefulness	13.05	3.31	15.78	3.43	8.06***
d)	Purpose	10.69	3.47	13.78	3.54	8.80***
2.	Emotion Regulation	51.55	5.94	53.33	8.18	2.49***
a)	Cognitive Reappraisal	30.90	2.93	33.07	4.75	5.49***
b)	Expressive Suppression	20.65	4.51	20.26	5.10	.798
3.	Life Satisfaction	12.58	3.86	15.12	3.12	7.17**

***P<0.001 level, **P<0.01 level

Table 1 compares the mean score of institutionalized and non-institutionalized elderly on the scales of resilience and its dimensions i.e., hardiness, optimistic, resourcefulness and purpose. Elderly living in OAHs and family set-up differed significantly on the scale of resilience (t=9.20, p<.001), hardiness (t=8.20, p<.001), optimism (t=7.76, p<.001), resourcefulness (t=8.06, p<.001) and purpose (t=8.80, p<.001). Elderly living in family set-up scored higher on the scale of resilience (M=65.88, SD=15.27), hardiness (M=18.02, SD=5.28), optimistic (M=18.20, SD=3.43), resourcefulness (M=15.78, SD=3.43) and purpose (M=13.78, SD=3.43) as compared to elderly living in OAHs who scored lower on resilience (M=52.52, SD=13.57), hardiness (M=14.48, SD=4.24), optimistic (M=14.30, SD=3.31), resourcefulness (M=13.05, SD=3.31) and purpose (M=10.69, SD=3.47).

Similarly, there is significant difference between institutionalized and non-institutionalized elderly in terms of emotion regulation (t=2.49, p<0.001) and its dimension, cognitive reappraisal (t=5.49, p<.001). Non-institutionalized elderly scored higher on the scale of emotion regulation (M=53.33, SD=8.18) and its dimension i.e., cognitive reappraisal (M=33.07, SD=4.75) as compared to institutionalized elderly who scored lower on the scale of emotion regulation (M=51.55, SD=5.94) and its dimension i.e., cognitive reappraisal (M=30.90, SD=2.93). Moreover, they do not differ significantly in terms of expressive suppression (t=.798). The institutionalized (M=20.65, SD=4.51) and non-institutionalized elderly (M=20.26, SD=5.10) scored similar on the dimension of expressive suppression.

Institutionalized and non-institutionalized elderly also differed significantly on the scale of life satisfaction (t=7.17, p<.001). Non-institutionalized elderly scored higher on the scale of life satisfaction (M=15.12, SD=3.12) as compared to institutionalized elderly who scored lower (M=12.58, SD=3.86) on this scale.

Table 2: Mean, SD and t-value of Elderly Males (N=224) and Females (N=176) on the scales of Resilience, Emotion Regulation and Life Satisfaction irrespective of their residence.

		Males (N=224)		**Females** (N=176)		
S. No.	**Variables**	**Mean**	**SD**	**Mean**	**SD**	**t-value**
1.	Resilience	61.43	15.53	56.16	15.87	3.31**
a)	Hardiness	17.04	4.76	15.43	4.58	3.65***
b)	Optimism	16.71	5.06	15.43	5.13	2.50*
c)	Resourcefulness	14.87	3.51	13.82	3.71	2.87**
d)	Purpose	12.80	3.66	11.49	3.91	3.44**
2.	Emotion Regulation	52.74	7.20	52.09	7.17	.89
a)	Cognitive Reappraisal	32.16	4.17	31.75	3.94	1.00
b)	Expressive Suppression	20.58	4.51	20.34	5.17	.49
3.	Life Satisfaction	14.00	3.71	13.63	3.76	.97

***p<0.001, **P<0.01, *P<0.05

Table 2 compares the mean scores of elderly males and females irrespective of their residence on the scale of resilience and its dimensions i.e., hardiness, optimistic,

resourcefulness and purpose, emotion regulation and its dimensions i.e., cognitive reappraisal and expressive suppression and life satisfaction. Elderly males and females differed significantly on the scale of resilience (t=3.31, p<.01), and subscales of hardiness (t=3.65, p<.001), optimism (t=2.50, p<.05), resourcefulness (t=2.87, p<.01) and purpose (t=3.44, p<.01). Elderly males scored higher on the scale of resilience (M=61.43, SD=15.55), hardiness (M=17.04, SD=4.76), optimism (M=16.71, SD=5.06), and resourcefulness (M=14.87, SD=3.51) and purpose (M=12.80, SD=3.66) as compared to elderly females who scored lower on resilience (M=15.43, SD=4.58), hardiness (M=15.43, SD=4.58), optimism (M=15.43, SD=5.13) and resourcefulness (M=13.82, SD=3.71) and purpose (M=11.49, SD=3.91).

On the remaining scales these two groups did not differ significantly. Males and females scored more or less similar on the scales of emotion regulation and its dimensions i.e., cognitive reappraisal, expressive suppression as well as life satisfaction. Although mean score of elderly males were slightly higher on the scales of emotion regulation (M=52.74), cognitive reappraisal (M=32.16), expressive suppression (M=20.58) and life satisfaction (M=14.00) as compared to females on the scale of emotion regulation (M=52.09), cognitive reappraisal (M=31.75), expressive suppression (M=20.34) and life satisfaction (M=13.63).

DISCUSSION

The aim of the present study was to assess and compare resilience, emotion regulation and life satisfaction among institutionalized and non-institutionalized elderly. Furthermore, it also examined gender differentiation regarding resilience, emotion regulation and life satisfaction. It has been hypothesized that elderly living in non-institutional set-ups would be more resilient than institutionalized elderly. Findings revealed that non-institutionalized elderly have significantly better level of overall resilience as compared to their institutionalized counterparts. Elderly living with their families is probably able to cope in a better way and participate in a variety of social activities. This probably helps them to bounce back and deal with a variety of life-long stressors as well as stressors related to old age. Saba et al., (2016) findings was in line with the findings of the present results which revealed that older people living with their families experience higher level of resilience and life satisfaction than those living in institutions. Wells (2009) reported that among older persons, resilience was significantly linked with family networks as well as good physical and mental health. Therefore, presence of family network and being physically and mentally healthy probably make non-institutionalized elderly more resilient to deal with the current stressful events successfully.

On the other hand, institutionalized elderlies are deprived of healthy lifestyle such as good diet and exercise. There is non- availability of family networks with whom they used to share special bond. They lack strong positive relationship with the inmates. Since most of the OAHs' inmates are compelled to shift to OAHs they lost the positive mindset and attitude about the world. Moreover, they lack spiritual practices in their daily routine which otherwise improves resilience. All these factors make institutionalized elderly become less resilient and as a result they find it difficult to cope with various adversities of old age. Findings of the present study is in line with previous researches (Azeem & Naz, 2015; Saba et al., 2016; Thanoi, 2009), which revealed that the older people living with their families exhibit higher level of resilience than those living in institutions. Hence the hypothesis that non-institutionalized elderly would be more resilient than institutionalized elderly has been accepted.

Another hypothesis framed for the study is that, non-institutionalized elderly would better able to regulate their emotions as compared to institutionalized elderly. Findings of the study revealed that non-institutionalized elderly were better at regulating their emotions than institutionalized elderly. This could be possible because non-institutionalized were the people with strong social networks and report greater emotional wellbeing due to which they were able to practice emotion regulation strategies successfully in their day-to-day life as well as during stressful life events. Moreover, community dwelling elderly were surrounded by their near and dear one and also enjoyed the autonomy which might helped them to frame positive attitude about their life. They also encounter with less adverse circumstances as compared to institutionalized counterparts and hence non-institutionalized elderly have been better able to manage and regulate their emotions efficiently. On the other hand, institutionalized elderlies were less efficient in regulating their emotions probably because they might lack strong social network, one of the factor affecting emotion regulation tendencies. This is in the line with the study which indicated that people with strong social networks report greater emotional wellbeing in day-to-day life as well as when they experience stressful life situations (Cohen & Wills, 1985). Additionally, institutionalized elderlies also lack familial touch and company of friends with whom they could share their feelings (Charles, 2012). Thus, they were the people who are in a vulnerable situation and facing constant stressors, as a result they might not be able to manage emotions properly and hence might not experience emotional wellbeing. Hence the hypothesis, non-institutionalized elderly would better regulate their emotion than institutionalized elderly has been accepted.

Also, it was assumed that older people living in non-institutional settings would be more satisfied with their lives as compared to those elderly who are institutionalized. It was evident from the result that non-institutionalized elderlies are better satisfied with their life than their institutionalized counterparts. Finding suggested that non-institutionalized elderly have higher level of life satisfaction probably because they live in supportive and healthy environment with family members, relatives, friends as well as community in comparison to institutionalized elderly. The finding was similar to the findings of Chauhan and Didwania (2013) and Kozerska (2015) who also revealed that those elderly who live with their families had higher

self-esteem and better satisfaction with their life in comparison to those who are institutionalized. In contrast to this, those elderly who are institutionalized, reported poorer life satisfaction or are dissatisfied with their life than those elderly who are residing with their families. The lack of personal freedom, poor institutional policies, lack of privacy and care may cause institutionalized seniors to feel unsatisfied with their lives (Kim et al., 2006; Berglund, 2007; Brooker, 2008).

Furthermore, it has been hypothesized that elderly males and females regardless of their institutional background, will differ significantly in their level of resilience, emotion regulation, and life satisfaction. Findings indicated a significant difference between males and females' elderly regarding their resilience. Elderly males are more resilient as compared to elderly females. This finding is in accordance with the previous researches (Hardy, 2004; Demakakos, et al., 2008; Seidal et al., 2009; Fergus et al., 2020) which revealed that gender plays crucial role in predicting resilience and found males to be more resilient sex in older age. Males are more self-accepting, optimistic, have intact emotional health and they often possess hardy personality which shields them from exposure to extreme stress. They might believe that they can learn from both positive as well as negative life experiences. Generally, women are seen as less valuable (Hesketh et al., 2011) in the sense that they do not take part in the decision-making process due to lack of abilities and illiteracy. Moreover, they are only meant for household chores. Since women are dependent and possess low self-esteem, when caught in stressful situations are unable to thrive to normalcy on their own. As a result of all these women could be less resilient sex than males. Therefore, women with low self-esteem and fewer resources would likely to be less resilient when compared to their men counterparts.

Further, it has been hypothesized that there would be significant gender difference regarding life satisfaction. Findings of the study revealed that elderly males and females scored almost the same in terms of life satisfaction. Which further implies that life satisfaction is not affected by gender at old age might be because both elderly males and females are in same kind of situation, they are living their retired life where they get socially isolated from their friends and neighbors. In addition to this, most of them might be living the life of widowhood after losing their partners. Moreover, due to physical deterioration in their health both elderly males and females might become highly dependent on others for most of the time. In this way the present findings that gender does not have an impact on life satisfaction is in conformity with the findings of previous researches (Ahmad & Silfiasari, 2020; Mayungbo, 2016; Roothman, Kirsten & Wissing, 2003). Hence, the hypothesis that there would be significant gender difference in life satisfaction has not been accepted.

In terms of gender differentiation regarding emotion regulation, it has been hypothesized that there would be significant gender difference. Findings revealed that both elderly males and females are more or less similar in their ability to regulate and manage their emotions. No gender difference has been reported in habitual use of emotion regulation strategies especially cognitive reappraisal (Gross & John, 2003; Haga et al., 2009; Zhomke & Hahn, 2010). Which further implies that gender do not plays role in emotion regulation abilities rather it might be associated with age factor. The result of the study is similar to the findings of the previous researches, which indicated that older adults are good at regulating their emotions (Gross et al., 2009; Lauton et al., 1992). To understand emotion regulation from the lens of elderly, it is likely stated that their reappraisal tendencies will improve with age. Moreover, late adulthood is the time which is full of anxiety when people meet various losses in health, relationships as well as social roles, as compared to any other stage of life. Though, elderly tend to engage themselves in emotion regulation strategies evenly, irrespective of gender in order to cope up with forth coming challenges in life. Since emotion regulation tendencies are age related factor, as a result there are no gender specific differences found in regulation of emotions (Gross & John, 2003; Haga et al., 2009).

Comparison between institutionalized and non-institutionalized elderly revealed that non-institutionalized elderly had significantly higher level of resilience, were better able to regulate their emotions as well were more satisfied with their life as compared to their institutionalized counterparts. Moreover, regarding gender differentiation elder males were found to be more resilient than females. Meanwhile, both the group did not differ significantly in terms of emotion regulation and in life satisfaction. As emotion regulation tendencies are age related factors, therefore, gender might not play significant role. Similarly, in context to life satisfaction no significant difference indicated that both elderly males and females were moderately satisfied with their life as people expect little from them at old age and they were free from responsibilities which they were taking since adulthood.

The study carries the implication that it is very important for OAHs' authorities to take great care of elderly and treat them more humanly. Additionally, they should periodically plan activities that bring the inmates together so that they may grow in trust and faith with one another and be able to communicate openly about their emotions. Particularly, institutionalized elderly should be encouraged and trained to participate in resilience building activities, in order to keep them occupied and protect them from being ruminating about the adverse life circumstances. Promoting emotion regulation strategies, particularly a cognitive reappraisal strategy, among older persons would undoubtedly improve their cognitive performance and help them age well. It is very crucial to ensure freedom of choice and independent decision making among elderly people, in order to promote life satisfaction among them.

Although the present study yielded important findings, it is not without limitations. The sample of study was restricted only to the elderly of Varanasi. In order to generalize the findings, elderly from varied geographical areas should to be investigated.

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Original Research Article

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A desire to be perceived positively: Approval motivation in School Children

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ABSTRACT

Aims

1) To assess the degree of approval motivation in school children using a standardised scale and assess the impact of age, gender, and Body Mass Index (BMI).

2) To plan intervention programs in schools to develop self-motivation to reduce dependence on approval from others.

Methodology

Study design – Cross sectional study in school children

Sample selection – Convenience sampling was employed. All 712 children studying in 8th and 9th std. allotted by the principal were included in the study. There were no exclusion criteria.

Study duration – July 2017. Data was collected in a single day, onsite in the classroom; statistical analysis was completed in the same month.

Sample: The sample comprised 712 school children from 8th and 9th std. from two English medium HSE Co-ed schools in Delhi, India. The students were divided into two groups– Group I (10–14 yrs.) and Group II (15–18 yrs.) To encourage honest answers, no names were asked except for participants' age and gender and demographic details.

Consent: Consent was obtained from school principals who then obtained consent from parents. Written assent was obtained from students in the form.

Ethical clearance: Ethics approval was obtained from AACCI Institutional ethics committee.

Data collection: The third author trained the teachers to get the proforma made for this project, including the MLAMS scale. Demographic details like age, gender, and number of siblings were collected. Height and weight were asked to calculate the BMI.

Statistical analysis: Conducted using SPSS version 17.

