The difference in emotional intelligence in relation to levels of maltreatment of Jordanian secondary school students

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ABSTRACT
The purpose of this study is to examine the relationship between maltreatment (psychological and neglect) and emotional intelligence among 163 Jordanian students in seventh grade. Two measurements were applied: The Maltreatment and Neglect Scale and The BarOn Quotient Inventory scale. The study results revealed a statistically significant inverse relationship between emotional intelligence and maltreatment. Students subjected to high levels of maltreatment scored lower means in emotional intelligence, and students subjected to low levels of maltreatment scored higher means in emotional intelligence. The emotional intelligence domains included intrapersonal skills, interpersonal skills, stress management and adaptability. The results showed statistically significant differences for all domains except intrapersonal skills. Furthermore, the results revealed no statistically significant differences in emotional intelligence of those maltreated attributed to students’ gender. Finally, there were statistically significant differences in emotional intelligence which were attributed to the type of maltreatment in favour of neglect.

Introduction
Exposure to anger or conflict in family environments has emotional consequences for children, especially when these verbal or physical conflicts remain unresolved. Research shows that when children are present in these environments, they feel a variety of emotions ranging from anger, to sadness, anxiety, shame and guilt (Cummings, Simpson, & Wilson, 1993; Cummings, Vogel, Cummings, & El-Sheikh, 1989). Thus, emotional maltreatment within the family environment has a large impact on children's emotional well-being. Psychological or emotional maltreatment is defined as acts, other than physical or sexual abuse, which can or do lead to conduct, cognitive, affective and other mental disorders. Examples of psychological maltreatment include verbal abuse, and extreme or unreasonable demands regarding a child’s performance (Underwood & Rosen, 2011).

Maltreated children have various problems in recognizing emotions. The reason that recognition of emotion is so important is because it is one of the earliest applications of social cues, which children then use to interpret emotions and behaviourally respond to them (Cummings, Hennessy, Rabideau, & Cicchetti, 1994; George & Main, 1979; Hennessy, Rabideau, Cicchetti, & Cummings, 1994; Klimes-Dougan & Kistner, 1990). Maltreated children are more likely to be emotionally constricted in situations in which negative emotional expressions are contextually appropriate (Maughan & Cicchetti, 2002).
One type of maltreatment is neglect, which is defined as the failure of the parents or the caregiver of the child to provide needed age-appropriate care even when possessing the finances to do so. It can include failure to provide the child with enough food, clothing, shelter, medical care in case of sickness, and supervision, as well as the failure to educate the child (Underwood & