Whither Emotional Intelligence in Mental Healthcare

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Abstract

Emotional Intelligence (EI) has always been a relevant in studies and investigations. It has been useful in various clinical and non-clinical domains of profession. The present article is a comprehensive narrative review especially in the context of mental health services. The authors have explored major studies conducted in last three decades and available on various sources like PubMed, Mendeley, google scholar, Cochrane, Psychinfo, Research Gate and APA Psychnet. In addition, a few additional published book chapters have also been reviewed on interventional research to be useful and incorporated. At last, major methodological limitations and conclusions focus on a need for more representative research to understand the concept with special reference to mental health, have been incorporated.

Keywords: Emotional Intelligence; Mental Health; Psychotherapy; Behavioural Health; Developmental Stages

Introduction

Several definitions have been given for understanding our own and others' emotions [1]. Mayer and Solovey (1997) [2] coined the term 'Emotional Intelligence (EI) in the 1990's and explained it as a component of Social Intelligence. They defined EI as the capacity to see and communicate emotions, incorporate emotions in thought, comprehend and reason with emotions, and manage emotions in self as well as other people [3]. Mayer (2009) [4] has rightly defined, "Emotional Intelligence is the ability to reach other's emotions accurately, to respond to them appropriately, and to motivate oneself, to be aware of one's own emotions, and to regulate and control one's own emotional responses".

Although the term EI was not heard before the 1990s, however, similar concepts had been given by researchers for a long time. Its traces can be seen in the Bhagavat Geeta where Krishna mentions the concepts of Sthithiprajnaya which means 'an emotionally stable person' [5]. Ancient Philosopher Plato in his numerous teachings mentioned that 'All learnings have an emotional base' [6]. This evidence points the fact that the concept of emotional intelligence has been existing since a long before it was recognized explicitly. It was firstly mentioned in the 1930's by American Psychologist Edward Thorndike who studied behavior psychology. He gave the concept of Social Intelligence which was explained as the capacity to coexist with others by having the ability to comprehend their internal states, intentions and behavior of oneself as well as other people [7].

Thereafter, the concept of Non-Cognitive Intelligence was given by Wechsler in the 1940's. He said that Intelligence is fundamental for success through everyday life, and it isn't finished unless we are able to explain it non-cognitive characteristics [8]. This was followed by Howard Gardner's concept of Multiple Intelligence through his book 'The Shattered Mind' [9]. The concept of Interpersonal and Intrapersonal Intelligence was given further by him in his book 'The Frames of Mind' and this is quite like of modern Emotional Intelligence [10].

Peter Salovey and John D. Mayer (1990) [11] begat the term 'Emotional Intelligence' portraying it as "a type of Social Intelligence that includes the capacity to screen one's own and others' sentiments and feelings, to differentiate among them, and to utilize this information to direct one's reasoning and action". They additionally started a research program expected to create valid measures of Emotional Intelligence of passionate insight and to investigate its importance. In the 1990's Daniel Goleman became aware of Salovey and Mayer's work, and this eventually led to his book 'Emotional Intelligence: Why It can matter more than IQ' [12].

Theories of emotional intelligence

Emotional Intelligence has been classified into Trait EI and Ability EI [13]. The Mayer-Salovey-Caruso ability model is one of the most widely known and studied models of Emotional Intelligence. Based on the concept of Gardner, it proposed four branches of Emotional Intelligence [3]. The first being perceiving emotion i.e. the capacity to be mindful of ones emotions and to communicate emotional needs precisely to other people. It additionally incorporates the capacity to differentiate between precise and faulty or honest and precarious emotional expressions. The second branch is using emotions to facilitate thought which includes the potential to differentiate among various emotions an individual undergoing through and recognizing how they are affecting and altering their thought process by directing the awareness to crucial information. Changes in Emotional mood have the ability to control our thought process and as a consequence, the individual's problem- solving abilities. For example, a happy mood may encourage an optimistic thought process and facilitate creativity and inductive reasoning whereas a sad mood may foster pessimism and therefore decrease productivity and coherent thinking ability. The third branch of Emotional Intelligence is Understanding Emotions which includes the capacity to understand complex emotions and also the transition between emotions, for example, betrayal may cause an individual to feel frustrated which may lead to them getting angry. It explains the fact that emotions do not exist in isolation, a myriad of emotions can also be experienced at once, each influencing our behavior in a different manner. And finally, managing emotion incorporates the adeptness to control and manage their own as well as others emotions. It also means utilizing our reflective abilities to increase interpersonal harmony [3].