Tool used: We used the Martin-Larsen Approval Motivation Scale (MLAMS). This 5-point Likert-type scale has 20 items (6 items-reverse scorings), with a Mean of 53.6 and SD of 9.02. Higher scores indicate more need for social approval. Reliability index (Cronbach alpha coefficient) is 0.75; the Test-retest reliability coefficient is 0.72.

Results

Regarding the degree of approval motivation, in the total sample, approval motivation scores were higher in girls from Group II (60.49 vs 57.76; p=0.010). Between schools, Group I boys from School 1 had higher scores (59.14 vs 54.40; p=0.008) In children with no siblings, in the total sample, higher scores were seen in Group II girls (59.67 vs 55.72; p=0.008). Regarding the relationship between approval motivation scores of age groups within the same BMI category, for normal-weight children, Group I scored more than Group II (59.71 vs 56.67; p=0.019). On comparing schools, underweight children from Group II in school 1 had higher scores than children in school 2 (60.72 vs 55.71; p=0.009).

Keywords: *approval motivation, body mass index, school children, nutritional status, underweight, obesity*

INTRODUCTION

Approval motivation is the desire to produce positive perceptions in others and the incentive to acquire the approval of others as well as the desire to avoid disapproval (Bailey et al., 2008). Martin (1977) defined approval motivation as a personality variable that deals with the individual's need of approval from others. According to Crown and Marlowe, high approval motivation individuals to try to achieve favourable evaluations from other society members (as cited in Mishra & Singh, 2015). Approval motivation is an important factor in influencing numerous psychological and physical variables.

Research on approval motivation has shown how individuals from various demographics react to others' expectations and influences. With regards to adolescent altruistic behaviour, altruism positively correlated with approval motivation and negatively with power motivation,

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implying that altruistic behaviour increases with increased approval motivation (Mishra & Singh, 2015). A classic study by Larsen et al. (1976) investigated the relationship between aggression, social cost, and approval motivation in young adults using the Martin-Larsen Approval Motivation Scale (MLAMS). The results indicated that individuals with high approval motivation showed lower aggression when dealing with high social cost frustraters. Bailey et al. (2008) studied self-esteem and approval motivation among athletes and non-athletes and found that in both athletes and non-athletes, a negative correlation existed between self-esteem and approval motivation, indicating that high approval motivation may make individuals dependent on appreciation and negatively affect their self-esteem.

Very few studies have been conducted to study the relationship between approval motivation and physical variables, especially eating habits and body mass index (BMI). Regarding diet quality in young adults, Tang et al. (2022) studied gender differences in social desirability and approval motivation, and self-reported errors in diet quality in young adults. They found that approval motivation was more common in females and influenced their self-reported diet and diet quality; no such relations were found in males.

Helping children maintain optimal BMI is essential to prevent non-communicable diseases (NCDs) as obesity forms nidus for Hypertension diabetes and cardiovascular diseases. Above mentioned studies indicate that having approval motivation favourably influences different attitudes, including diet quality (WHO, 2022). Thus, we studied how approval motivation can be used as a tool for helping children maintain a healthy BMI in this sample, given the dearth of such research on Indian children. Additionally, children need to learn to maintain a healthy BMI without being neither overly dependent on appreciation from others or too careless about others' approval towards their health. We also conducted a study on self-efficacy in children regarding food choices and physical activity (Bhave et al., 2022). In the present study, we assessed the degree of approval motivation in school children and the relationship between the children's age, gender, sibling status and BMI and their degree of approval motivation as received from others.

Hence, this paper attempts to weigh the negative and positive implications of school children depending on perception of others for their self-acceptance. It contrasts the positive influence that seeking approval of significant others may have on young people maintaining their health and preventing life style related problems. On the other hand, it inspects the possible negative impact of the high need young people may have for approval from significant others, thereby reducing their own self esteem.

METHOD

Aims

1) To assess the degree of approval motivation in school children using a standardised scale and assess the impact of age, gender, and Body Mass Index (BMI).

2) To plan intervention programs in schools to develop self-motivation to reduce dependence on approval from others.

Study design

Cross sectional study in school children.

Study duration

The data was collected in July 2017. Data collection was completed in a single day, onsite in the classroom; statistical analysis completed in the same month.

Sample

The sample comprised 712 (362 Males, 350 Females) school children from 8th and 9th std. from two English medium HSE Co-ed schools in Delhi, India. The students were divided into two groups– Group I (10–14 yrs.) (n=417) and Group II 15–18 yrs. (n= 295). The total number of students in school 1 was 346 (166 Males, 180 Females) and that in School 2 was 366 (198 Males, 168 Females). To encourage honest answers, no names were asked except for participants' age and gender and demographic details.

Sample selection inclusion exclusion criteria

The third author conducts programs in English medium Co-ed school in New Delhi India. This was a convenience sample. All 712 children studying in 8th and 9th std. allotted by the principal were included in the study. There were no exclusion criteria.

Consent

Consent for the study was obtained from the school principals who then obtained consent from parents. Written assent was obtained from the students by including the form in the questionnaires. No names were asked to maintain anonymity. Only age, gender and demographic details were asked.

Data collection

The teachers were trained by the third author to get the proforma made for this project, including the MLAMS scale filled by the students. Demographic details like age, gender, and number of siblings were collected. Height and weight were asked to calculate the BMI. The students were explained how to fill out the approval motivation scale. To encourage honest answers, no names were asked for.

Out of the 712 students only 656 have mentioned gender hence 56 forms (7.68%) needed to be discarded when gender comparisons were carried out, but all 712 participants were included for other analyses. Of the 712 students, only 624 (87.64 %) students provided data for their weight and height so BMI correlation of only these students have been analysed.

Tool used

We used the Martin-Larsen Approval Motivation Scale (MLAMS). This 5-point Likert-type scale has 20 items (6 items-reverse scorings), with a Mean of 53.6 and SD of 9.02. Higher scores indicate more need for social approval. Reliability index (Cronbach alpha coefficient) is 0.75; the Test-retest reliability coefficient is 0.72.

Students' age, gender, class, and number of siblings were recorded. Additionally, to measure BMI, their heights and

weights were asked for. The BMI was calculated by the formula BMI = Weight (kgs)/ Height (m)^2 and categorised according to the category cut-off given by World Health Organization (WHO) for Asian populations (The Lancet, 2004; Weisell, 2002). Those who did not provide their height and weight, were not included in the corelation of BMI.

Data collection

The data was collected in July 2017. The teachers were trained by the 3rd author to get the MLAMS scale proforma filled by the students.

Statistical analysis

This was a cross-sectional study. The Mean and SD of students' approval motivation scores categorized by school, age group, gender, and BMI categories were calculated. To assess the relationship between BMI and Approval motivation scores, (statistical measure) was calculated. Statistical analysis was done using SPSS 17. Chi Square was used to find the significance of data.

Ethical clearance

Ethics approval was obtained from AACCI Institutional ethics committee. Permission to conduct the study and use the scale was obtained from the School principals. There is no personal, organizational or financial conflict of interest with regard to the design, conduct, supervision, reporting, and presentation of results. Additionally, written assent was obtained from the participants, since legally consent cannot be taken from minors below 18 yrs. and our sample comprised students aged 15–18 years.

RESULTS

Approval Motivation and Age and Gender

In total sample, approval motivation scores were significantly higher in the older girls from Group II (60.49) than in girls from Group I (57.76) (p=0.010). Between the two schools, younger boys in Group I from school 1 (59.14) had significantly higher approval motivation scores than those in school 2 (54.50) (p=0.008). Overall, girls in their late teens showed significantly higher desire for social approval than their younger counterparts, underlining the importance of gender in self-perception of the body as girls grow older. (Table 1, p< 0.01). Media and social perceptions arising out of its impact may have a role to play here.

Table 1
Approval Motivation (AP) scores related to age and gender
- Delhi schools n = 656

	Age group	School 1 Average AP scores	School 2 Average AP scores	Total Sample N=712
GIRLS	Group A - 10 to 14 yrs.	58.71	56.96	57.76
	Group B- 15-19 yrs.	60.82	59.96	60.49
	Total	59.73	57.95	58.88
	P value	0.077	0.110	**0.010 ***
BOYS	Group A - 10 to 14 yrs.	59.14	54.50	56.15
	Group B- 15-19 yrs.	59.56	56.49	58.34
	Total	59.37	55.10	57.06
	P value	0.724	0.352	0.074

Significant p values *
Average scores for AP are 53.6 SD 9.02. Martin H.J. (1984) higher the scores more is the need for social approval
n=656 as we discarded forms 56 forms (7.86%) which had not put their gender

Approval motivation and Siblings

In the total sample analysis of children who had no siblings, older Group II (59.67) had significantly higher approval motivation scores than children from younger Group I (55.72) (p = 0.008). No significant results were seen in other groups and between the two schools. It is interesting to note that children who had a single child status in the family i.e. had no siblings, grew more conscious of how others saw them, as they reached their late teens. (Table 2, p<.008) More work may be needed in this area, but the current results seem to point to a mitigating effect of presence of siblings in countering the importance given to whether others approve of them.

Table 2 – Comparison of Approval Motivation (AP) scores related to sibling status
Total sample - Delhi schools n= 712

	Age group	School 1 Mean AP scores	School 2 mean AP scores	Total sample n= 712
No Siblings	Group A - 10 to 14 yrs.	58.34	54.49	55.72
	Group B- 15-19 yrs.	59.82	59.33	59.67
	Total sample	59.11	55.42	57.04
	P value	0.0296	0.085	**0.008 ***
One Siblings	Group A - 10 to 14 yrs.	59.09	57.55	58.21
	Group B- 15-19 yrs.	60.03	59.23	59.67
	Total sample	59.54	58.17	58.83
	P value	0.428	0.332	0.163
Two+ Siblings	Group A - 10 to 14 yrs.	57.40	55.64	56.55
	Group B- 15-19 yrs.	61.34	55.08	59.51
	Total sample	60.00	55.38	58.29
	P value	0.066	0.917	0.219

***Significant p value**
Average scores for AP are 53.6 SD 9.02. Martin H.J. (1984)
We had higher scores- higher the scores more is the need for social approval

Relationship between BMI and Approval motivation

In the total sample, in children with normal weight, approval motivation scores were significantly higher in younger Group I (56.33) than in older Group II (59.98) (Table 3, $p = 0.005$). In obese children, approval motivation scores were significantly higher in younger Group II (62.38) than in older Group I (55.67) ($p = 0.018$).

In School 1, approval motivation scores of obese children in older Group II (65.20) were significantly higher than in younger Group I (55.75) ($p = 0.012$).

In School II, in children with normal weight, approval motivation scores of children in older Group II (59.47) were significantly higher than younger children in Group I (54.64) ($p = 0.029$).

Comparing two schools, in younger Group I children with normal weight, students from school 1 had significantly higher approval motivation scores (59.14) than children from school 2 (54.64) (p=0.021). In older Group II children who were underweight, the approval motivation scores were significantly higher in children from school I (60.2) than in children from school II (55.71) (p=0.009). Additionally, in older Group II obese children, the approval motivation scores were significantly higher in children from school 1 (65.20) than in children from school 2 (57.67) (p=0.024).

Table 3 – Comparison of Approval Motivation (AP) scores related to BMI.
Total sample - Delhi schools n= 712

BMI Asian Cut off	Age group	School 1 Average AP scores	School 2 Average AP scores	Total sample n= 712
Underweight	Group A - 10 to 14 yrs.	58.81	58.07	58.37
	Group B- 15-19 yrs.	60.72	55.71	58.75
	Total sample	59.59	57.52	58.49
	P value	0.126	0.268	0.750
Normal Weight	Group A - 10 to 14 yrs.	59.14	54.64	56.33
	Group B- 15-19 yrs.	60.30	59.47	59.98
	Total sample	59.81	56.31	58.00
	P value	0.398	**0.029***	**0.005***
Overweight	Group A - 10 to 14 yrs.	56.00	51.43	53.87
	Group B- 15-19 yrs.	59.80	58.91	59.42
	Total sample	58.48	56.00	57.39
	P value	0.175	0.298	0.107
Obese	Group A - 10 to 14 yrs.	55.75	55.50	55.67
	Group B- 15-19 yrs.	65.20	57.67	62.38
	Total sample	61.00	56.80	59.50
	P value	**0.012***	0.394	**0.018 ***

***Significant p values**
Average scores for AP are 53.6 SD 9.02. Martin H.J. (1984)
We had higher scores- higher the scores more is the need for social approval

DISCUSSION

The study aimed to understand the relationship between BMI and approval motivation scores in school children aged 10–18. The mean approval motivation scores of the present sample were higher (56.15–60.49) than the standard scores obtained by the western population (53.6). Given India's collectivistic culture and the emphasis on being liked by others, our needs for approval may be higher than in western cultures, which are more individualistic. These higher-than-average approval motivation scores may put children at high risk as they may seek excessive peer approval, a pattern we are seeing in social media overuse and addiction patterns among young persons (Masthi et al., 2018).

Results showed that older girls aged 15–18 had higher approval motivation scores, indicating a higher need of seeking approval from others. Tang et al. (2022) also found high scores of approval motivation in female students. A very high need for approval may put them at risk for "wanting to fit in or be appreciated a lot". Girls of the older teen group maybe more desirous of obtaining approval from others, and hence showed a significantly higher social approval score. The implications for their self-esteem vis a vis body image is amply clear.

Regarding the presence of siblings and approval motivation scores, children from Group II showed significantly higher approval motivation scores. A classic study by Ponit and Falbo (1987) studied single children and their personality development and found that children with no siblings had higher achievement motivation. A higher need for achievement may cause single children to need higher approval from others, especially in a collectivistic culture like India.

Regarding the relationship between BMI and approval motivation, older group II obese children had higher approval motivation scores. The older age group, i.e. late teens, is clearly more invested in obtaining social approval. This seems linked to the way they perceive their body. Interestingly, these trends were seen in normal weight children and obese children. Underweight and overweight children did not reflect these trends as clearly. Hayden-Wade et al. (2005) studied teasing behaviours among peers of obese school children and found that appearance-related teasing focusing on weight was directed at overweight

children. The findings were also associated with higher weight concerns and poorer self-perception of one's physical appearance. The present sample may have sought approval from significant others in life like their peers and family members in hopes of being liked despite their weight.

The findings of the study imply that the present sample relies on approval from teachers, peers, and parents as the scores on approval motivation are high in both boys and girls, especially in Older Group II. As children move to their teenage years, approval from others becomes an important motivating factor, especially in Indian culture. This highlights the importance of holding programs in schools to help students learn the importance of "self-motivation" and not depend on social approval will help in maintaining a healthy BMI. The Aim of AACCI in doing such surveys is not just conducting research, but sharing these results with school managements and parents to hold intervention programs in the schools based on the results of the survey conducted in the schools.

The data set obtained from combining respondents from two schools, yielded a statistical advantage of scale, yielding significant findings where smaller numbers in each separate group had failed to do so. This finding underlines the need to use large samples while exploring variables delving into internal experience of children, and the importance of exploring subtle and less researched variables such as desire for social approval.

Limitation of this study

The present study has certain limitations. The sample comprised students from only two schools in Delhi, limiting its generalizability. A more representative sample across different schools and cities will provide comprehensive data about the approval motivation trends in the Indian population. Ongoing AACCI work is further pursuing these variables to understand student thoughts and health related behaviours better. Future research can also study variables like achievement motivation, and social desirability in relation to children's approval motivation. Additionally, approval motivation trends in the young adult population (20–24 yrs.) in India can also be studied.

CONCLUSION

This study assessed the degree of approval motivation in school children and the relationship between children's BMI and their degree of approval motivation as received from others. Results indicated a high degree of approval motivation in older girls and older obese children. The implications of these findings call attention to the need to help school children rely less on others' approval. Customized programs are conducted by AACCI in the schools on WHO-Life Skill Education program (LSE) to increase self-esteem, teach children to follow their own self-motivation rather than be dependent upon approval from others.

Conflicts of Interest: The authors declare no conflict of interest.

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Original Research Article

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The Relationship Between Spiritual Intelligence, Psychological Well-Being and Personality among Working Women and Home Makers: An Empirical Study

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ABSTRACT

Background-Psychological constructs such as spiritual intelligence, psychological well-being and personality plays a very important role in shaping one's behaviour in order to deal effectively with the various situations of the life. The present study was carried out on 60 working women and 60 home-makers with an aim to establish the association between spiritual intelligence, psychological well-being and personality and to compare the level of spiritual intelligence, psychological well-being, and personality among working women and house maker. Tools used in the study for data collection were Integrated Spiritual Intelligence Scale (Amram ,2008), Psychological Well-being Scale (Ryff ,1995) and NEO-FFI (McCrae and Costa ,1992). The findings of the study stated that there is a significant relation between spiritual intelligence, psychological well-being, and personality. Further there was significant difference noted in all the selected variables between working women and home-makers.

Keywords: *Spiritual Intelligence, Psychological Well-being, Personality*

INTRODUCTION

Women are playing the role of a spouse, mother, daughter, and a self-actualized person who are very much trying to play the other roles of their life effectively (Holahan, C. K., & Gilbert, L. A. ,1979). The status of women is changing constantly due to the influence of urbanisation, industrialisation, awareness of rights, increased level of education etc. Carrying out the dual responsibility, career places extra demands on the working women, which ultimately affects their mental health and quality of life. Mental health contributes to about 14% of global burden of disease worldwide (Panigrahi A, et. al., 2014). The development of positive virtue like intelligence, good well-being and a positive personality can help women to develop positive attitude towards different stressors of life that also help them to overcome effectively with the challenges of their life (Yang, K. P. & Mao, X. Y. 2007). Spiritual intelligence is the ability of an individual to question about the ultimate meaning of the life and the relationship between us and our environment in which we live (Bhullar, A.,2015). Sood et al,2012 found that good interpersonal relationship and other positive traits like autonomy contribute to good mental health. Considering these variables at workplace will foster the productivity. It will help them to deal effectively with the daily hassles of their life and will also help them to enhance their quality of life by enhancing their skills. Further it helps organizations at different level to manage the human especially women resources and to attain the goals of their organization. Occupational stress can be one of the determining factors that may lead to hassles in the life of the women (Swanson NG,2000). But working women have more opportunities and are exposed to more life challenges so they might develop strategies to cope up with them.

In recent years, some studies had focused on the relationship between spiritual intelligence and psychological well-being. the result indicated that there exists a significant relationship between spiritual intelligence and psychological well-being and it is significantly related with purpose in life of the subject. (Sahebalzamani et al. 2013). A correlational study conducted by Rahimi Pour and Karami (2014) showed a significant relationship between spiritual intelligence and psychological well-being. Ahoei et al., (2017) carried out a research activity and stated that spiritual intelligence and psychological well-being shared a significant relationship with each other. The study also indicates that spiritual intelligence predicted psychological well-being.

Some previous studies have suggested that extraversion, agreeableness, and conscientiousness and critical existential thinking, personal meaning, transcendent awareness, and spiritual intelligence showed statistically significant correlations, but no association was found between personality traits such as neurosis and spiritual intelligence (Beshlideh et al 2011). The study conducted by Amrai et al (2011) showed that there lies a positive relation between the different dimensions of personality traits such as agreeableness, conscientiousness and extraversion and spiritual intelligence, but neuroticism and spiritual intelligence are negatively correlated with each other. From the study, conducted by Hossein et.al., (2012) it was found that neuroticism was not found to be positively correlated with spiritual intelligence. But spiritual intelligence was found to be statistically correlated with the other dimensions of personality such as extraversion, agreeableness, and conscientiousness. Also, it was found that personality traits such as extraversion, agreeableness and conscientiousness are predictors of spiritual intelligence. Sood et al (2012); in his study found that self-meaning generation and agreeableness and neuroticism are positively related. It was also found that there exists a significant relationship between transcendental awareness and openness. Samuel O Salami (2011) found that personality factors and emotional intelligence had significant correlations with psychological well-being.

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Rationale

As we all know that in today's scenario, peoples are facing various challenges in their life. Various psychological attribute like spiritual intelligence and well-being along with personality factors plays an important role in having a meaningful and satisfactory life. A person who is spiritually intelligent, have a positive personality and a good psychological well-being can face the adverse situations of their life confidently rather than avoiding the situations or having negative tendency towards the situation or the person himself. The spiritual intelligence in an individual can be enhanced through various types of training program and self-realization techniques which in turn will enhance their psychological well-being and personality which is important for living a meaningful and purposeful life. Also, while reviewing the literature, it was found that no studies have been conducted to see the relationship between spiritual intelligence, psychological well-being and personality and compare these variables between working women and home-makers. So, this study was carried out to fill the gap of knowledge in this regard.

Objectives

1) To establish relationship between spiritual intelligence and psychological well-being of working women and home-makers.

2) To assess relationship between spiritual intelligence and personality of working women and home-makers.

3) To assess relationship between personality and psychological well-being of working women and home-makers.

4) To compare spiritual intelligence, psychological well-being and personality between working women and home-makers.

5) To know whether spiritual intelligence predicts psychological well-being and personality.

Hypotheses

1) There would be positive correlation between the spiritual intelligence and psychological well-being.

2) There would be significant correlation between spiritual intelligence and personality.

3) The dimensions of psychological well- being is positively correlated with the dimensions of personality (such as openness, extraversion agreeableness and conscientiousness) and negatively correlated with neuroticism.

4) There would be no difference between spiritual intelligence, psychological well-being and personality of working women and home-makers.

5) Spiritual intelligence would be able to significantly predict the psychological well-being and personality.

METHODS

Research Design

The present study is based on descriptive research design and uses cross-sectional, comparative, and correlational research design.

Sample

A group of 120 women (60 working women and 60 house makers) were selected using purposive sampling from the urban and semi-urban area of Ranchi district, following inclusion and exclusion criteria as follows:

Inclusion criteria for working women:

Women in the age range of 25-45 years of age.

Women having minimum qualification as graduation

The working women must have at least 3 years of working experience.

Women working in either private or government sector.

Exclusion criteria for working women

Only women who can comprehend and respond to the questionnaire items properly.

Non-cooperative participants are not included in the study.

Inclusion and exclusion criteria for home makers:

Same inclusion and exclusion criteria were followed for home makers also. And the only difference is that home makers have no history of paid wages.

Tools

Integrated Spiritual Intelligence Scale (ISIS)

ISIS is developed by Amram (2008). The long version of this scale has 83 items while the short version which is used in this study has 45 items. It is a 6-point Likert scale Cronbach alpha ranged from .84 to .95, with a mean value of .89. It contains 22 subscales which are grouped into 5 domains: Consciousness, Grace, Meaning, Transcendence and Truth.

NEO Five Factor Inventory (NEO-FFI)

NEO-FFI was introduced by Paul T Costa and McCrae (1992) to assess personality factors. The inventory originally had 240 items. This personality inventory assesses neuroticism, agreeableness, extraversion, openness, and conscientiousness. In the present study, abbreviated version of NEO is used which consists of 60 items with 12 items assessing each personality factor. Cronbach alpha-coefficient were found to be .82 for neuroticism, .77 for openness, .71 for agreeableness, .67 for extraversion, .75 for conscientiousness.

Psychological Well Being Scale

Scale of psychological well- being developed by Ryff et al (1995) is a self- report instrument based on the six dimensions of psychological well- being. The scale has 18 items which measures six dimensions include autonomy, positive relationships with others, environmental mastery, self-acceptance, personal growth, and purpose in life. It is a 5-point rating scale.Reliability and validity are satisfactory.

Procedure of data Collection:

Firstly, sample was selected as per the inclusion and exclusion criteria of the study. After that informed consent and permission were taken from the subjects and all the other stakeholders. After developing rapport with the sample group all selected tools or questionnaires were

administered individually on the sample as per their convenience. APA recent ethical guidelines were followed while conducting this study.

RESULT

Table 1- Correlation between psychological well-being and spiritual intelligence

	Psychological well-being
Spiritual Intelligence	-
Consciousness	.084
Meaning	.511**
Grace	.451**
Transcendence	.321**
Trust	.431**
Spirituality	.523**

**** sig on .01 level**

Table 1- shows the correlation between psychological well-being and spiritual intelligence. Psychological well-being is positively but insignificantly correlated with one of the dimensions of spiritual intelligence i.e., consciousness(r=.084). While the other sub-scales of spiritual intelligence such as meaning (r=.511, p>.01), grace (r=.451, p>.01), transcendence (r=.321, p>.01), truth (r=.431, p>.01) and overall spirituality (r=.523, p>.01) is found to be positively and significantly correlated with psychological well-being.

Result shows that sspiritual intelligence and personality are found to be significantly correlated with each other. Conscientiousness is found to be positively and significantly correlated with meaning(r=.424, p>.01), grace(r=.449, p>.01), transcendence(r=.284, p>.01), truth(r=.263, p>.01) and spirituality(r=.453, p>.01).Extraversion is found to be positively and significantly correlated with meaning(r=.277, p>.01), grace(r=.401, p>.01), transcendence(r=.366, p>.01), truth(r=.299, p>.01) and with overall spirituality(r=.441, p>.01). Agreeableness is found to be positively and significantly correlated with meaning (r=.338, p>.01), grace (r=.305, p>.01), transcendence (r=.303, p>.01), truth (r=.398, p>.01) and overall spirituality (r=.393, p>.01). Neuroticism is found to be negatively and significantly correlated with meaning (r=-.338, p>.01), grace (r=-.338, p>.01), transcendence (r=-.293, p>.01), truth (r=-.397, p>.01) and spirituality (r=-.409, p>.01).

Table 2-shows the correlation between spiritual intelligence and personality.

	Openness	Conscientiousness	Extraversion	Agreeableness	Neuroticism
Consciousness	.077	.157	.112	-.067	.023
Meaning	.282**	.424**	.277**	.338**	-.338**
Grace	.121	.449**	.401**	.305**	-.338**
Transcendence	-.019	.284**	.366**	.303**	-.293**
Truth	.178	.263**	.299**	.398**	-.397**
Spirituality	.161	.453**	.441**	.393**	-.409**

** sig. on .01 level

Table 3- shows the correlation between psychological well-being and personality.

	Psychological well-being
Personality Variables	-
Openness	.221*
Conscientiousness	.511**
Extraversion	.404**
Agreeableness	.405**
Neuroticism	-.386**

*Significant on .05 level, ** significant on .01 level

Above table shows thatthe sub-scales of personality i.e., openness (r=.221, p>.01), conscientiousness (r=.511, p>.01), extraversion (r=.404, p>.01) and agreeableness (r=.405, p>.01) are positively and significantly correlated with psychological well-being whereas neuroticism (r=-.386, p>.01) is negatively and significantly correlated with psychological well-being. The result of the study proves the hypothesis that psychological well-being is negatively and significantly correlated with neuroticism while positively and significantly correlated with other dimensions of personality.

Table 4- Comparing spiritual intelligence, psychological well-being, and personality of working and home maker women.

Table 4.1 shows the comparison between the psychological well-being of working and home maker women

		N	Mean	Std. Deviation	t-test	Sig. 2 tailed
PWB	Working women	60	63.93	7.080	2.375*	.05
	Home-makers	60	60.63	8.105		

The psychological well-being of working women (M=63.93) is higher in comparison to that of home maker women(M=60.63) (t= 2.37, p<.05).

Table-4.2 Comparison between spiritual intelligence of working and home maker women

		N	Mean	Std. Deviation	t-test	Sig. 2 tailed
Consciousness	Working women	60	22.37	4.573	.572	568
	Home-makers	60	21.93	3.672		
Meaning	Working women	60	18.57	3.543	2.799**	.01
	Home-makers	60	16.80	3.369		
Grace	Working women	60	48.82	6.838	2.298*	.05
	Home-makers	60	46.05	6.342		
Transcendence	Working women	60	44.77	6.374	3.081**	.01
	Home-makers	60	40.97	7.119		
Truth	Working women	60	49.60	6.880	1.656	.100
	Home-makers	60	47.63	6.109		
Spirituality	Working women	60	184.1167	20.21922	3.105**	.01
	Home-makers	60	173.3833	17.56064		

*sig. on .05 level, ** sig. on .01 level

Table-4.3 Comparison between personality of working and non-working women

		N	Mean	Std. Deviation	t-test	Sig. 2 tailed
Openness	Working women	60	37.03	4.113	2.275*	.05
	Home-makers	60	35.17	4.847		
Conscientiousness	Working women	60	44.43	5.404	1.098	.274
	Home-makers	60	43.38	5.063		
Extraversion	Working women	60	41.28	5.675	2.168*	.05
	Home-makers	60	39.05	5.607		
Agreeableness	Working women	60	42.63	5.520	1.991	.049
	Home-makers	60	40.68	5.203		
Neuroticism	Working women	60	34.77	6.521	1.931	.056
	Home-makers	60	37.00	6.145		

*sig. on .05 level, ** sig. on .01 level

Above table shows the score on the dimension of meaning of working women (M=18.57) was high in comparison to that of home-makers (M=16.80). The level of significant difference i.e., t-value=2.799 which is significant at .01 level. Working women (M=48.82) scored high on the dimension of grace in comparison to that of home-makers (M=46.05). The level of significant difference i.e., t-value=2.298 is significant at .05 level. The score on the dimension of transcendence was high for working women (M=44.77) in comparison to that of home-makers (M=40.97). The level of significant difference i.e., t-value=3.081 is significant at .01 level. Working women (M=49.60) scored high on the dimension of truth as compared to that of home-makers (47.63). The level of significant difference i.e., t- value=1.656 was not found to be significant. The score on the overall spirituality was more

of working women (M=184.12) in comparison to that of home-makers (M=173.38). The level of significant difference i.e, t-value=3.105 is significant at .01 level.

