



Emotional Intelligence: Relevance and Implications for Addiction

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Abstract

Purpose of Review Emotional intelligence (EI) is widely regarded as an important predictor of a diverse set of health and life success outcomes. There is growing evidence to demonstrate the role that EI plays in the development of both substance use and behavioral addictions. The aim of this article is to provide an overview of the still limited, but growing research literature on the relevance of EI and related constructs to addictions.

Recent Findings There is substantial empirical evidence to suggest that EI is an important risk factor for the development of addictions. This points to a need for greater research attention into the specific mechanisms linking EI to addictions, as well as the potential utility of EI training in the treatment of addictions.

Summary Future research should examine the specific components of EI and mediator variables that underlie the relationship between EI and addictions, as well as develop and evaluate EI training programs for use in treatment.

Keywords Addiction · Alexithymia · Emotional intelligence · Literature review

Introduction

This article examines the relevance of the emotional intelligence (EI) construct to the field of addiction. Importantly, despite continued debate regarding the use and definition of the term “addiction”, the current review takes addiction or addictive behavior to involve a set of key features outlined by Griffith, namely, salience or preoccupation, mood modification (e.g., euphoria or escape), tolerance, withdrawal symptoms, conflict between the addict and themselves and/or others, and relapse [1]. This approach to addiction takes into consideration multiple different forms of addiction, including both substance use and behavioral addictions, which will be addressed in this review. Nonetheless, to date, there has been a relatively limited amount of research related to the EI construct. However, although only a small amount of direct literature exists, several highly related constructs have produced a relatively rich body of knowledge. The first section of this article identifies one of the more important EI-related

constructs (alexithymia), as well as summarizes the most important findings from the relevant clinical literature. Subsequent sections of this paper review the small but growing literature on EI and addiction, as well as the treatment implications of EI and alexithymia for addiction.

Precursors to the EI Construct

Since its appearance in the late 1980s, there have been various models proposed for the EI construct [2–5]. Regardless of the specific model used, however, all EI models identify key dimensions with important implications for the field of addiction: namely, the ability to identify and communicate emotional experiences, the ability to connect specific mental experiences with situations and behaviors, the ability to monitor future behavior from prior feelings and emotions, as well as the ability to self-regulate negative emotional states. This broad range of abilities included in most EI models has obvious clinical implications for both substance use and behavioral addictions [6, 7].

However, direct empirical evidence on the relationship between EI and addiction is only now starting to appear in the clinical literature. As has been documented elsewhere, the early EI literature was plagued by a lack of reliable and valid assessment tools [8–10]. These issues regarding measurement

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of EI have thus hindered and disincentivized clinical researchers in the addiction area from investigating EI until relatively recently. On the other hand, indirect empirical evidence on the relevance of EI to the area of addiction comes from research on related constructs. One such EI-related construct, alexithymia, in contrast to EI, has received much attention and interest in the addiction literature [11].

Alexithymia

First coined by Sifneos to identify individuals with a similar set of cognitive and affective characteristics, alexithymia (from the Greek: *a* = lack, *lexis* = word, *thymos* = emotion) has garnered much research attention in the clinical literature, including in the area of addiction [12]. Over the past five decades, research on alexithymia has led to a definition of the construct with the following core features: difficulty identifying feelings and distinguishing between these feelings and the bodily sensations of emotional arousal; difficulty describing feelings; constricted imaginal processes; and an externally oriented cognitive style [13, 14].

Importantly, individuals with high levels of the core features of alexithymia appear to be less likely to turn to other people for emotional support, in part, because of pervasive problems in their ability to communicate emotional experiences to others. They are also less likely to self-regulate negative emotional states via imaginative coping activities like daydreaming [15]. As a result of these characteristics, alexithymic individuals are at an increased risk for developing a number of mental health problems, including depression and suicidal ideation [16, 17], eating disorders [18], somatic symptom disorder [19], chronic pain [20], and cardiovascular disease [21]. Alexithymia has also been linked to a variety of non-clinical lifestyle variables such as impaired relationships and loneliness [22, 23], poor sedentary habits [24], and risk-taking behaviors [17].

Along with these core characteristics, several other common features observed in individuals with high levels of alexithymia have important clinical implications for addiction. One such feature is the common finding that individuals with high levels of alexithymia are more likely than their low alexithymia peers to have a history of childhood abuse and early trauma [25, 26]. This is particularly true for sexual and emotional abuse which are both risk factors for addiction in their own right. Indeed, research clearly shows that victims of childhood abuse and neglect are at a higher risk for addiction later in life, among other psychiatric disorders, and that alexithymia compounds this risk [26, 27].