Another model of EI was given by Daniel Goleman and it was called Goleman's Competency Model. He believed that EI was more of a skill that is acquired and developed by an individual to enhance their interpersonal abilities rather it being an innate characteristic, as believed by Mayer and Solovey. His model consisted of four constructs that comprised emotional intelligence. First being Self Awareness which is understood as the ability of an individual to be in tune with one's own emotions and accurately perceive and identify them and use this knowledge to navigate our decision making. Secondly, Self-Management which is managing or having a reign oven one's emotional reactions in accordance to the dynamic environmental conditions. Thirdly, Social Awareness includes the potential to detect, comprehend, and respond to other's feelings while apprehending social networks. And finally, Relationship Management involves the capacity to motivate, impact, and developing others while managing disputes [14].

And finally, the Bar on Model of Emotional and Social Intelligence [15] is a mixed model as it explains EI as a cognitive ability as well as through aspects like health, wellbeing and personality. He drew inspiration for his model by the work of Darwin on emotional expression for survival and adaptation (1837-1872) [16]. Other theoretical perspectives that influenced his work were of Thorndike, Wechsler and Gardner. The work of Sifneos in the year 1967 on Alexithymia [17] which he believed to be on the pathological end of EI spectrum and the work of Appelbaum (1973) [18] on psychological mindedness which according to Bar On is on the healthier end of the EI spectrum are some of the concepts that formed the basis of his model.

According to this model, "Emotional-social intelligence is an array of interrelated emotional and social competencies, skills and behaviors that determine how well we understand and express ourselves, understand others and relate with them, and cope with daily demands, challenges and pressures" [15]. It encompasses the following five factors. Firstly, self-perception which is the capacity to perceive, comprehend and express feelings and emotions; self-expression which is the capacity to see how others feel and relate to them; Interpersonal factors the capacity to oversee and control emotions; Decision making ability the capacity to oversee change, adjust and tackle issues of an individual and relational nature; and finally Stress Management the capacity to create positive effect and be self-motivated [15]. Bar On believed that overall Intelligence possessed by an individual which estimates the probability of success in one's life is determined equally by their cognitive and emotional Intelligence.

Measures of emotional intelligence

Various measures and tools have been formulated over the years to assess or measure the emotional intelligence possessed by an individual. These are embedded in different theoretical backgrounds as well as fulfill the criteria for reliability and validity. Nonetheless, further research need to be conducted on the existing tools to improve the tools that exist as well as to formulate new measures [19]. One of the most widely used and known measure of EI is Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) which is a performance-based test developed by Mayer, Salovey and Caruso [20] where individuals must answer 141 questions which are divided into four tasks corresponding to the four branches of the Mayer-Salovey Model [2] measure called Emotional Quotient Inventory (EQ-i) [21] a 133 item self-report inventory was developed by Reuven Bar On mixed model of Emotional Intelligence which assessed the individual of the 5 facets and 15 sub facets of the model.

Emotional Competency Inventory (ECI) is another instrument developed by Goleman, Boyatzis, and McKee (2002) [22] based on Goleman's Competence Model (1998) [14]. It consists of 12 competencies that are divided into the four facets of EI according to Goleman's model including self-awareness, self-management, social awareness and stress management. Another widely used tool given by Goleman is the Emotional Intelligence Appraisal (EIA) which is a self-report as well as another report tool. It is a 7- minute assessment that also uses the 4 facets of the competence model (1998) [14] and gives a quick assessment. Self-Report Emotional Intelligence Test (SREIT) is a self-report measure of EI also based on the theory of Mayer and Salovey (1997) [2]. It is a 33-item tool divided into four factors which are optimism, appraisal of emotions, utilizing emotions, and social skills.

Work Group Emotional Intelligence Profile (WEIP) is another useful measure of EI, based on the model of Mayer and Salovey (1997) [2]. It was developed by Jordan et. Al. (2002) [23] and measures workplace EI. It is divided into two sub-scales which are: the capacity to deal with our own emotions and capacity to deal with the emotions of others. And, Wong Emotional Intelligence Scale (WEIS) is a self -report tool developed by Wong and Law (2002) [24]. WEIS comprises of two sections. The first part contains 20 situations and respondents are required to pick one alternative that best mirrors their likely response in every situation. The second part contains 20 capacity sets wherein respondents are required to pick one out of the two kinds of capacities best addressing their qualities [24].

EI tools developed in India: Some tools to measure EI have also been developed in India. One of the oldest tools is Emotional Intelligence Scale (EIS-Sans) by Singh and Narain (1971) [25]. It can be administered to individuals above the age of 12 and has 31 items to which the respondents have to respond in a 'Yes' or 'No'. Personal Competence Social Competence (PcSc) Scale is another tool that is developed by Mehta and Singh (2013) [10] and it is a 69- item self-report measure which assess EI in the workplace and it includes two subscales i.e. personal competence and social competence and this is scale.

The concept of emotional intelligence has formally been introduced and discussed since not more than thirty years. And due to this the theoretical models have not focused much on the cross-cultural features of the emotions [26]. Culture has broadly been divided into two components namely, Individualistic and Collectivistic cultures [27]. While most of the known researches and models are conducted in

accordance to the Western culture which are mostly Individualistic, its applicability and generalizability on Asian countries like India, is debatable. How individuals appraise and display emotions is largely governed by the cultural setting they are a part of and should therefore be considered to understand the applicability of the theories and models [13].

Neuropsychology of EI

Several studies have also been conducted to understand the underlying Neuropsychological evidences behind EI by employing extensive neuroimaging and brain mapping techniques. Regions of the Anterior Insula & Ventromedial prefrontal cortex were associated with the first branch of Perceiving emotions from the Ability Model [2]. Lesions or damage to these areas led to reduced emotional intensity in everyday life [28], reduced feelings of guilt [29], and essentially, alexithymia [30] that is an inability to identify and explain one's own emotional state. The second branch which comprises the ability to comprehend how thoughts facilitate emotions is associated with the ventrolateral prefrontal cortex lesions and insular lesions and leads to reduced affective empathy [31].

The third branch of Understanding emotions is associated with ventromedial prefrontal cortex [32] and bilateral amygdala [33] and damage to these regions caused decline in ability to recognize socially inappropriate statements in a study conducted by Leopold & others (2012) [32]. Ventrolateral prefrontal cortex [34] and the amygdala regions [35] are observed to also control the regulation of emotional responses, as observed through neuroimaging studies. They display symptoms like irritability or difficulty in building a rapport in social situations [36].

Developmental approaches on EI

Developmental perspectives on emotional intelligence are scarce as the available research focused on academic and social outcomes or the behavior of children. But little is known about parenting styles, familial interaction patterns, and their relationship with the development of emotional intelligence in the child [37]. However, there are some studies on parental practices that promote EI in the child. Some of these identified factors are responsiveness, parental positive demandingness and parental emotional training have been observed to be associated with EI development in the child. Conversely, negative parental demandingness like punitive parenting [38], and minimization or distress reactions to situations when the child displays negative emotions lead to a decreased emotional understanding displayed by the children [39]. Argyriou., *et al*. (2016) [40] studied a sample of Greek high school students to observe the associating between their EI level and the parenting style and the results showed a positive correlation between authoritative parenting styles and a negative correlation with authoritarian parenting styles. The reason for this was hypothesized to be the negative feedback and dictatorial disciplining may lead to child to be constantly seeking the guardians' approval instead of understanding their internal emotional state regulating them appropriately [41]. Whereas authoritative parenting styles that provide room for free expression of felt emotions leads to emotional competence [42].

But what does emotional intelligence predict?

Among children EI was a predictor of positive academic as well as social outcomes [43] and it negatively predictive of problem behavior like hyperactivity [44]. Among adults, higher EI prompts more noteworthy self-view of social ability and less utilization of destructive interpersonal strategies. Others see high-EI people as more pleasant to associate with, more empathic, and more socially gifted than those low in EI and it also correlates positively with family and intimate relations [45]. In a work setting individuals who were rated high on EI displayed superior decision-making skills [46] and also EI related positively with better negotiation skills [47]. Another study by Elfenbein., *et al*. (2007) [48] predicted a positive correlation between EI and overall workplace effectiveness in professions as diverse as business managers, school teachers and principals, human service workers and physicians. They are able to work more effectively towards their end objective by keeping a reign over their urges of immediate gratification [49].

Research evidences also point towards psychological and physical wellbeing being correlated with EI. It correlated positively with higher life satisfaction and another study showed a correlation with higher self-esteem [50]. A lower rating was also observed with Depression and Anxiety levels in two separate researches study by Bastian., *et al*. (2005) [51]. A study by Saklofske., *et al*. (2007) [52] concluded that individuals high on EI tend to use more effective coping strategies i.e. they tend to use problem focused coping techniques instead of emotion focused. Another study by Trinidad and Johnson (2002) [53] concluded that among adolescents, EI was also correlated with decreased alcohol and tobacco use. Lower risk for Internet Addiction was also observed among adolescents owing to superior emotional perception skills [48].