Above table shows that working women and home maker were significantly differed to each other on the openness (t=2.27,P<.05) and extraversion(t-2.16,P<.05) dimension of the personality. Working women are comparatively more open and extroverted than the home maker women.

Table-5 Regression analysis for spiritual intelligence as predictor and psychological well-being and personality as criterion variable

Predictor (Spiritual Intelligence)	R	R Square	R Change Square	Beta Change	F Change	Significance of F Change
Criterion Variable:						
Psychological well-Being	.312	.097	.090	.312	12.719	.001
Personality	.319	.101	.094	.319	13.326	.000.

This table-5 indicates that the 9.7 percent variance in the scores of spiritual intelligences is accounted for by psychological well-being and 10.1 per cent variance in the spiritual intelligence is accounted for by personality.

DISCUSSION

Spiritual intelligence and its domains like meaning, grace, transcendence, truth, and overall spirituality are found to be positively and significantly correlated with psychological well-being. This was in conformity with the earlier study of Lee Fong et al,2022. They found a statistically significant relationship between spiritual intelligence and psychological well-being. Present study also reveals that personality i.e., openness, conscientiousness, extraversion, and agreeableness are positively and significantly correlated with psychological well-being whereas neuroticism is negatively and significantly correlated with psychological well-being. Some studies like Mahasneh et. al. (2015) in their study found that the dimensions of spiritual intelligence such as critical existential thinking, personal meaning production, transcendental awareness and conscious expansion and the personality traits such as neuroticism, extraversion, openness to experience, agreeableness and conscientiousness showed a positive and statistically significant relationship with each other. But, personal meaning production, transcendental awareness and neuroticism do not share positive significant correlation. Some earlier studies also show a significant relation between psychological well-being and personality traits of the individual, but this relationship is not simple , this is very much complex in nature (Chiara Ruini et al ,2003). Most of the times individual due to his own personal traits felt distress and anxiety. Result of the present study also shows that working women and homemakers are differed significantly on the spiritual intelligence (meaning, grace, transcendence, and spirituality) and personality factors (openness and extraversion). Working women have more meaning, grace, transcendence, spirituality, extraversion, and openness in comparison to home maker women. One of the explanations may be that the working women always interact with others in official as well as other situation, and their interpersonal relationship affects the meaning of their life and brings a lot of positive virtue like grace, transcendence etc.

CONCLUSION

It can be concluded that spiritual intelligence, psychological well-being, and personality was found to be significantly correlated with each other. working and home maker women differed significantly on the spiritual intelligence, psychological well-being, and personality variable.

IMPLICATIONS

The present study has a very practical implication that by enhancing the spiritual intelligence, psychological well-being, and personality of working women one can help them to manage their work and resources. The unique skills and attributes of the three variables could increase their confidence towards taking on leadership positions in future. This will further help the organization in attainment of a particular goal and objective of the workplace.

LIMITATIONS OF THE STUDY

Although the study gave a very clear-cut description of the relationship between spiritual intelligence, psychological well-being, and personality. Some of the limitations of the study are the listed below:

The study did not employed analysis of the variables based on socio-demographic details.

Secondly, if the study would have been both qualitative and quantitative study inspite of quantitative study, the participant would have got chance to express their feelings and opinions in a better way, that would have given better picture of the challenges faced by both working and non-working women.

Lastly, the study was restricted to a small geographical region of Jharkhand, Ranchi.

RECOMMENDATIONS FOR FUTURE STUDY

The present study gave a better understanding about the challenges and difficulties women face in their day to day lives and explained the relationship between spiritual intelligence, psychological well-being and personality among working and home maker women. Future research should focus on the factors that enhances spiritual intelligence, psychological well-being, and personality. A mixed method i.e., both qualitative and quantitative method can be used for collecting data and analysis of data. Also, a larger geographical area can be selected for collecting data.

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Levels of Anxiety and Depression among Mothers of Children with Intellectual Disability: A Study in the Indian Context

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ABSTRACT

Intellectual disability is a term used when a person has certain limitations in cognitive functioning and skills, which remains throughout the individual's life. Intellectually disabled individuals may fail to deal with complex socio-cultural phenomenon, as a result of which they have traditionally been stigmatized, isolated and deprived of society's resources. This leads to the parents, especially mothers, being more prone to develop anxiety and depression in the long run. This study aimed at finding out whether there is a risk of psychological problems among mothers based on the degree of intellectual disability. Purposive sampling method was adopted and a total of 80 mothers having child with intellectual disability from a varied socioeconomic background consented to participate in this study. The participants were measured on anxiety and depression inventories. The results showed that when the degree of intellectual disability in the child progressed, the mother's risk for depression increased, particularly there were significant differences observed in depression levels of mothers of children with mild intellectual disability and profound intellectual disability. There was no significant relationship was found intellectual disability and anxiety. The findings of the study were discussed in the light of Indian context.

Keywords: *Anxiety, Depression, Intellectual Disability, Maternal Anxiety, Maternal Depression.*

INTRODUCTION

Intellectual disability (ID) is a type of disability characterized by individuals having significant impairment in both intellectual functioning and socio-adaptive behaviour, which remains throughout the individual's life (Beighton and Wills, 2017). This significant impairment is characterized as performance that is 2 or more standard deviations below the mean based on normed, individually administered standardized tests of cognitive and adaptive function. The diagnosis and classification indexes for ID are based on the specific range of Intelligence Quotient (IQ) scored by individuals, that is, mild (IQ 55–69), moderate (IQ 35–49), severe (IQ 20–34) and profound (IQ <20). As per the reports by the Decennial Population Census of India 2011, 26.8 million individuals are falling under the spectrum of disability, of which 6 percent are intellectually disabled, with a higher prevalence among males (American Association of Intellectual and Developmental Disabilities, 2021). Meanwhile, a later study carried out in India has reported a prevalence rate of 10.5/1000, where the urban population have slightly higher rates than the rural setting. Having the largest population of children with risk of developmental disabilities among the world, ID has evolved as a major health and societal concern in India (Azeem et al., 2012; Bourke-Taylor et al., 2010; Dabrowska and Pisula, 2010).

Intellectually disabled individuals may fail to deal with complex socio-cultural phenomenon, characterized by difficulty in complying with the cultural values required and intellectual and social behavior. As a result, they have traditionally been stigmatized, isolated and deprived of society's resources. Parents and the immediate family members are the main source of support for a child with ID in any culture. Functional impairment of the child with ID, may be it physical, psychological or social, needs to be compensated for by the caregivers. Thus, parenting a child with ID can bring in outcomes such as increased family closeness, personal growth and joy, which are beneficial and constructive (Hastings et al., 2002; Hastings and Taunt, 2002; Keskin et al., 2010; Kim, 2017). On the downside, having a child with disability not only affects the child functionally, but it is also a concern to the whole family due to the mental and financial burden, and raising a child with disability will be quite challenging for the family as it requires additional time and attention than their typically developed counterparts (Durkin, 2002). Moreover, depending on the severity of the condition, the responsibilities could vary disproportionately. Due to this, parents undergo a lot of distress, worry about their children's future, and experience mental imbalance and psychological confusion while upbringing their children with ID (Emerson, 2003). As a consequence, it makes the parents more prone to develop depression and anxiety in the long run (Lakhan et al., 2015).

Depression is linked to a variety of negative effects limited to not only the individual's cognition, behavior and affect but also poor physical health, lack of self-care and limited social functioning, which in turn affects the quality of care to the children from the parental side (Emerson, 2003; Hastings and Taunt, 2002; Majumdar et al., 2005). Although sparse research evidence exists on anxiety among parents of children with ID, it was found that parents of child with ID scored high on trait anxiety (Maulik and Harbour, 2010).The main reasons for these emerging parental problems cited in the literature are permanency of the condition, disapproval of the child's behavior

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demonstrated by the society and family members, and insufficient professional support (Mumford et al., 1997).

The coping styles of parents of children with these disabling conditions were extensively researched. In an Indian study that examined the psychological parameters and coping styles of caregivers of ID and psychiatric illness, Panicker and Ramesh (2018) reported that symptoms of stress, anxiety and depression in caregivers were higher in those with children with ID than with psychiatric illness. The most common coping style used by caregivers was religious coping. Dabrowska and Pisula (2010) found difference in social diversion coping among mothers of children with autism and healthy controls. In addition, it was also found that emotion-oriented coping was the predictor of parental stress in parents of children with autism and Down syndrome, and task-oriented coping was the predictor of parental stress in the sample of parents of typically developing children.

In an economically developing nation like India, there are only limited research data available on the effects of upbringing children with ID and risk of psychopathology such as anxiety and depression especially in mothers since they are the primary caregiver. Hence, in our study, the primary objective was to discover the relationship between anxiety, depression, and ID and how the severity of ID in children could contribute to the risk of psychopathology among mothers.

METHODS

Recruitment of the Samples

The inclusion criterion of this study was mothers aged 40 years or below with one intellectually disabled child who is aged less than 18 years. Mothers of children with ID along with other comorbid conditions, mothers who were facing distress by death of any first relative, mothers who are facing distress by any major physical illness which has a disabling nature and mothers who are undergoing treatment for any psychiatric illness were excluded from the study. Participants fulfilling the proposed criteria were first determined, and a total of 147 mothers whose children were diagnosed and availing treatment from the outpatient service clinic at a tertiary care disability rehabilitation centre were purposively approached.

Participants

A group of a total 80 mothers of children with ID expressed their consent to participate. Their mean IQ (see Table 2) was found to be 43.1±14.66. The male mean IQ of 44 and female mean IQ of 41. Of the total sample, 39 percent constituted the mild ID group, 38 percent constituted the moderate ID group, 15 per cent constituted the severe ID group and 8 percent constituted the profound ID group. The mean male age of the children was 10.2 years and the mean female age of the children were found to be 11.5 years.

Procedure

The purpose of the study was explained to participants; written informed consent was taken from the participants who expressed willingness to volunteer, and consequently the data were collected individually from each participant. The interviewers were clinicians who were trained in the administration of the questionnaires. This study was conducted in accordance with local legal and ethical regulations concerning scientific research.

Table 1: Sociodemographic characteristics.

Variables	Mean (*SD*)	*N*
Age (children)	10.69 (3.18)	80
Gender		
Males	–	53
Females	–	27
Age (mother)	33 (5.63)	80
Educational qualification (mother)		
Primary School Education	–	9
Secondary School Education	–	26
Higher secondary Education	–	31
Graduate	–	11
Postgraduate	–	3
Domicile		
Urban	–	69
Rural	–	11
Socioeconomic Status		
Low	–	53
Middle	–	23
High	–	4
Family type		
Joint	–	28
Nuclear	–	52

Table 2: Descriptive statistics for IQ, BDI and BAI scores

Variables	Mean (*SD*)	*N*
Depression (BDI)	22.95 (9.06)	80
Anxiety (BAI)	10.65 (6.50)	80
Intellectual Quotient (IQ)		
Male Children	44 (14.81)	53
Female Children	41.14 (14.4)	27
Both Gender	43.1 (14.66)	80

Measures

The participants' basic details and characteristics were collected using a brief sociodemographic questionnaire.

Child Measures:

The children of the mother's included in the study were assessed using either one of the following intellectual functioning assessments (given below) by a clinician, and the IQ were estimated based on the following assessments.

1. Seguin Form Board (SFB; Seguin 1907) was used to measure overall intellectual functioning in children

ranging in age from 3.5 to 10. The test comprises of ten geometrical wooden blocks and a form board, sometimes known as a pegboard, on which the blocks can be properly put. Although it is primarily intended to assess children's form perception and motor coordination, it can also be used to assess IQ in children in the age group above. It has good reliability and concurrent, predictive validity if it's used only in the above-mentioned age groups.

2. Malin's Intelligence Scale for Indian Children (MISIC; Malin A. J. 1969) was used to measure intelligence in children from the ages of 6 to 15 years 11 months. This test comprised of 11 subtests divided into two groups, Verbal and Performance. Verbal Scale consists of 6 subtests and Performance Scale consists of 5 subtests. The test-retest reliability for MISIC was found to be 0.91 for full-scale IQ. MISIC has established concurrent as well as congruent validity.

Maternal Measures:

The following tools were used on the mother's who participated in the study:

1. Beck's Depression Inventory (BDI-II; Beck 1996) was used to measure the depression symptoms among the participants. The BDI-II contains 21 items and it is scored on a 4-point scale from 0 (symptom absent) to 3 (severe symptoms). The test-retest reliability of this scale was found to be r = .93 (suggesting robustness against daily variations in mood) and an internal consistency score of α = .91. This tool also found to be having good content and criterion validity.
2. Beck's Anxiety Inventory (BAI-II; Beck et al., 1988) was used to measure the anxiety symptoms among the participants. The BAI consists of 21 self-reported items (four-point scale) used to assess the intensity of physical and cognitive anxiety symptoms during the past week. The BAI is psychometrically sound. Internal consistency (Cronbach's alpha) ranges from .92 to .94 for adults and test-retest (one week interval) reliability is .75. Concurrent validity with the Hamilton Anxiety Rating Scale, revised is .51; .58 for the State and .47 for the Trait subscales of the State-Trait Anxiety Inventory. The BAI has also been shown to possess acceptable reliability and convergent and discriminant validity for both 14-18 year and inpatients and outpatients.

Data Analyses

The distributions of the study variables were explored using Shapiro-Wilk test statistic, the results of which was non-significant for BDI scores and significant for BAI and IQ scores. It was interpreted that BDI scores were normally distributed but whereas BAI and IQ scores were not normally distributed, hence non-parametric analyses were considered for the study. Spearman correlation was computed for the BAI, BDI and IQ scores to understand the degree of the relationship. Followed by this Mann-Whitney U test was performed to understand the differences in the depression and anxiety levels based on the children gender and Kruskal-Wallis H test was done to understand the differences in the mother's anxiety and depression level based on the severity of the child's intellectual disability. Post-hoc testing was performed using Tukey's HSD for BDI scores and Intellectual Disability severity, as the BDI scores did not violate the parametric one-way ANOVA assumptions.

RESULTS

The descriptive analysis (Table 1) for the socio-demographic variables of the participants and study variables indicated that the mean age of the mothers who participated in the study was found to be 33 ± 5.63 years, majority of them (39%) had a higher secondary school education, was from an urban (86%), low socio-economic status (66%) and a nuclear (65%) family type. The mean maternal depression and anxiety scores was found to be 22.95 ± 9.06 and 10.65 ± 6.50. The correlational analysis (Table 3) revealed a significant negative correlative between the IQ scores and BDI scores (r = -.336, p < 0.01), and positive correlation between BAI scores and BDI scores (r = .451, p < 0.01) of mothers with ID child. Regression analysis could not be computed, as the data violated the assumptions hence effect size was computed for significant correlations from the analysis (i.e., between IQ and BDI scores) to understand the correlational strength, the analysis revealed that medium size of effect with a total variance of 9% explained by the variable.