Moreover, individuals with high levels of alexithymia also tend to engage in more avoidance coping strategies (i.e., engaging in behaviors to distract, deny, or disengage from stressful situations) in order to cope with negative affective states

[28, 29]. This finding is particularly relevant as researchers argue individuals with addictions utilize addictive behaviors as a way of managing negative affective states or otherwise regulating their emotions during unpleasant situations [13, 30]. Thus, by already having a tendency towards avoidance coping strategies, individuals with high levels of alexithymia are already primed to utilize addictive behaviors that will do the work of emotion management for them.

Alexithymia and EI

Theoretical work examining the nature of both EI and alexithymia consistently supports the negative association found between the two constructs. Indeed, when comparing the definitions of alexithymia and EI, one can see that the two constructs are highly related [6, 13]. For instance, both constructs have overlapping domain coverage of socioemotional competencies, including an individual's understanding and experience of emotions and the expression of those emotions to others. Moreover, when describing an early model of emotional intelligence, Salovey, Hsee, and Mayer conceptualized individuals with alexithymia as being at the extreme lower end of the EI continuum [31].

Not surprisingly, several researchers have found empirical evidence of a strong relationship between EI and alexithymia. Given the diversity of EI models used in this literature, the consistent pattern of a moderate to high association between the two constructs is quite significant. For instance, using the 26-item Toronto Alexithymia Scale (TAS) [32] and their own 33-item self-report emotional intelligence scale (SSREI), Schutte et al. found a correlation of $-.65$ in a small sample ($n = 25$) [33]. Using the same measure of emotional intelligence, Saklofske, Austin, and Minski [34] found a similar moderate negative association ($-.52$) between the EI measure and alexithymia using the psychometrically superior 20-item TAS [35]. Likewise, Dawda and Hart [36] found a correlation of $-.49$ for men and $-.55$ for women between the total EI scale and the TAS-20 using the Emotional Quotient Inventory (EQ-i) [2]. Using a larger sample of adults ($n = 734$), Parker et al. reported a correlation of $-.72$ between the same two measures [6]. More recently, using an Iranian university student sample and a Farsi version of the TAS-20, Ghiabi and Besharat found a correlation of $-.74$ between TAS-20 total scores and total EI scores on the SSREI [37]. Similarly, using the TAS-20 and a short form of the Trait Emotional Intelligence Questionnaire (TEIQue-SF) developed by Petrides [38], Lonsdale found a correlation of $-.67$ in a sample of adults ($n = 177$) while also controlling for gender, age, and perceived stress [39].

Alexithymia and Addiction

Over the course of several decades of research, alexithymia has also been found to play an important role as a risk factor for several forms of addiction. Indeed, according to several recent studies, alexithymia appears to contribute as both an indirect and direct risk factor for a variety of substance use addictions, including alcohol use disorder (AUD) [40], buprenorphine addiction [41], and heroin and synthetic cannabinoid addictions [42]. Similarly, recent research has also found alexithymia to be a significant risk factor for several behavioral addictions, including Internet addiction [11], problem gambling [43], and mobile phone addiction [44].

Alexithymia appears to contribute to the risk of addiction development, in part, through its associations with increased cravings and decreased ability to regulate negative mood [45]. Specifically, individuals with high levels of alexithymia are unable to internally regulate negative affect and cravings and thus turn to substance use or addictive behaviors in order to reduce cravings and negative affect. This mechanism is further supported by evidence from individuals with substance use and Internet addictions that alexithymia is associated with greater sensitivity to rewards and punishments, as well as impaired disinhibition and self-regulation [11, 46]. Overall, this suggests that alexithymia places individuals at a primed state in which they are both more highly attracted to the rewarding sensations that substances and addictive behaviors induce and highly aroused by the unpleasant sensations of cravings which they are unskilled at internally self-regulating. Among Internet addiction in particular, research has demonstrated alexithymia to be associated with an increased use of suppression, a maladaptive form of emotion regulation, and thereby indirectly associated with addiction severity [47].