Emotional Regulation and coping is seen to have a significant role in disordered eating [54]. Research conducted by Foye, Irving and others (2018) [55] concluded that EI levels are negatively correlated with disordered eating behavior. They further went on to discuss the significance of these finding for improved therapeutic outcomes for this condition which tends to run a chronic course. The eating behavior is generally triggered by societal constructs of thinness being associated with beauty. This leads to negative body image issues that lower the individual's self-esteem levels. It was further observed that high EI levels acted as a protective factor regarding the subsequent development of the disorder whereas those who were on the lower end of EI levels, were more vulnerable. In addition, there were also evidence of lowered emotional processing, awareness, and regulation [56] contributing to the symptomatology. Another research conducted by Kee., *et al*. (2009) [57] studied the psychosocial functioning of schizophrenia patients by assessing their level of emotional intelligence by using MSCEIT and it was observed that these patients performed poorly as compared to the control group of non-psychiatric counterparts. Scored were even poorer for those with negative or disorganized symptoms and it was also observed that negative symptoms and low EI levels predicted poor functional outcomes of Schizophrenia.

Personality factors and EI are often argued to have fundamental similarities and many theorists have stated that the information yielded by EI is similar to that we receive by using various measures of personality assessment [58]. A study conducted by Lopes., *et al.* (2003) [59] examined the relationship between EI and personality traits and how do they influence the quality of interpersonal relationships of an individual. It was observed that EI shows a high correlation with the Big 5, especially with Emotional Stability and Extraversion and also predicts.

We also examine Emotional Intelligence and its effects on individuals in context of presently ongoing COVID-19 pandemic. The COVID-19 is a deadly virus that originated on Wuhan district of China in December, 2019. It spread globally and caused mayhem by infecting millions and taking the lives of thousands of people. Nationwide Lockdowns were introduced to curb the spread of the virus and workplaces, schools, colleges etc. all started operating through an online mode to ensure the safety of everyone. This sudden and unforeseen change in the lifestyle of everyone brought with it high levels of stress, anxiety and fear [60]. Globally around 1.2 billion children have received education through remote modes. A study conducted by Chandra (2020) [61] on college students from Mumbai and Ahmedabad studied the stress level among them due to the online mode of education and their perception of the academic stress due to COVID-19. These stressors were identified to range from scholarship requirements, increased competition in classes, family pressure or stress related to their academic courses or even the financial pressure. The results showed that students were seen to be employing coping strategies like EI to keep away from negative and depressing thoughts.

The ongoing pandemic has also put a lot of strain on individuals working in the healthcare system as they are at the frontline battling this virus with tooth and nail risking their own lives and the lives of their families. At the same time these healthcare professionals had to face physical, psychological, social and emotional demands while the available resources were depleting, according to the Spanish Ministry of Health through a survey conducted in Spain [62]. And this stress which has been prevailing for a long time, may the individual to a burnout syndrome [63]. A study aimed to examine the effect of EI on the nurses who were working closely with COVID-19 patients and were exposed to the physical and psychological adversities that prevailed. The results depicted a that high level of EI acted as a protective

factor against psychosocial stressors like burnout, psychosomatic symptoms and contributed to better job satisfaction. Therefore, integrative models which also include EI training can be implemented to train these individuals and equip them to manage a situation the of a magnitude that we are presently facing [64].

Author	Title of Paper	Year of Publication	Major Findings	Limitations
Petrides and Furnham [13]	On the dimensional structure of emotional intelligence	2000	Aimed to establish the psychometric properties of the EI scale by Schutte., *et al*. (1998) and also proposed the concept of Trait and Information Processing EI.	
Gayathri and Meenakshi [5]	Emotional Intelligence in the Indian Context	2013	The paper analyzed the Ability model of EI against the background of the Indian culture given in the Bhagwad Geeta and draws parallels between the two.	The complex language and the multifold meaning of the holy scripture may have led to simplifications in its interpretation by the researchers and therefore multiple researches in the field may help understand the similarities.
Nyklíček., *et al*. [94]	The role of emotional intelligence in symptom reduction after psychotherapy in a heterogeneous psychiatric sample	2014	The study aimed to assess the pre-intervention levels of EI in psychiatric patients, the change in EI over the course of therapy and the subsequent changes in symptoms.	The EI status of the psychiatric patients was assessed through self-report measures, decreasing the reliability of findings.
Dixit., *et al*. [119]	Emotional Intelligence in Indian Folklore	2017	Explored the existence and promotion of EI skills of understanding and managing emotions in the ancient Indian folklores like the Panchatantra tales.	Being a review research, the article has gaps in research as it is a reductive approach.
Dulewiczand Higgs [122]	Emotional Intelligence: A Review and evaluation study	2000	Reviews literature on Emotional Quotient and establish psychometric properties of constructs to measure EQ. It also provides support to the proposition that a combination of EQ and IQ is a good predictor of success.	The very specific and narrow sample of the study reduced the generalizability of the results.
Soto-Rubio., *et al*. [64]	Effect of Emotional Intelligence and Psychosocial Risks on Burnout, Job Satisfaction, and Nurses' Health during the COVID-19 Pandemic	2020	Aimed to assess the impact of psychosocial risks and EI on nurses' health, job satisfaction and commitment and burnout during COVID-19 and observed that EI emerged as a protective factor.	Being a cross-sectional study conducted in Spain, the generalizability of the results is reduced as well as causality cannot be established.