Table 3: Spearman correlation test statistics for IQ, BDI and BAI scores.

Variables	Depression (BDI)	Anxiety (BAI)	IQ
Depression (BDI)	-		
Anxiety (BAI)	.451**	-	
IQ	-.336**	-.218	-

** Correlation was significant at 0.01 level (2-tailed)

Table 4: Mann-Whitney test statistic for BDI, BAI scores and gender of the children.

Variables	Gender (Children)	Mean Rank	Sum of Ranks	Mann-Whitney U	Sig.
Depression (BDI)	Males Females	40.71 40.09	2157.50 1082.50	704.5	.911
Anxiety (BAI)	Males Females	40.71 40.09	2157.50 1082.50	704.5	.911

The mean value observed for maternal depression when they had male child was 22.92 ± 9.03 and in the case of female child the mean value was found to be 23 ± 9.30. The mean value observed for maternal anxiety when they had male child was 10.67 ± 6.18 and for the female child 10.59 ± 7.22. The Mann-Whitney analysis (Table 3) showed no

significant differences between the child gender and the maternal anxiety (U = 704.5, $p > 0.05$), depression (U = 704.5, $p > 0.05$) levels.

Kruskal-Wallis H statistic revealed that there were significant differences in the maternal depression levels and the severity of the intellectual disability i.e., mild, moderate, severe and profound groups (H = 11.451, $p < 0.01$) but not for maternal anxiety levels.

Table 5: Kruskal-Wallis H test statistic for BDI, BAI scores and gender of the children.

Variables	Intellectual Disability Severity	Mean Rank	Kruskal-Wallis H	Sig.
Depression (BDI)	Mild	30.58	11.541	.01
	Moderate	44.20		
	Severe	46.29		
	Profound	58.64		
Anxiety (BAI)	Mild	36.74	5.340	.149
	Moderate	38.37		
	Severe	54.21		
	Profound	42.79		

Post-hoc testing was performed based on Tukey HSD, the findings indicated that there were significant differences in the maternal depression levels when they had a child with mild and moderate severity of intellectual disability with an observed mean difference of -6.06 between these two groups (i.e., mild and moderate ID). Also, we found that there were significant differences in the maternal depression levels when the mothers had a child with mild and profound severity of intellectual disability with an observed mean difference of -9.84 between these two groups (i.e., mild and profound ID).

DISCUSSION

This study aimed at finding out whether there is a risk of psychological problems among mothers based on the degree of ID. A total of 80 mothers were selected through the purposive sampling method.

From the results obtained, it was evident that when the degree of ID in the child progressed, the mother's risk for depression significantly increased. This result was consistent with the previous findings based on studies conducted in other cultures (Olsson and Hwang, 2001; Osborn, 2001; Panicker and Ramesh, 2018). Although we did not find any significant differences in depression and anxiety among mothers of male and female children, Nagarkar et al. (2014) in their study found depression was higher among mothers of female intellectually disabled children as they are considered a social burden in an Indian scenario.

Research works in the past have highlighted that parenting a child with ID could be stressful and challenging (Durkin, 2002). It could be due to the reason that in response to heightened stress, mothers of children with mental retardation often demonstrate increased depression and anxiety compared to mothers of children without mental retardation. This is because of the circumstance that in every Indian household, mothers are expected to assume a greater responsibility to manage the child's needs and daily household chores. While taking direct care of a child with disability, the responsibilities could demand more time and energy, which consequently brings down their interests in pursuing leisure and social activities.

We cannot hold up the assertion that mothers are the only victim to mental health deterioration while raising a child with ID. In a study based on Pakistani samples, fathers scored higher on anxiety and lower on depression than mothers. Despite the fact that fathers had lower depression rates, the rates were seemingly higher than men in the general population. Depression and anxiety involve various symptomatology such as excessive worry and fear, agitation, poor sleep hygiene, persistent sadness, negative evaluation of oneself, lack of motivation and suicidal tendencies, which makes it difficult for the individuals to carry out daily routines. Hence, it is imperative that parents and caregivers should seek solutions to maintain their mental health to deliver excellent care to their children with disability.

CONCLUSION

The study's findings indicated high rates of depression among mothers when the child's degree of ID is very high. Mental healthcare workers and institutions have to be mindful about the issues and should follow an early intervention approach to screen mothers who are at risk of developing psychiatric morbidity.

The management of ID should shift therapeutic and rehabilitation intervention from the individual level to the family level, particularly towards mothers as they are the primary carers. Intervention plans such as recommendation for the carers to consult with experts frequently for treatment, therapy and counselling which would help them to improve their mental health, and teaching them the effective strategies to deal with the child's behaviour and also enhance appropriate coping skills to deal with the situation should be implemented wherever deemed necessary. Future studies should be done to evaluate the effectiveness of such interventions. Also, the findings of this study must be considered while policy-making and providing aids and financial support so that the parents of children with ID would be benefitted.

LIMITATION

The study had relatively a smaller sample size and was limited to one geographical site in India. There was no balancing of sample size between the different degrees of ID group. It did not include both the parents, and it lacked a control group. Future studies should approach the same issue by carefully considering the limitations of this study.

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Operational Police Stress and Psychological Capital among Police Personnel

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ABSTRACT

Policing is one of those occupations which has constant exposure to the public. For police officers work is nothing less than a challenge. Occupational stress is inherent in the nature of this job. They leave behind a legacy of highest standards of commitment to duty. Psychological capital is a positive psychological resource that helps effectively to reduce stress.

Aim: To assess the nature and association between operational police stress and psychological capital. **Method**: The study was conducted on police personnel within the age range 25-55, posted in the state of Bihar. Purposive Sampling method was used to recruit Ss of the study. Operational police stress Questionnaire, developed by McCreary & Thompson, (2013) and psychological capital questionnaire developed by Luthans (2007) were administered to collect data.

Result: On operational police stress 40% of the Ss revealed moderate level of stress and 60% of the Ss revealed high level of stress. Sample had average psychological capital with higher mean on dimension of efficacy. Significant correlation was found between the dimensions of psychological capital and items of operational police stress. Occupational stress may directly affect the physical and mental health resulting in reduced work productivity, indirectly affecting the crime prevention and correctional services as well as their personal , family and social life.

Keywords: *Stress, occupational police stress, psychological capital and Police personnel*

INTRODUCTION

The job of a Police is considered as one of the most stressful occupation which includes exposing staff to occupational, organizational and personal stress (Anshel et al., 2013). Police officers experience dissatisfaction and exhaustion while working under continuously stressful conditions (Robyn Geshor, n.d.). Psychological capital is one of the major subsets of human capital. It has emerged as a positively oriented higher-order construct (Luthans & Youssef, 2007). This higher-order Psychological capital is defined as: "an individual's positive psychological state of development and is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success" (Luthans, Youssef, et al., 2007, p.3).Studies have shown that psychological capital is positively related to innovative job performance and negatively related to job stress, individuals with high psychological capital reported lower levels of job stress as compared to low psychological capital (Abbas & Raja, 2015).Higher rating on Psychological capital supported a better work life balance(Sen & Hooja, 2015). Relationship between psychological capital and job satisfaction were reported by many researchers (Hashmi & Hasan, 2018). Personality trait and coping method have an interactive role in development of high psychological stress in police personnel placing them at high risk for developing psychiatric disorder (Kaur et al., 2013). Stress in the workplace was a problem and significant association was found between the age group, marital status, education and working hours and level of stress among police personnel (Selokar, 2011). During the pandemic of COVID-19 study of occupational stress and quality of work life revealed that the Railway Protection Force had a higher level of stress as compared to other counterparts of the Government Protection Force (. Singh, 2020).Police personnel reported that while enforcing new regulations and restrictions there was an increased no of violent confrontations between public and them, resulting in high occupational stress (Nameirakpam et al., 2021).The Novel COVID-19 outbreak as a pandemic made government to advocate wearing masks, ensuring physical distancing, criticizing gathering, isolation of positive cases and implementing the lockdown through restricting public movement was shouldered by the police force through the enforcement of the Epidemic Disease Act, 1987 and the Disaster Management Act, 2005.Among the health care personnel police were also the first responders to the COVID-19 disaster who were popularly listed among the "corona warriors". Research on the level of stress and its impact on various social, psychological and physical aspects is one of the inspiring area of research. The present study examines police personnel whose job is highly stressful. High level of stress experienced by them can cause serious consequence in form of physical and mental ailments which could result in reduced productivity and absenteeism at work.

METHODS

Objectives

- To study and examine operational police stress.

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- To study and examine the psychological capital and its dimensions among police personnel.
- To study the association between psychological capital and operational police stress.

Hypotheses

There would be significant association between dimensions of psychological capital and operational police stress.

Research Design

The study envisaged on Cross Sectional and co relational design to ascertain the significant association between operational police stress and psychological capital.

Sample:

35 police personnel from the state of Bihar were included in the study.

Inclusion criteria

1. Age range within 25-55 yrs.
2. Work experience of 3yrs and more.
3. Male police officers
4. Officers who are posted as or equivalent to inspectors, sub-inspectors and assistant sub-inspectors under the category of junior officers in the state of Bihar

Exclusive criteria

1. Age not less than 25yrs and above 55 yrs.
2. Work experience less than 3yrs

Tools used

1. Psychological capital questionnaire PCQ was developed by Luthans *et al* (2007) to measure psychological capital. The instrument contains 24 items that measure the current state of an individual's psychological capital through the dimensions of hope, efficacy, resilience and optimism. A six-point scale for rating agreement is used. The scoring of the subscales of PCQ scale is calculated by taking out the average of all the items in that scale. The total PCQ score is calculated by taking the mean of all the items in the scale. For example, all the ratings are added and then divided by 24 is equal to the mean PCQ score. The items 13, 20, 23 are reverse scored items in the scale. The range of score is 1-6, with 1 indicating low levels of psychological capital and 6 indicating high score on the questionnaire. The Cronbach's α ranged from .38-.92
2. Operational police stress (McCreary & Thompson, 2006)The Operational Police Stress Questionnaire (PSQ-Op): It was developed to measure operational stress of police officers. It is a 20-item measure to be rated on a 7-point Likert type scale ranging from 1 (No stress at all) to 7 (A lot of stress). The PSQ-Op is highly reliable; the Cronbach's α for the PSQ-Op was found to be .93

Procedure of data collection

The participants of the study were approached using purposive sampling method. After giving a brief introduction about the research with the informed consent the police filled the questionnaires. Data were collected using datasheet covering socio-demographic profile. The participants' confidentiality and anonymity was maintained. The subjects and the facilitators were acknowledged. Both descriptive and inferential statistics were used for analysis. The scores obtained were analyzed using the Statistical Package for Social Sciences (SPSS) version 20.

RESULTS

Table 1: Demographic details of the sample.

	N	Minimum	Maximum	Mean	Std. Deviation
Age	35	2	7	5.14	1.498
Job state	35	1	2	1.26	.443
Designation	35	1	3	2.17	.707
Work experience	35	1	7	5.23	1.816
No of transfer	35	0	31	8.43	6.857

Table1. shows the demographic details of the 35 police personnel that participated in the study. The age range was of minimum 30-34 years and maximum of 55 years of age with mean of 45 years. Out of total sample minimum were of Inspector rank and maximum were Assistant Sub-Inspector. The job state of maximum police was rural area. Minimum work experience was 3-6 years and maximum were above 27 years. Minimum transfer was 3 and maximum transfer was 31.

Table 2: Level of Operational Police Stress among the participants.

Level of operational police stress	f (%)
Moderate	14 (40%)
A lot of stress	21 (60%)

In the above table 2 we can see that 40% of the sample is experiencing moderate level of stress and 60% of the samples are experiencing a lot of stress in their work.

The above table 3 depicts that 91% of police personnel while on duty experience a lot of stress in shift work, 45%of them experience a lot of stress working alone at night,48% of them experience moderate level to a lot of stress in overtime demands,68.6% of them experience a lot of stress in paper work and 65.7.6% of them experience a lot of stress on feeling like always on the job. 42.9% of them experience moderate level of stress in traumatic events, 65.7% experience moderate level of stress in managing social life outside of work,54.3% of them experience moderate level of stress in not enough time available to spend with friends and family,60%of them experience moderate level of stress in eating healthy at work,54.3% of them experience moderate level of stress in finding time to stay in good

physical condition,51.4%of them experience moderate level of stress in fatigue,51.4% experience moderate stress in occupation- related health issues (e.g., back pain), 42.9% experience moderate stress in lack of understanding from family and friends about the work,60% experience moderate level of stress in limitations to social life and family/friends. 65.7% experience a lot of stress in feeling the effect of the stigma associated with the job. 34.3% experience mild stress in risk of being injured on the job, 54%experience mild stress in work related activities on the day off (e.g., court, community events),45.7% experience mild stress in making friends outside the job,51.4% experience mild stress in upholding a higher image in the public and 42.9% experience mild stress in negative comments from the public.

Table 3: Item wise analysis of operational police stress among the participants

Sl. No	Item description	f (%)	Interpretation
1	Shift work.	32 (91%)	A lot of stress
2	Working alone at night.	16 (45%)	A lot of stress
3	Over-Time demands.	17 (48%)	Moderate-A lot
4	Risk of being injured on the job.	12(34.3%)	No stress- mild stress
5	Work related activities on day off(e.g., court, community events	19 (54%)	Mild stress
6	Traumatic events(e.g., MVA, domestics,death, injury)	15 (42.9%)	Moderate
7	Managing your social life outside of work.	23 (65.7%)	Moderate
8	Not enough time available to spend with friends and family.	19 (54.3%)	Moderate
9	Paper work.	24 (68.6%)	A lot of stress
10	Eating healthy at work.	21 (60%)	Moderate
11	Finding time to stay in good physical condition.	19 (54.3%)	Moderate
12	Fatigue (e.g., shift work over-time.	18 (51.4%)	Moderate
13	Occupation-related health issues(e.g., back pain)	18 (51.4%)	Moderate
14	Lack of understanding from family and friends about your work.	15 (42.9%)	Moderate
15	Making friends outside the job.	16 (45.7%)	Mild
16	Upholding a “higher image” in public.	18 (51.4%)	Mild
17	Negative comments from the public.	15 (42.9%)	Mild
18	Limitations to your social life (e.g., who your friends are, where you socialize)	21 (60%)	Moderate
19	Feeling like you are always on the job.	23 (65.7%)	A lot of stress
20	Friends/ family feel the effects of the stigma associated with your job.	15 (42.9%)	Moderate

Table 4 - Performance of the participants on the dimensions of psychological capital scale.