EI and Addiction

As one would expect, given the robust association between EI and alexithymia, it has also become increasingly clear that EI plays an important role in addiction [7]. Indeed, in a recent review of studies examining the relationship between performance-based measures of EI and substance use addictions, Leite et al. found that a majority of studies demonstrate that individuals with alcohol and cocaine addictions have lower levels of EI compared to healthy individuals [48]. Similarly, Kun and Demetrovics, in their review of the relationship between various measures of EI and substance use problems, found further evidence that individuals with substance use problems, including alcohol, opiate, and cannabis addictions, have lower EI levels than individuals not experiencing these problems [7]. Additionally, Kun and Demetrovics also found preliminary evidence suggesting that polydrug abuse is associated with even lower EI levels than with single drug abuse.

More recently, a study by Aslanidou, Petrides, and Stogiannidou examined the EI levels of adults with or without a substance use addiction and found significantly lower EI scores among adults with a substance use addiction [49].

Consistent with findings for substance use addictions, there is also growing evidence in the clinical literature for the important role of EI in behavioral addictions [7]. For example, Saraiva et al. and Hamissi et al. both found small to moderate negative correlations between total EI scores and internet addiction [50, 51]. Two other studies of smartphone and internet addictions by Arrivillaga et al. and Beranuy et al. similarly found significant negative associations between smartphone and internet addictions and EI [52, 53]. Consistent with these findings, Parker et al. found moderate to strong associations between EI and a number of behavioral addictions, including problem gambling, problem gaming, and Internet addiction, in a large sample of adolescents ($n = 667$) [54]. Similarly, using a clinical outpatient sample of adolescents, Parker et al. found a moderate to strong association between EI and the same behavioral addictions [55]. Kircaburun et al. also found a moderate association between EI and gaming addiction [56].

Additionally, EI has been found to have both a direct effect on gaming addiction severity and indirect effect via escape motivation—a form of avoidance coping [57]. Consistent with this finding, a recent study by Sun, Lui, and Yu found an association between EI and smartphone addiction, with this association being partially mediated by problem-focused and emotion-focused coping [58]. Moreover, a recent meta-analysis by Ranjbar and Bakhshi found a robust moderate negative association (pooled correlation = $-.39$) between EI and Internet addiction across 15 separate studies included in their analysis [59]. Taken together, these findings suggest that there is an accumulating evidence that lower EI scores represent a vulnerability or great risk for the development of addiction-related problems, both in terms of substance use and behavioral addictions.

Treatment Implications of Alexithymia and EI

Along with an increased vulnerability for addiction-related problems, the presence of alexithymia in clients has a number of potential implications for healthcare professionals. For example, individuals who present with alexithymic features may be at an increased risk for gratuitous medical consultations and procedures. Indeed, one Spanish study by Vazquez et al. found that among asthma patients, those with higher levels of alexithymia tended to make more frequent visits to the emergency room [60]. Moreover, a review by Lumely, Neely, and Burger found that a number of studies point to greater reporting of somatic and other physiological symptoms, as well as greater healthcare seeking among individuals with higher alexithymia [61]. Contributing to this finding may be

the poor communication style of individuals with high levels of alexithymia, combined with the tendency to somatize their distress [62]. Confronted with patients appearing to experience various somatic problems, healthcare professionals routinely respond by requesting various tests and interventions. When initial interventions fail to provide sufficient relief to the patient, many healthcare professionals will prescribe additional tests and interventions. As a result, individuals with high levels of alexithymia may be at an increased risk for medical complications or other iatrogenic problems.

Owing to a tendency to interpret normal physiological arousal as problematic symptoms, recent research has suggested that individuals with high levels of alexithymia may dramatically over-report medical and psychiatric symptomatology [63, 64]. In particular, researchers have found individuals with high levels of alexithymia to report somatic symptoms inconsistent with objective observation or over-report symptoms considered quite rare or extreme [63]. These findings highlight the need for healthcare professionals to consider screening for individuals with alexithymia or low levels of emotional intelligence.

Several researchers have also noted that individuals scoring high on measures of alexithymia may be unsuitable clients for many forms of psychotherapy [65, 66]. Indeed, in the case of insight-oriented psychotherapies, researchers have found individuals with high levels of alexithymia to report poorer therapeutic outcomes than individuals with low levels of alexithymia. In part, this is likely due to specific deficits in individuals with high alexithymia that are problematic for interventions that depend on reasonable abilities to perceive, reflect on, and communicate affectively laden experiences [65].