Chandra [61]	Online education during COVID-19: perception of academic stress and emotional intelligence coping strategies among college students	2020	Assessed the perception of academic stress experienced by students during COVID-19 and online education and the coping strategy of EI that was used by them.	A small sample size and the technique to data collection i.e. telephonic interview led to a decrease in the generalizability of results.
Foye., *et al.* [55]	Exploring the role of emotional intelligence on disorder eating psychopathology	2018	Explored the role of EI in the etiology of disordered eating attitudes and behavior and delineated the use of EI in its treatment and intervention.	The cross-sectional study design made it difficult to establish causality and the sample was also not representative of the population.
Alegre., *et al.* [37]	The Relationship Between Trait Emotional Intelligence and Personality. Is Trait EI Really Anchored Within the Big Five, Big Two and Big One Frameworks?	2019	Studied trait EI that can be considered a broad personality trait integrated into the higher levels of a multi-level personality hierarchy and found that it positively correlated with general personality factors.	The questionnaire used in the study measured only certain aspects of Trait EI and not the whole phenomena making the analysis carried out to be limited.
Kee., *et al.* [57]	Emotional intelligence in schizophrenia	2009	Assessed the emotional procession in schizophrenia patients using the MSCEIT and found deficits in multiple domains across their emotional processing.	The measure of emotional processing used relied heavily on global and objective indicators which overlooked more specific relationships with EI.
Hogeveen., *et al.* [120]	Emotional Intelligence: From lesions to lessons	2016	Evidences from human lesion studies are reviewed to know about specific brain regions associated with the core emotional abilities.	Since it is review work, there are certain gaps knowledge and inconsistencies in the research findings.
Dhani and Sharma [123]	Emotional Intelligence: History, Models and Measures	2016	Summarizes the available literature on EI focusing on the evolution, definition, models and the Indian context of EI.	
Jahangard., *et al.* [99]	Training emotional intelligence improves both emotional intelligence and depressive symptoms in inpatients with borderline personality disorder and depression	2012	Assessed the effects of EI and trainings in EI among patients with BPD and depressive disorders and it was observed that trainings in EI led to improvement in symptoms.	Participants were recruited from only one center and therefore a very diverse sample would not be very diverse.
Kaplowitz., *et al.* [104]	Impact of Therapist Emotional Intelligence on Psychotherapy	2011	Conceptualized the overlap between psychotherapy and EI models and observed how high EI levels positively impact patient assessment compliance.	Being the first study to be addressing this topic, the results obtained are preliminary and require further exploration.