Sl.No	Dimensions of Psychological Capital	Mean	SD
1	EFFICACY	31	3.68
2	HOPE	29.66	3.5
3	RESILIENCE	28.26	2.83
4	OPTIMISM	27.06	3.25

In table 4 we can see that the participant has M=31, SD= 3.68 in efficacy,M= 29.66, SD =3.5 in Hope, Resilience M= 28.26,SD= 2.83 and optimism M= 27.06,SD=3.25.

Table 5- Total psychological capital of the participants.

Total score of Psychological Capital	Interpretation
117.94	Average psychological capital

Table 5 shows that the overall psychological capital of police personnel is 117.94 which can be interpreted as average psychological capital.

Table 6 Correlation between items of operational police stress and domains of psychological capital among the participants.

	OPS1	OPS3	0PS7	OPS9	OPS17	OPS 20	E	H	R
E	.47**	-.34*	.39*	.33*	-.38*				.37*
H	.59**				-.34*	.39*	43**		
R							38*		

*Significant at 0.05 level, **Significant at 0.01 level.

In table 6 we can that there is correlation between efficacy and shift work(p=.47<0.01) level of significance, negative correlation between efficacy and over-time demands (p= -.34<0.05), efficacy and paperwork (p=.33<0.05), negative correlation between efficacy and negative comments from the public(p= -.38<0.05), efficacy and resilience(

p=.37<0.05), hope and shift work(p=.59<0.01), negative correlation between hope and negative comments from the public (p= -.34<0.05), hope and friends/family feeling the effects of the stigma associated with the job (p=.39<0.05), hope and efficacy (p=.43<0.01), resilience and efficacy (p=.38<0.05) level of significance.

DISCUSSION

Psychological capital is an important factor influencing individual's capacity to reduce or overcome stress. The study investigates the level of stress and psychological capital and also association between the dimensions of psychological capital and stress among police personnel of Bihar, India. In the present study (91%) of the police personnel experienced a lot of stress in shift work, working alone at night (45%), paper work (68.6%) and feeling like always at job(65.7%). In line with previous studies (Selokar, 2011) important factor leading to stress among 82.4% participants were shift work and long working hours. 60% of the sample experienced a lot of stress and 40% experienced moderate level of stress. On the dimension of psychological capital, efficacy M=31, SD= 3.68, M= 29.66, SD =3.5 in Hope, Resilience M= 28.26,SD= 2.83 and optimism M= 27.06,SD =3.25. Efficacy Mean being 31 as high among other dimensions and Mean total score on psychological capital 117.94 which is interpreted as average psychological capital which provides a person to understand "who they are". This may enhance the possibility of making individuals sure that they are getting enough challenges and is able to acquire knowledge to compete with the job demands despite of being a stressful one. After investigating the level of operational police stress and psychological capital the dimensions of psychological capital were analyzed with operational police stress. The analysis showed that efficacy was related significantly with shift work (p=.47<0.01); overtime work demands (p=.39<0.05); paper work (p=.33<0.05); negative comments from the public (p= -.38<0.05) and resilience (p= -.37<0.05).Efficacy is individual assessment of his abilities required to accomplish a task successfully. Hope positively correlated with shift work (p=.59<0.01);friends/family feel the stigma associated with the job (p=.39<0.05); efficacy(p=.43<0.01) and negatively correlated with negative comments from the public with (p=-.34<0.05); resilience positively correlated with efficacy (p=.38<0.05) level of significance. High self-efficacy promoted the feeling of confidence to do shift work. (S. et al., 2018) study revealed that 58.33 per cent of police had moderate level of occupational stress followed by high and low level (35% and 6.67%, respectively). The amount of stress experienced by all echelons of police is extremely high (S. Singh et al., 2019).Operational as well as organizational stress was significant among the police officers. Scores on moderate range was in moderate range in 67%and in high range in 16.5% of the officers. 23%had been diagnosed with physical illness.(Ragesh et al., 2017)

Occupational stress may directly affect the physical and mental health resulting in reduced work productivity, indirectly affecting the crime prevention and correctional services as well as their personal and familial life.

Workshops, stress management programs, periodic health check-ups at the workplace, can be very helpful for early identification of vulnerable policemen who are at-risk of having stress.

Conflicts of Interest: The authors declare no conflict of interest.

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Original Research Article

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A Study of Relationship Between Life Satisfaction and Parental Attachment

Gagandeep Singh[1*] and Roshan Lal[1]

ABSTRACT

Aims/Objective: The present study was aimed to examine the relationship between Life satisfaction and parental attachment among adolescents.

Methodology: Total 74 participants of both genders were randomly selected on the basis of inclusion and exclusion criteria. Inventory of Parent and Peer Attachment (IPPA), and Satisfaction with Life Scale (SWLS) was administered. Obtained data was analyzed by using descriptive, t test and Pearson correlation statistical techniques.

Results and Conclusion: Results of the study show that father and mother attachment was positively associated with life satisfaction. In regards to the gender differences, positive correlation was found between gender and mother alienation indicating females scored more on alienation with mother. Further, it was found that both male and females scored high on all domains of mother attachment indicating more secure relationship with mother as compared to father.

Keywords: *Parental Attachment, Life Satisfaction, Adolescents, Gender*

INTRODUCTION

The emergence of positive psychology, researchers in the field of psychology has shown great interest in studying the positive aspects of adolescents such as life satisfaction. Life satisfaction is viewed as the cognitive component of subjective well-being and involves the cognitive evaluation of the quality of one's life overall Diener & Diener, 1995. Researchers found numerous different variables which are responsible and associated with adolescents Life Satisfaction Huebner, 2004,Proctor et al., 2009i.e. Socio-demographic variables (religion, income status, stage of life , gender), intrapersonal variables (temperament, personality, self-esteem, self-concept), and interpersonal variables (e.g., parent-child relations, peer relationship, romantic relationship, social support). Conversely, parental attachment was found to be significant predictor of adolescents' LS among interpersonal factors, which indicates that adolescent with secure parental attachment significantly associated with higher Life Satisfaction in this population

Individuals feel delighted when they interconnect with those to whom they are attached with strong and affectionate emotions. They feel more comfortable because of their closeness with these special ones in their lives. Parental Attachment is the mutual emotional bond between child and their parent. It is conveyed through different level of trust, communication and alienation Armsden & Greenberg, 1987. As per attachment theory internal working model ,the quality and skills acquired in high level of trust and communication relationship with parents since childhood, are significant features in solving various age-related issues linked to adolescence Dubois-Comtois et al., 2013. Several studies have reported significant relationship among high parental attachment and overall life satisfaction among adolescents.(Ma & Huebner, 2008,Nickerson & Nagle, 2005).

Therefore, the present study was planned to assess the relationship between adolescent's life satisfaction and parental attachment to explore the potential factors of parental attachment which leads to better adolescent life satisfaction in Indian context.

METHODS

Participants

The sample consisted of 39(52.7) males and 35(47.3) females (N=74) of 11th and 12th class attending different schools of the city with age range between 16 to 18 years (average age 17.12 years (SD=0.77).

Instruments

Satisfaction with life scale (SWLS) (Diener et al., 1985)

SWLS was used to measure the global cognitive judgments of one's life satisfaction. In this, subjects responses on 7 point likert scale ranges from 7 (strongly agree) to 1 (strongly disagree) with item indicates the life satisfaction range i.e. extremely dissatisfied to extremely satisfied level.

Inventory of parent and peer attachment-revised (IPPA-R)Armsden & Greenberg, 1987: It is a self-report questionnaire based on 5 point likert scale, used to assess the adolescents attachment with their parents on the three broad dimensions i.e. trust, communication and alienation. This is based on the attachment theory formulated by Bowly. In this study, we used only parent (father, mother) sectionof the revised version which consists 25 items each for both parents'trust, communication and alienation scores.

Procedure

A total 74 participants were randomly selected from the schools of the city as per the inclusion criteria. Three tests

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were administered to each participant after obtaining prior permission from principal of the schools and assent from the parents. Before completing the tests, researchers explained the objective of the study and were assured in maintaining the confidential of their responses. The subjects were asked to complete the questionnaires in the most thorough and genuineness manner. The obtained data was scored according the scale manuals and digitally codified by using SPSS20. This study was approved by the research ethical committee of the Institute.

RESULTS

Descriptive Analysis

Table 1 *Socio-demographic Details of Participants in frequency and percentage*

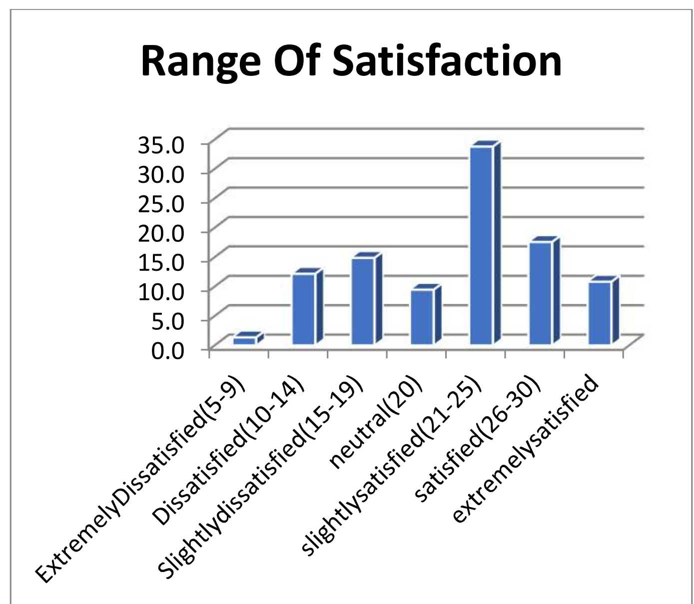
Variables	Category	Frequency (%)
Age	16years	18(24.3)
	17 years	29(39.2)
	18 years	27(36.5)
Gender	Male	39(52.7)
	Female	35(47.3)
Class	11th	25(33.8)
	12th	49(66.2)
Father Education	Illiterate	1(1.4)
	Primary	1(1.4)
	Middle	6(8.1)
	Matric	19(25.7)
	Higher Secondary	18(24.3)
	Graduation	26(35.1)
	Post-Graduation/Professional	3(4.1)
Mother Education	Illiterate	1(1.4)
	Primary	8(10.8)
	Middle	7(9.5)
	Matric	19(25.7)
	Higher Secondary	15(20.3)
	Graduation	22(29.7)
	Post-Graduation/Professional	2(2.7)

The normality test was carried out to assess the skewness and kurtosis of the outcome variables which indicates normal distribution of scores among variables. Descriptive statistics for life satisfaction reveal an overall mean 22.47(SD=6.16), indicating slightly satisfaction in most of the adolescents. For Father total attachment an overall mean 66.44(SD=6.25) and mother total attachment mean 69.22(SD=11.51) indicating higher attachment with mother than father among them.

Table 2: *Mean and Data Normality Test*

	Minimum	Maximum	Mean	Sd	Skewness	Kurtosis
Life Satisfaction Scale						
Total Scores of Life Satisfaction	8.00	35.00	22.47	6.16	-.166	-.535
Inventory of Parent and Peer Attachment-Revised						
Father Trust	10.00	50.00	37.41	7.95	-1.087	1.692
Father Communication	14.00	42.00	29.02	6.86	-.130	-.726
Father Alienation	6.00	30.00	15.45	6.25	.330	-.361
Father Total	28.00	91.00	66.44	13.26	-.765	.282
Mother Trust	16.00	50.00	38.74	6.42	-1.006	1.107
Mother Communication	13.00	45.00	30.48	6.54	-.615	.387
Mother Alienation	6.00	30.00	14.95	5.59	.264	-.397
Mother Total	32.00	95.00	69.22	11.51	-.936	.986

Figure1. Range of satisfaction among Adolescents



Correlation analysis

Table 3: *Significant Correlation between Socio-demographic Variables, Life Satisfaction and Parental Attachment*

	FT	FC	FA	FTA	MT	MC	MA	MTA
SWLS	.292*	.144	.035	.250*	.359**	.277*	-.109	.357**
Gender	-.139	-.127	.065	-.149	-.225	-.025	.270*	-.140
Father Education	-.346**	-.239*	.025	-.331**	-.247*	-.092	.040	-.191
Father Occupation	-.174	-.064	.047	-.138	.003	.093	.007	.055
Mother Education	-.260*	-.185	.039	-.252*	-.058	-.034	.037	-.052
Mother Occupation	-.170	-.290*	.048	-.252*	.095	.013	-.085	.060

* correlation is significant at the 0.05 level

**correlation is significant at the 0.01 Level

Note. FT=Father Trust, FC=Father Communication, FA=Father Alienation, FTA=Father Total Attachment MT=Mother Trust, MC=Mother Communication, MA=Mother Aleination, MTA= Mother Total Attachment

Correlation analysis was conducted by using Pearson product correlation to assess the association between study variables. The analysis revealed positive and significant correlation between life satisfaction and both father ($r=.250$, $p<0.05$) and mother total attachment ($r=.357$, $p<0.01$). In gender, positive correlation was found between gender and mother alienation ($r=.270$, $p<0.05$) indicating females scored more on alienation with mother. Father education($r=-.331$, $p<0.05$), mother education ($r=-.252$, $p<0.01$) and mother occupation($r=-252$, $p<0.01$) were negatively correlated with father sub domains and total attachment.

DISCUSSION

This study was conducted to assess the relationship between life satisfaction and parental attachment among adolescents. First of all, it is important to understand the descriptive statistics of the study. In life satisfaction, majority of the adolescent's lies under the range of slightly satisfied which suggests that at this point of age, they want secure attachment with parents for overall wellbeing. Earlier studies also confirmed that parental secure attachment with adolescents linked to higher life satisfaction among them Cripps, 2009.

In the domain of parental attachment, overall adolescents scored higher on all domains of mother attachment indicating they trust more on mother communicate well and felt less alienated. In gender differences, both male and females scored high on all domains of mother attachment indicating more secure relationship with mother as compared to father. This study consistent with prior research in which mothers were stronger attachment figures than fathers throughout childhood and adolescence Haigler et al., 1995.

Correlation Analysis was done to assess the relationship between life satisfaction and parental attachment. Overall findings indicates that life satisfaction was positively correlated with both parents attachment and sub domains of attachment (trust, communication). Secure attachment includes high score of trust and communication with parents. Overall trust and total attachment with father was positively correlated with life satisfaction indicating secure relationship with father figure. They felt more satisfied with their life if they have secure relationship in the form of good trust, well communication and less alienation among them. Similar findings found with mother attachment, adolescents who scored more on mother trust and communication, they felt more satisfied with their life. Previous research also in favor and highlighted the importance of secure relationship with parents, which may serve as possible contributing factor for high life satisfaction in adolescents Armsden & Greenberg, 1987,Jiang et al., 2013,Pan et al., 2016, Natashya & Basaria, 2021. Another study done by researchers, found that anxiety and avoidant attachment with parents responsible for lower life satisfaction Koohsar & Bonab, 2011.