In contrast, evidence regarding the impacts of alexithymia on treatment outcomes for other forms of psychotherapy is mixed. A study by Quilty et al., examining the effects of alexithymia on treatment outcomes for cognitive-behavioral therapy (CBT) and interpersonal psychotherapy (IPT), found that clients with high levels of alexithymia reported poorer symptom improvement following both CBT and IPT [67]. Researchers also reported that, consistent with insight-focused psychotherapies, poorer improvements in symptoms following CBT and IPT were in part due to the effect of alexithymia in reducing therapeutic alliance. Similarly, a recent longitudinal study examining the impact of alexithymia on treatment retention and relapse among substance use disorder (SUD) patients, following outpatient treatment, found that higher levels of alexithymia had shorter treatment retentions as well as quicker relapses following treatment [68]. In contrast, other researchers examining the effects of alexithymia on treatment outcomes have found limited evidence supporting a reduction in treatment outcomes [69–71]. Another recent longitudinal study examining

treatment outcomes among a small sample of young adults with SUDs ($n = 55$) following inpatient treatment found that only the difficulty describing feelings component of alexithymia predicted the number of relapses per month experienced by patients [69]. Moreover, other treatment outcomes, including treatment retention and the total number of relapses reported, were not significantly associated with alexithymia. Given these mixed findings, it is suggested that healthcare professionals are to be mindful about the interventions prescribed to individuals with high levels of alexithymia, particularly if potentially poor therapeutic alliance is indicated (see [65] for a detailed discussion of the implications of poor therapeutic alliance).

As with alexithymia, research evidence also suggests that EI has several implications for healthcare professionals. Indeed, owing to the associations between EI and other related constructs, including alexithymia, emotional awareness, empathy, and psychological mindedness, several authors have recently argued for the importance of EI for various aspects of clinical practice [72–74]. In particular, authors argue that both the client and mental health professional's ability to be aware of their own emotions (i.e., emotional self-awareness) and to be aware and attentive to the emotions of others (i.e., empathy) is especially important, as is evidenced by the extensive literature supporting the roles of empathy, alexithymia, and psychological mindedness in treatment outcomes [73]. Moreover, despite limited direct research examining the implications of EI for treatment outcomes, the evidence that does exist is quite encouraging.

A pilot study by Kaplowitz, Safran, and Muran, for example, examining the relationships among the EI scores of psychotherapists and various psychotherapy outcomes, found that therapists with higher EI scores reported more positive improvements in their clients' interpersonal problems and main symptom complaints [75]. Additionally, clients of psychotherapists with higher EI scores were also less likely to drop-out of treatment and less likely to be non-compliant with assessment. Consistent with these findings, a study by Rieck and Callahan also found that higher EI scores among therapists predicted more positive client change post-intervention [76]. Direct evidence of the importance of clients' EI levels with respect to treatment outcomes has also been demonstrated in a more recent study from the Netherlands [77]. Interestingly, researchers found that clients' EI scores pre-intervention did not predict psychiatric symptoms post-intervention; however, clients' change scores in EI from pre- to post-intervention did predict clients' psychiatric symptoms, both post-intervention and at a 6-month follow-up. Importantly, this suggests that improvements in EI through treatment interventions can be an effective way to improve not only EI but also psychiatric symptoms both for the short term and long term.

Conclusion

Despite limitations in the current clinical literature on direct evidence of the relationship between EI and addiction, particularly in the context of treatment and intervention, there is growing evidence for both indirect and direct impacts. Research largely supports the view that low EI, like alexithymia, is a significant risk factor both directly and indirectly (via use of maladaptive coping and emotion regulation strategies) for the development and maintenance of substance use and behavioral addictions. Moreover, there is also evidence demonstrating the important implications of EI for healthcare professionals in the treatment of addiction. This suggests that more direct research is needed into the relationship between EI and addiction, as well as its treatment. In particular, future studies could elucidate the relative importance of EI as a risk factor for addiction alongside other important individual differences characteristics. Future research is also needed to better clarify the internal mechanisms underlying the EI-addiction relationship, especially those mechanisms that differentiate addictions. Finally, there is an important gap in research that examines the effects of EI on psychotherapeutic treatment outcomes, including the treatment of addiction. Future studies could address this by examining the importance of both healthcare professional and client EI levels on the effective treatment of addiction. In particular, research examining the utility of EI training programs that target individuals with addiction-related problems would help to clarify whether improving EI may be an effective approach for the treatment of addiction.

Compliance with Ethical Standards

Human and Animal Rights All reported studies/experiments with human or animal subjects performed by the authors have been previously published and complied with all applicable ethical standards (including the Helsinki declaration and its amendments, institutional/national research committee standards, and international/national/institutional guidelines).

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