Makhija and Wadhwa [124]	Mood Board: An IoT based Group Mood Evaluation Tool	2019	Proposed a tool called the 'mood board' that allows a real time estimation of the mood evaluation and its use to increase emotional literacy among students.	The proposed model is a prototype and therefore further exploration about the reliability, validity and utility are required.
Mayer [4]	Personal Intelligence Expressed: A Theoretical Analysis	2009	Shed light on personal intelligence that helps individuals meet their own needs and find and fit with the environment and also delineated distinguishing factors among people who are high or low in PI.	
Waterhouse [125]	Multiple Intelligences, the Mozart Effect, and Emotional Intelligence: A Critical Review	2006	Reviewed evidences for multiple intelligence theories, Mozart effect theory and EI effect theory and compared it with their counterpart theories in cognitive psychology and neuroscience.	Further exploration and in-depth investigation into the phenomenon is required for improved understanding of the concept.
Salovey and Mayer [11]	Emotional Intelligence	1989	Literature on intelligence and social intelligence is explored the role of emotions and propose a framework for integrating emotion related skills in the concept of intelligence.	
Simha-Alpern [98]	"I Finally Have Words!" Integrating a Psychodynamic Psychotherapeutic Approach With Principles of Emotional Intelligence Training in Treating Trauma Survivors	2007	Proposed a model of implementing psychoanalytic understanding by psycho-educating trauma survivors about the principles of emotional intelligence can lead to the development of 'emotional language' to articulate their trauma.	The paper explains the proposed model through a single case example and hence the applicability of the findings is questionable.
Mohanty., *et al*. [121]	Effects of emotional intelligence on Job performance: an empirical study In private sector workplace	2019	Assessed the association between EI and work related work related flexible relations in workplace and found a positive correlation between EI and job performance.	The sample was collected from Odisha, where the research was conducted and the therefore the results would also be niche to the state.
Argyriou et.al. [40]	Parenting styles and trait emotional intelligence in adolescence.	2016	Examined the relationship between Trait EI and parenting styles in adolescents and observed a significant association with authoritativeness and a small association with authoritarianism.	A small and relatively homogenous sample size and a low reliability of the PAQ scale led to the findings lacking reliability.
Mayer., *et al*. [107]	The Ability Model of Emotional Intelligence: Principles and Updates	2016	Reexamined the previously given Ability model of EI and revised it in accordance with the current body of research and positioned it among other hot intelligences.	A dearth of research data on the topic made the revised principles given in the article less reliable.

EI and health

The extensive work conducted by Schutte., *et al*. (2007) [65] discusses that lower levels of EI increases the vulnerability towards psychosomatic complains as lower EI contributes towards poorer social functioning. Trait EI was also observed to be related to better physical health outcomes. More use of proactive self-care health practices, adaptive coping and more positive emotions and better access to social support were cited as probable causes [66]. Emotional regulation is considered to be a crucial factor in determining one's health status through effects that are direct or indirect. Direct influences can include exacerbation of physiological responses related to emotions, cardiac functioning, blood pressure or immune responses. While indirect symptoms can be difficulty in symptom recognition, delayed help-seeking behavior, decreased quality of interpersonal communication, coping strategies, social support or cognitive resources [66-69]. Contrarily, Lower levels of Emotional skills are seen to be linked to deviant behavior like getting into physical fights or vandalism, or self-destructive acts like use of substances like alcohol or tobacco [70].

A person's mental health is also influenced by emotional intelligence [71]. Preliminary evidence suggests that some forms of EI may also protect individuals from stress and cause improved adaptive functioning. Research evidence link EI to stress process like appraisal, coping and emotional regulation [72]. A better access to social support and a higher level of satisfaction with the available support protects individuals from depression and suicidal ideation [73]. Shabani., *et al*. (2010) [74] in their research also concluded that higher levels of EI correlate to lowered somatic complains, anxiety and social dysfunction. There is a scarcity of researches on the levels of EI among the clinical population even though theoretical concepts and empirical evidences are clearly indicative of it [75,76].

Research evidences indicate the patients of MDD score lower on dimensions of emotional regulation as compared to their healthy counterparts [77]. A deficit in their reward-oriented or approach motivation system [78,79] lowers their ability to experience positive affect which leads to a diminished ability to identify and respond to positive emotional stimuli [80]. Substance use too has been related to deficits in emotional regulation [81] and also in perceiving and using emotions [70]. Several neuro-chemical modifications may happen due to the use of psychoactive substances leading to impairments like difficulty in impulse control [82] or affective liability [83].

Another mental condition called Borderline Personality Disorder (BPD) which is also labeled as emotional-regulation disorder [84] is characterized by impulsivity, difficulties in interpersonal relationships, self-harm tendencies and even mood instability. Individuals affected by this may be overly sensitive to emotional expression and may possess higher sensitivity to detect any changes in one's emotions. But this may also cause a vulnerability to overreaction to minor events and misinterpretation of emotional information [85]. The condition also involves maladaptive behavior like self-harm, impulsivity [86] and suicidal ideation as a result of the trouble in dealing with emotions like anger and anxiety [87]. They also have a hard time of acknowledging and rebuilding their own emotions [88] and at the same time display decreased level of empathy towards other's emotional state by appearing unconcerned [89]. People with BPD also have a reduced ability to manage complex negative and positive emotions, rather display an exaggerated response to negative emotions [90]. Dyck., *et al*. (2008) [91] observed that BPD patients also have trouble in differentiating between swift and direct, negative and neutral emotional reactions. Hence, lower levels of EI can be observed in individuals with BPD [92].