Socio-demographic variable like father education, mother education and mother occupation was negatively correlated with father attachment. It was found that adolescents whose fathers are well educated, they scored less on trust and communication domain. At the same line, mother education was also responsible for overall attachment with father. Adolescents with well-educated mother scored lower on trust, communication and total attachment with father. This indicating that father figure don't trust, understand needs, discuss problems and support them. These findings inferences that well educated parents may be more ambitious in their career development which leads to less communication between

them and create distrust for overall attachment with father figure.

CONCLUSION

The findings of the study highlight the importance of parental attachment in adolescent's life satisfaction among adolescents as suggested by majority of the previous studies Jiang et al., 2013, Pan et al., 2016, Kim et al., 2016, Rath & Patra, 2018. Professionals working in this area like teacher, psychologist, school counselor and policy maker need to pay special attention on the adolescent's age as this is the turmoil stage of development in which they make distance from the primary caregiver and rely on peer relationships. There is need to assess and manage the common problem during this age at the school level for example interpersonal issues (conflict with parents, siblings and peers) according to both genders as some issues depicted more in one gender. At the same time interventions will also planned for parents like parenting counseling for the interpersonal issues in-between them.

However, the findings must be viewed in relation to limitation of the study. The samples of the study were recruited from urban area and sample size was small. It is difficult to generalize the results. For future researchers, it is recommended to use large sample and different regions (rural, urban) of the country to explore other important factors like peer attachment, romantic relationship which may also responsible for overall development to view the broader picture of this population.

Conflicts of Interest: The authors declare no conflict of interest.

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Original Research Article

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Technology Messing With Your Biology
Porn Induced Erectile Dysfunction- A Case Study

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ABSTRACT

Porn addiction is a behavioral addiction defined by an increasing need to examine pornographic materials or material. Before, a person with a pornographic addiction would largely fulfil his or her demand for sexual content by viewing or storing pornographic movies, periodicals, and images. Now, thanks to the internet and other technology, the instruments available to fuel a porn addiction have changed, giving anonymous access to endless pornography at all levels of explicitness. 34-year-old male, doctor by profession, Indian by nationality, from an urban background, married to his girlfriend for the past 4 years, with whom he had been in a committed loving relationship for a significant time, came for a consultation with concern of desire to watch porn and masturbate to the visual content associated with porn, despite repeated attempts to not do so for the past 6 months, leading to feelings of guilt, irritability, and issues in married life. There was no indication of any addiction-related issues or psychiatric or medical illnesses in the past. The same fundamental method that has been shown to succeed in the treatment of sexual addiction and drug use disorders is often used in the therapy of porn addiction. Sensate focus treatment was employed in this case, in addition to the CBT method and aspects of MET, to assist the client to restore confidence in himself. The emphasis was on creating a new dimension to the client's sexuality while removing the client's addiction to pornography.

Keywords: *Porn addiction, Tolerance, Withdrawal, Behavioral Addiction, Sensate Focus*

INTRODUCTION

Porn addiction is a behavioural addiction defined by an increasing need to examine pornographic materials or material. Recently, thanks to high-speed internet and other technology, the instruments available to fuel a porn addiction have expanded, giving anonymous access to endless pornography at all degrees of explicitness.

Apart from the internet, a variety of additional technologies, such as social media and smartphones, facilitate porn addiction by giving a way to access pornography at any time and from any location. According to several studies, international rates of porn use range from 50% to 99% of males and 30% to 86% of women. Porn is thrilling.

Pornography attachment can be very strong because masturbation and orgasm produce a fireworks display of neurochemicals and repetition builds neural pathways to enable patterns of behaviour. In men, the neural pathway for masturbation leads to a quick release of opiates during ejaculation. [Black,S. 2003]

According to research, porn addiction is a result of brain alterations that impact the same parts of the brain as substance abuse. Porn addiction bears many similarities with drug use disorder. The development of tolerance to the addictive drug is a crucial criterion in defining addiction. The compulsive watching of pornography can lead to the addiction cycle, which includes a desire stage in which the user is concerned or anticipates accessing porn. Yet, studies have shown that detecting the injury early can inhibit the formation of deep brain circuits. Porn addiction, if left untreated, can lead to broken or strained romantic relationships, feelings of shame and guilt, difficulty at work or school, job loss, financial difficulties, and divorce.

Many porn addicts often have other mental health problems, such as alcohol or substance use disorders, as well as mood disorders like depression.

The case history

A 34-year-old male, doctor by profession, Indian by nationality, from an urban background, married to his girlfriend for the past four years, with whom he had been in a committed and loving relationship for a significant time prior to marriage, sought consultation for being unable to deal with current life situations.

He stated that everything was well until six months ago, when he changed his job description and location. His daily routine and lifestyle have changed significantly because of his present job schedule, resulting in a disordered sleep cycle [night shifts], increased work hours, a broken circadian rhythm, diminished sexual intimacy, and fatigability. This was the period when he began watching porn, which he began with the intention of falling asleep and as a last option to relax while alone.

However, gradually he found himself hooked to it and despite repeated attempts to not do it, he found himself coming back to it more frequently and masturbating. He even would look for times when he would be alone at home and would be able to access the internet for this purpose. He also shared that he had started exploring different, more graphic videos to stimulate himself in the last couple of months.

He began to experience feelings of guilt, irritation, and powerlessness. Especially so when he realized he was having difficulty feeling aroused and maintaining his

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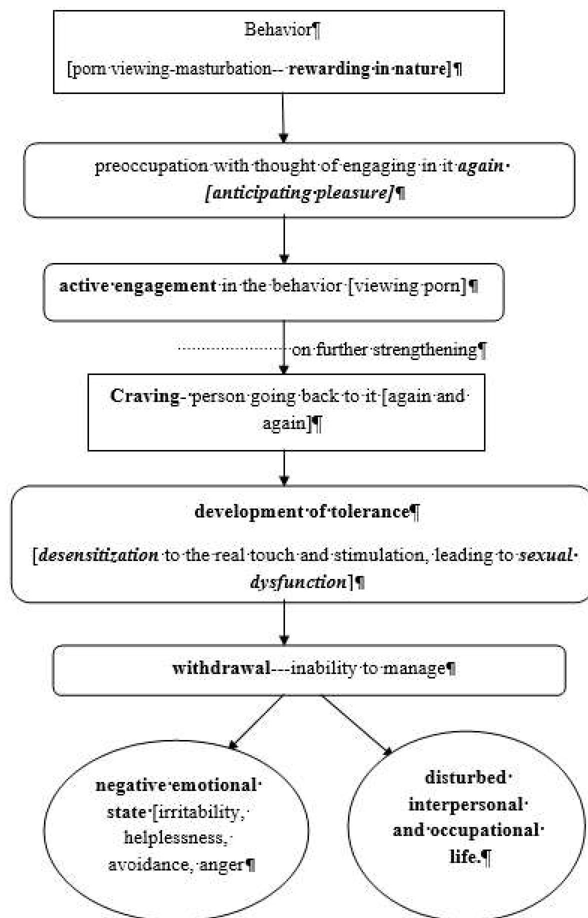
erection when having a sexual experience with his wife, despite having a desire and need for her. He began to bail himself out of similar situations by making up excuses like exhaustion or stress, but on the inside, he felt powerless and embarrassed. He also recognized he was losing his capacity to focus and was generally angry and avoidant. Seeing the need of coping with the trauma created by his addiction and the appearance of sexual dysfunction as a result, the client chose to seek counselling and came along with his wife to seek medical care.

Therapeutic sessions…

Before beginning any intervention, hormonal investigations and other tests were used to rule out h/o anomalies in testosterone and LH levels, hypertension, diabetes, thyroid, and renal illness, as well as h/o any underlying infections/injuries and surgery. Physical examination revealed a normal penis and testicles. Additional tests, including as CBC, Lipid profile, FSH, and Prolactin levels, were all normal. There was no indication of any addiction-related issues or other psychiatric or medical illnesses in the past.

Porn addiction like any other addiction involves a cycle.



The same fundamental method that has been shown to succeed in the treatment of sexual addiction and drug use disorders is often used in the therapy of porn addiction. For this patient, an eclectic strategy was adopted, with aspects of CBT, MET, and sensate focus method applied at various phases of intervention.

The procedure was separated into three stages: the beginning, the middle, and the end. Counselling sessions lasted seven months, with twice-weekly sessions for the first two months, then once a week.

The first step which was suggested to the patient was a 90 days abstinence contract which meant not only no self-sex but also no sex with the spouse. According to Laaser, “ the abstinence contract works as a neurochemical detox”. After 30 days of abstinence the individual starts to feel confident and more focused in their lives in general. The patient was asked to use a calendar to look at every day and to reward oneself being able to manage craving well and recognize progress. The patient was also explained

that giving in to either porn or masturbation will set back the recovery time and as such the process will have to be started again. Triggers and high risk situations were also identified at this stage [namely being alone at home, night shifts, stressful work environment in this case] which could lead to a relapse owing to difficulty in managing craving and environmental modifications were considered accordingly.

Access to such materials, such as images or films, was absolutely barred. In this example, the patient threw away all of his pornographic material, which offered him "warmth and self-confidence," in his own words. *The Three A's—Accessibility, Affordability, And Anonymity*—draw the majority of people into online sexual behaviour [Cooper et al]. These three components function similarly to the three legs of a stool.

If you take away any of these, it will be tough to continue sitting, and the simplest to lose is anonymity. New positive activities were introduced, with the goal of making them joyful and rewarding. The neurological route for masturbation in men results in a rapid release of opiates during ejaculation. He was told that introducing or forming good habits will aid in the development of a new brain circuit that provides pleasure and prompts dopamine release, which is rewarding in nature, and will aid in the consolidation of new neural connections. As a result, the patient was urged to begin working on a hobby or to pursue activities such as exercising/sporting or dancing.

He was trained to recognize a tempting situation, avert his gaze instantly, and affirm one's efforts, as well as reiterating to oneself the number of clean days and a desire to continue doing so if confronted with situations that could trigger a sense of craving in him, such as if he comes across an exciting billboard/ advertisement. Stress, Anger, Loneliness, and Tiredness were identified as high risk circumstances. Finally, the patient was taught to identify porn with something terrible so that anytime he saw a potential trigger, he could block it with those thoughts.

The couple was introduced to different stages of the therapy with the help of sensate focus, which was introduced after 45 days [of a complete abstinence period successfully achieved by the patient], where they gradually moved from non-genital sensate focus to genital sensate focus and finally the final stage of intercourse. Both were urged to concentrate on their own unique 'sense' experiences rather

than viewing climax as the main purpose of sex, which reduces it to a mechanical process. With the assistance of his partner, a new dimension to the patient's sexuality might be re-established, removing the patient's addiction to pornography and restoring mutual trust, respect, and yearning for each other.

CBT focuses on changing negative ideas about oneself, others, and the world, in addition to dealing with the patient's rationalizations, guilt, and denial. Intermittent sessions with the wife were also held to assist her deal with her feelings of betrayal, anger, and helplessness over the situation, as well as to help her recognize her part in the healing process.

CONCLUSION

Pornography has catastrophic consequences. Apart from producing issues for the individual, Porn is destroying couples, and as a result, Pornography addictions are now one of the leading causes of divorce. Individuals want porn because they have taught their minds that it is exciting, a source of sexual expression, and an escape. It is also destroying men's libidos and is one of the leading causes of men's decreased sexual desire. It causes a need for genuine things, which are touching, kissing, and stroking, as well as a connection not just with the body but also with the mind and spirit. People's views, relationship commitment, sexuality, ability to reason and propensity of acting aggressively against women alter when they use pornography. It is past time for us to recognize the negative influence of technology on our biology, and how it is wreaking havoc in all of our lives, with most of us unaware of how and when it is turning us, slaves, to themselves. There is, nevertheless, hope. Under the organized direction and appropriate intervention, each person embarks on a unique journey with personalized outcomes.

As you say, where there is a will, there is a way!!!

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Letter to Editor
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"Indian psychological thought for clinical practice"- Relevance of this issue

Shakuntala Dube[1*]

INTRODUCTION

The IJCP volume 48 number 2 is indeed thought-provoking. The emphasis is towards attending inward and body mind control which is bound to help the turmoil of the outer world. It requires a focus on Transpersonal Psychology- a culturally rooted Psychology. The ethos of India is secular and multiple in many ways as one nation which we are celebrating in the 75th year of Independence. Those of us who have witnessed freedom and got higher education in the post independence Era (AIIMH, AIIMS, IIT etc.) have kept Gandhi's philosophy of non-violence and compassion to all. This Welfare based Socialism are fundamental aspects of our constitution. (Samastha loka sukhino bhavantu). This ideology is to be linked in transpersonal psychology which is being applied to comprehend, predict and control body and mind. The Editor & his Editorial team need our thorough acknowledgement, in addition to all the authors of this issue who have contributed their valuable knowledge, expertise and ways of practice.

The integration of inner to outer space is an evolutionary process. In the present life our efforts are to perform 'nij-dharma'. This Sanskrit noun word which is derived from the verb- 'Dhriti'- (Dharyate iti Dharma). Our soul always prompts us to live inwardly and to reject trappings of outer life.

The turmoil during Covid 19 pandemic led to ramifications in inward isolation. Added to the continuing war of health workers and researchers all over the world, presently war between Russia and Ukraine in Europe, poses a new challenge- where does India stand today? Shall we reject the trappings of outer life and turn inward in 'Nidhyasan' (A Part of the Yoga of reading scriptures Vedic and Upanishadic as well as other religious literature)? As advocated by Ramana Maharishi "the mind should not be allowed to wander towards worldly objects and what concerns other people. However bad other people may be, one should have no hatred towards them; all that one gives to others, one gives to oneself." If this truth is understood, who will not give others this state of peace of mind?

Though the scope is wider the answer is yes and no. The point to be noted is that it is not easy to apply psychological knowledge to resolve personal problems and to provide ready-made solutions (read Uses and Abuses of psychology by Eysenck).

When an ardent student (The present author) joined the department of psychology and philosophy, Lucknow university (1953-1955) and later Ph.D, the firm footing was provided by late Prof. Kaliprasad in Western psychology. He established an Experimental lab as well as maintained scholarly collections of recent publications in the Tagore Library and put a special research section having journals and books on Contemporary Psychology, Developmental Psychology, Childhood Development, Research Methodology etc. Additionally, exposure of practice in clinical psychology at the University Centre of student counselling and group therapy at the Noor Manzil Psychiatric Centre, Lucknow was provided. Moreover, Prof. H.S Asthana who had returned from the U.S.A (Full Bright Fellowship) provided practical training in Psychometric measurement tools and Projective tools. He equally imbibed students' interpretation and limitations of Intelligence, Personality and ability tests. He especially emphasized practical training in Rorschach Inkblot, TAT and many Self-report rating scales. The Subject matter of modern psychology was wide, and its scope expanded to learning Behaviourist (Skinner) to Self Psychology (Maslow).