EI in mental health care

Tools like EI can also be used during psychotherapy to enhance the emotional intelligence of clients as increase in emotional awareness and regulation of emotions are some very important skills in the process of psychotherapy [93]. EI has been professed to protect against manifestations of psychological distress, as it is speculated to be related with better coping abilities pertaining to stressors and everyday demands [87]. EI has also been observed as a skill to be acquired and enhanced over time, and training in EI skills tends to improve mental health [65].

Nyklíček., *et al*. (2015) [94] studied changes in emotional intelligence during psychotherapy of a heterogeneous group of psychiatric patients; its effects on their symptoms immediately post completion of the intervention as well as a follow up after 6 months. It was found

that persons with low EI and psychological difficulties like depression, anxiety or adjustment disorders were hospitalized more. Further, gradual increase in the level of emotional intelligence during the therapy decreased the levels of the previously experienced psychological symptoms at the end of the intervention and also after 6 months of follow-ups.

Emotional instability is observed at its peak while working with trauma survivors in a therapy setting. Most PTSD patients display a lack of articulation of their traumatic experience [95]. Verbalization is troublesome on the grounds that the traumatic experience is difficult to reach; patients battle to address the unformulated and disarranged primary process communication of horrifying flashbacks and bad dreams [96]. Fonagy and Target [97] suggested that the process of gradually labeling and finding a different meaning to one's traumatic experience is the route towards subsequent emotional regulation, controlling one's impulses and self-monitoring. A study by Simha-Alpern [98] described the use of a psychoanalytic model paired with psycho-education of the postulates of emotional intelligence while working with trauma patients and using this technique to enhance their articulation and verbalization of the traumatic experience. It was observed that this helps patients develop the 'emotional language' required to recount the experience.

Jahangard., *et al.* [99] aimed to investigate the effect of emotional intelligence training in patients with BPD and Depressive disorders as the duo display some similarities in their symptomatology, i.e. dysfunctionality in emotional and cognitive beliefs or a reduced self-esteem [100]. The intervention plan included educational content on emotional self-awareness, enhanced emotional flexibility, improvement in communication and interpersonal skills, working on coping with stress and other important problem-solving skills. The 1-month intervention plan showed an increase in EI among the inpatients and a substantial decrease their symptoms. This information was also rendered useful in formulating a future therapeutic plan.

EI in a psychotherapist

So, we have established that EI is a useful tool during psychotherapy. Let us also discuss about the importance of EI as a skill in a psychotherapist. Safran and Muran [101] hypothesized that a huge part of the competence of a therapist is their capability to perceive, process, comprehend, and react to relational dynamics between a client and the therapist and is therefore a predictor of the outcome of the therapeutic process. There are a few noteworthy similarities between the EI ability and some therapist skills. The first among these is Empathy that is capacity to be sensible and receptive to feelings and experience of others [102]. This bears resemblance to the first and second branch of the Ability Model [2]. The second skills is psychological mindedness implying an ability to understand how thoughts, feelings and actions are associated with each other and how it effects one's behavior [18] and this is similar to branch three of the model. The third skill is Reflective functioning, and it also bears similarities to the third branch of EI. It lays emphasis on the capability to acknowledge and comprehend the emotional and cognitive process taking place within oneself and others [103]. And finally the fourth skill is Affect Regulation signifying an ability to rightly react to one's own and others emotional reactions, and this conceptually bears similarity with the fourth branch of EI.

These skills within a therapist may affect the therapeutic relationship in several ways: by directly being the carrier for change, by passively facilitating the intervention strategy or by encouraging a positive therapeutic relationship [104]. A study by Kaplowitz., *et al*. [104] aimed to investigate how EI levels of a psychotherapist affect treatment outcomes and the results showed that a high EI level of the psychotherapist was correlated with improved therapy outcomes, lower dropout rates and a higher patient assessment compliance.

Current status of EI

There have also been a number of breakthrough studies on EI off late. One of these groundbreaking discoveries is that of the 'Mood Meter' which has been developed at the Yale center for Emotional Regulation of University of Yale by Marc Brackett. It aims to help instill 'RULER' skills in an individual which is an acronym for recognizing, understanding, labeling, expressing and regulating emotions. It rates one's mood on two parameters, which are Pleasantness and Energy and on the basis of the response the individual's present mood and

emotional state is determined among four colored quadrant, each colour denoting a different emotional state. Yellow is when the individual feel energized, optimistic, brave, confident, excited, happy. Green is calm, tranquil led, peaceful, content, relaxed. Blue is sad, tired, depressed, lonely, despair, disappointed. Red is angry, scared, mad, irritated, furious, uneasy, worried or anxious [105].