Need for Skillful training in Psychometry as well as Psychodiagnostics

The matter of psychological assessments has been developing rapidly. The yearly publication of volumes of work in this field was edited by Buros (Dube,1967). We have been using the culture-free personality test as well as intelligence tests. However, our subjective approach to interviewing requires rapport building and focusing the attention of the subject(him/her) providing a proper setting of a battery of tests based on age, education and time availability.

A global approach- White,1952 is pertinent. "The psychological test can no longer be regarded as inducing specimen or samples of performance of restricted functions. The samples may be conceived of as inducing say, problem-solving capacity, but many other characteristics of personality also contribute e.g., a problem-solving measure may also tap frustration tolerance, anxiety control, and level

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of aspiration. Hence tests consequently supply overlapping information. Defining the role of psychological tests in a clinical setting." (Dube, 1967). Rapaport, 1946 writes: "No single test proves to yield in all cases a diagnosis or to be in all cases correct in the diagnosis it indicates. Psychological maladjustment, whether severe or mild, may encroach on any several of the functions tapped by these tests, leaving other functions absolutely or relatively unimpaired." (Dube, 1967)

Those of us who have worked as staff or faculty members in teaching in medical colleges or government institutions know that a clinical psychologist is called upon in diagnostic rounds either in the clinical conference, grand ground or bedside ward round. The team head, namely the professor, builds up tension. Collecting cues from case history, and physical examination carried out by investigating team members, clinical psychologist, nurses, and social worker apart from senior resident and junior resident. The clinical psychologist can base small cues on behaviour observation, and interviews (verbal as well as non-verbal) but above all his/her psychological testing report. Often the final diagnosis and prognosis of the case depend on culture-free tests like the BGT test, Projective test, self-paper-pencil tests, MMPI, MPQ etc. The trump card often is the Rorschach inkblot test. Although there is an emphasis on drug treatment in treatment follow-up, the questions of patient disability, rehabilitation plan, the expectation of caregiver, and burden of long-term care seldom get discussed. The UG and PG students imbibe this imprinting and learning of the process.

The question of the patient's future growth and development may get lost in group discussions and controversies among expert faculty members from diverse backgrounds and viewpoints of the team. However, the IACP should formulate like in the West, ethical standards of psychologists (American Psychologist, January 1963) namely principles 1) Responsibility- high value on objectivity and integrity 2) Competence 3) Moral and legal standards, 4) Misrepresentation, 5) Public statement in mass media 6) Confidentiality 7) Client Welfare 8) Client relationship Issues 9) Impersonal Services in terms of the professional relationship and so on. However, the importance of Test security, test interpretation, test publication and its credit and research precautions are the responsibility of organizations like IACP, its branches at the centre and state institutions. Some of us who are trained from Central Institute of Psychiatry Ranchi or NIMHANS, Bangalore, who came to Delhi to work in government medical hospital or private practice or in government institution like Prof. Majumdar from CIP (he had laid the foundation of selection program in defence); NN Sen who had laid 'Psychological foundation' in NCERT. Later the need for local professional issues made us open the Delhi chapter of clinical psychology. There was a need for a PhD degree in order to get a promotion in the hierarchy of medical settings. There one needed to invent or adapt newer psychometric tools in clinical practice or teaching of nurses, UG and PG students. The leadership issues of changing politics in India as well as abroad like the 'women liberation movement' in the West. Although in Indian civilization as well in modern times gender and transgender questions of equanimity and respect are addressed and given due place. The regional ethnocentricity in minority groups leads to conflicts between them, leading to riots and economic unrest. Such issues made us to write scripts for Psychodrama, talks in the media and other community welfare programs. The author soon moved away from the professional group to creative ways of writing psychology in Hindi literature- poems, short stories, novels etc.

Right for education to every child, health for all, the menace of alcohol and drug addiction and other eating disorders led to changes in the training of clinical psychologists from Diploma in Medical Psychology to Diploma in Medical and Social Psychology. The eminent Fellows of the Indian Association of Clinical Psychologists; past and present such as Smt V. N. Murthy, K Satyavathi, K Kapur et al., at the National Institute of Mental Health and Neuro Sciences Bangalore as well others like Central Institute of Psychiatry, Ranchi, Department of Psychiatry (AIIMS) namely G. G. Prabhu, who trained not only Indian Clinical Psychologists, also PG and UG medical students, nurses and other rehabilitation workers. His inspiring lectures based on theoretical and applied modern clinical psychology made him famous from North to South, East to West, and after retirement visited to American Universities.

The Ministry of Social Justice and Empowerment and Ministry of Health and Family Welfare, Government of India established National Institutes for physically handicapped Sensory and motor, Speech and Hearing, Blind, Mentally Handicapped where discriminatory knowledge for prevention, promotion and early identification, intervention and rehabilitation for all type of disabilities were required. For example the chief of the National Institute of Speech and Hearing Mysore, Late J Bharath Raj imparted training and research work to this special group. Dr J Bharth Raj (DST – Developmental Screening Test published by Swayamsiddha, Mysore). Other NGOs as well as philanthropic endeavours like Tata Institute of Social Science, Mumbai, Kovai Medical Centre & Hospital, Coimbatore, and Thakur Hari Prasad Institute of Research for mentally handicapped, Hyderabad etc. For sensitizing medical officers in issues of disabilities, for example, social legislation, human rights, general issues and organization of the persons with disabilities. In order to organize these services for various groups of disabilities and formal recognition was given via the Rehabilitation Council of India which was founded in the year 1992 no. 34; to regularize the training of various rehabilitation professionals; and thereby maintenance of Central Registration Register and matters connected. The national program for health for all given at Primary Health Centres (rural and urban settings) in India were given a questionnaire prepared by RCI to assess their knowledge and training in the various disability groups. This thrust was through Health Secretaries to identify the agenda for making medical professionals employed at the Primary Health Centres to get involved in a 'bridge course'. As well as for less resourceful teachers and other rehabilitation workers were provided 'bridge course'.

Growing stress was laid on children with various types of disabilities to be integrated within the general school going

children (Dube, 2005). The objective was to remove attitudes of the general public along with so called 'able children'. As well as their parents who saw differently able child given special teaching and learning material. This training led to selection of 'Scout masters'. The success of inclusive educaion these days is being reflected in sports, art and craft, fine arts like dance, music, literature; Such differently abled persons are called Divyang.

Several executive committees and sub-committees of RCI were formed to deal with matters for monitoring and evaluation.

1. Assessment & Accreditation Committee.
2. Academic Review Committee.
3. Planning & Finance Committee.
4. Research & Fellowship Committee.

For an economy that aspires to achieve the status of a middle-income nation by end of this decade our huge population as well as 23 percent of the youth fall in the category of not in the employment; education or training referred as NEET youth. This is perhaps a huge population of semi literate people who are just wailing away their time or becoming prone to suicidal prone behaviour. In search of modernization, the young is often seen in sensation seeking and modern ways of organizing parties in the city life, Where increase of alcohol and drug abuse and many other eating disorders as well as facilities of free sex leading to vulnerable ones to diseases HIV, VD diseases or other life style diseases. Narcissism (centralization upon self in extreme form, blows our self esteem as well). Such evils in metropolitan society specially, are leading to crime and sex trafficking and exploitation of innocent children, juveniles and transgender towards commercialization of such trade. Therefore, one's freedom ceases where freedom of others starts; Sobriety is the norm for the healthy living. The Sanskrit proverb "Ati Sarvatra Varjayet".

The article "Psychology in the Indian culture and tradition – a road map to the past and the future" by Ajit K Mohanty, (in the IJCP Special issue, volume 48, Number 2) seems to

overlook that human behaviour and psyche are governed by universal principals based on positive-empirical assumptions. Such a science of behaviour is inherently inadequate to understand the human mind. Various diverse world cultures are harmonized by a multiplicity of changes in world views. Additionally, our patients come from various socio-economic backgrounds. Those of us who have

taken post-doctoral training like the recent author and written textbooks on Individual psychotherapy, group psychotherapy or co-joined couple therapy or articles based on research in community-based educational programmes are largely based on Western psychology. The present author had been practising at AIIMS at the Department of Psychiatry and currently in a professional NGO along with the board of trustees, Psychiatrists Dr. D Mohan(past), Dr V. S. Rastogi, V. Kapoor and social scientist N. Ranganathan , A. Kapur and several others. The present president is Dr. Ramavat Sudha (M.D), and past were late H. S Asthana and Dr. S Bharadwaj et al. Thus, the present author appeals not to bring cognitive dissonance in practising the use of standardized test batteries prepared in the West like intelligence like the Bellevue test, and the Binet Kamat Test and personality inventories projective as well as objective. It is not just the lack of creativity but several other factors which are holding us back from getting a Patent* when developing measurement tools like MPQ in ICMR sponsored project (Upadhaya, 1982). However, the problem of getting a patent is not easy in India compared to the USA, UK, Japan and china. The present author had the fortune of number of departmental publications on Life Events, Social Support and Ex-addicts becoming counsellors etc. which were widely used in research work.

The Practice of analytic psychotherapy is like a triangle between therapist, patient and setting. However, without the knowledge of diagnostic formulation and rapport building, one should not indulge in allowing free association of thought processes. This requires proper training, supervision by expert teachers as well as personal analysis. No number of lectures or book reading can enable one to become a skilful therapist. (Dube, 1997,1999).

The present special issue of IJCP is indeed thought-provoking and enriched in inward practices of various yoga schools. Practising mind and body control (Ashtang Yog-the eight limbs) gradually provides control of 'yoga chit virdhi nirodha'. In our cultural context, it is quite similar to the western concept of self-actualization. The beginner in Dhyan yoga, taught by the Guru (initiator of yoga*) occupies and gives a mantra for this inward practice to attain the final state of pure consciousness. The beginner is asked to practice this regularly for at least 20 minutes in the morning and that is why mentally unstable and people who are addicted to hardcore drugs/ psychotropic drugs etc are unable to continue Dhyan Yog for a longer time according to Patanjali's Yog Sutra. Different yoga systems are largely emphasize upon personality differences namely gunas-Sattvic, Rajasvic and Tamasic. The pursue of realization of

one's true source, the mind wreaks havoc but ability to continue the practice regularly help regulate oneself.

Major Indian philosophies and religions may believe in God like 'Vedantis' yet, in the end, define God as 'Naiti'. Jainism, Buddhism denies God or keeps silent, yet advocates the student at the end of teaching "if you come across a buddha, do not depend on the external buddha". Similarly, beginning and termination of analytical psychotherapy one should not teach the meta psychology which is largely based on Freudian theory. The abiding

principle in the east, as well as western psychology, is a spiritual necessity. Such a pure mind adheres to here and now.

Environmental issues

The space, setting, duration, and charging fees in treatment are challenging issues in current times. All over the world especially after the virus epidemic (2020) and war in Europe have given rise to Tele-psychotherapy as well as yoga practice in residential places, in gardens or in the mohalla.

*P. Upadhaya 1982 et al ICMR project "Surgical management of Hydrocephalus children" had prepared a low cost Indian shunt valve and enabled Dube to prepare intellectual performance quotient correlating with the function of the valve. Dube had made use of NCERT prepared norms As well as other developmental scales like Gassel and others

The Lockdown and frequent curfew not only created social isolation but also the economical crisis, migration of people, unemployment, and scarcity of basic items like gas, petrol and drugs. Inflation of basic necessities required in urban as well as rural. In addition, these days there are environmental issues like pollution, climate change, the in-accessibility to clean water and air; man-made and natural disasters are seen. The mass media of communication (news in printed

media, WhatsApp messages, Instagram etc.) likely to increase propaganda and restlessness. No doubt tensions are created within the mind of men from the outer information and news. e.g., recently a diplomat was unusually dramatic in saying that the 'Russian oil that India buys has a portion of Ukrainian blood' (Times of India, October 22,2022)

Not only tourism, but the impact of frequent lockdowns has badly affected industrial production, the film industry etc. even our holy places where pilgrims or tourists go in their pursuit of spirituality to Haridwar, Rishikesh and Amarnath where rates of accommodation have increased. The development in social psychology in India had been addressed and such theoretical knowledge required attention in clinical practice. Though the emphasis is on the individual difference.

CONCLUSION

There is a continuum from normalcy to abnormality. The degree of differences in human behaviour changes into typology defined by the diagnostic classification of psychiatric diseases standardized by DSM or ICD revisions. Similar subjective and objective ways of measuring adaptive and maladaptive ways depend on a theoretical model of modern psychopathology. However personal insight into assets and liabilities depends on life course, one resilience or one's destiny. In that sense psychology is a science and an art.

No amount of contextualization in the disease classification system, psychological tools, psychotherapy or ways of treatment would go along in ways of modern medical advancement where the emphasis is on bringing a healthy body and mind (Sharir Madhyam Khalu Dharma Sadhana). The younger generation is attracted to the digital world and rightly so. It had been instrumental in easy access to knowledge and communication. But it is to be noted that newer ways of giving education to children will impact their nervous system, structure as well as function and development. Without giving protection to children in this digital space, the impact will be seen only in future- its benefit and harm. However, the rapid changes make children and old people vulnerable and helpless. (Dube 1983,2008)

Online safety education is being advocated to be a part of the curriculum in schools, universities and even in higher professional educational institutions. The technological innovations of internet intermediatory are being sold like hot cakes to further propaganda benefitting commercialization. The rapid development for disabled like Aid, Appliances, Robotics etc as well as utilization of artificial intelligence are welcomed.

Without one's own discrimination and wisdom one should not become an atheist hedonist (Charvoka) or a follower of Vedanta in search of Karm-Arth- Kama- Moksha. "The door of truth is covered by a golden disc. Open it, or O Nourisher so that I who have being worshipped in the truth may uphold it." (Isha Upanishad,15-16).

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*The author was initiated into Dhyan yog in 1967 by an initiator SatyanandJi. She was asked by Maharishi Mahesh Yogi to stay in the ashram for taking care of a psychotic patient who had visited him for Dhyan Yog. Her management of violent behaviour needed a long stay and allowed her the good fortune of learning discourse given by the Maharishi and attaining a state of Sach Chit Anand (Pure Consciousness). At that time number of foreign disciples were engaged in the practice of Dhyan yog in the ashram who were witnessing psychological hurdles in practising Dhyan Yog. Although the author had undergone a full course in the practice of Dhyan Yog but could not undertake this responsibility of teaching others Dhyan Yog giving up her job at AIIMS. Till today she is regularly practising Dhyan Yog and has moved away from Dhyan Yog to Gyan Yog, Karm Yog and Bhakti Yog and referred her patients to yoga whenever required

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