It is hypothesized that the insight one receives after being made aware of the label of emotion, their feeling gradually helps them develop a mindfulness about their emotional reactions and therefore also learn to control or regulate them. This self-awareness would gradually increase with practice and can be utilized to work through emotional instability. This tool has been used in classroom set-ups to observe the effect of different learning styles on academic and workplace performances [106].

There have also been some recent up gradations in the theoretical basis of emotional intelligence. Mayer, Salovey and Caruso [107] re-examined the Ability Model (Mayer and Salovey, 1997) and reformulated it in accordance with growing research and empirical evidences not available in the 1990s. This was done with the idea to improve its usefulness. They then described a set of principles that guided them in this process. Some of the major updates included adding more instances of problem-solving in the four branches. An example of this can be the inclusion of concepts of emotional forecasting and appraisal of emotions in the third branch [108] or including the role of context that is associated with the cultural component of emotions [109] in the branch of perceiving emotions and understanding emotions.

The up gradations also include the inclusion of EI among what is called as 'Hot Intelligence' which is a form of intelligence that means reasoning with data of some personal importance to the individual. Social and Personal Intelligence are other forms of intelligence that have been included under this concept of hot intelligence. Similarities, overlaps and discretions in the three types of intelligence have been discussed further from a theoretical as well as practical outlook, and also on how they influence cognitive reasoning of humans [110,111]. And finally, the role of problem-solving in employing EI has been discussed. These up gradations ensure that the present-day applicability of the model is achieved and supported by empirical evidences that add to its validity.

Bar-On [112] has also introducing path-breaking concepts, expanding his previously famous work of the Emotional and Social Intelligence model introducing the Multifactor Measure of Performance (MMP) that, he believes, is a paradigm shift in the field of psychology. This psychometric tool is designed to study, measure and amplify key predictors of human performance in a number of domains simultaneously and reduces the need for individual batteries of tests making this tool time- and cost effective.

Conclusion

Being a relatively more recent topic of research with only about thirty years since its formal inception, the domain is not free of shortcomings paving ways for future research. Since EI talks about multitudes of qualities at once, it does lack conceptual coherence [113]. According to Locke [114] the conceptual definition of EI is so broad and diverse that it is difficult to adequately test it. Developmental researches of [115] showed that there are a number of other constructs that can be a probable label for what we call as emotional intelligence.

Another argument given is that Emotional Intelligence has a high correlation with general intelligence and personality measures [72]. This correlation makes it difficult to assess that how is EI different from these two already existing domains [58]. Davies, Stankov, and Roberts [116] said that EI does not give any information that is not already provided by the diverse variety of personality or intelligence tools.

Also, a number of psychometric tools exist that offer standardized measures of EI. There is however a longstanding debate that EI is a subjective concept that may not be entirely captured by a tool that is based on a single theoretical concept. While some psychometric tools are performance based, some are also self-report. Self-report tools can also be deceptive as the responses given may depict social desirability [117]. Also being extremely implicit, the facets of emotional competence may not be consciously accessible to the individual

and therefore give incorrect or biased results [118]. There is also some argument over the cross cultural validity of EI. There are several cross-cultural differences on how people experience and express their emotions. Therefore, using the western norms to score people of other cultures may again lead to bias. Thus, more indigenous researches and psychological tool formulation should be encouraged [80].

There is also a huge gap in the available literature on EI with respect to developmental perspectives with most of the work focused on predicting scholastic, non-scholastic or social behavior or children and its relationship with EI. However, little is known about psychodynamic or behavioral perspectives on the development of emotional competence in children. Some research is available on how parent-child interactions influence EI, but they too are limited and inconclusive. Therefore, future researches in this area can yield useful lead to models to enhance the levels of EI among children at home or in schools. Similarly, how to measure the emotional intelligence of persons with cognitive impairment/disabilities is also worth investigating.

Furthermore, many claims related to EI and the factors it predicts lack empirical evidence. The statement that EI determines real-life success, given by Daniel Goleman has not been validated. Matthews., *et al.* [119] theorized, that some of the skills believed to be a part of EI, were found to be correlated with certain aspects of success, but there have not been enough empirical evidences to say that EI is the cause of the development of those skills. It is therefore fair to say that being a relatively new avenue, more researches need to be conducted in the field of emotional intelligence to establish its place. Cross-cultural studies too need to be conducted on a more diverse and wider population.

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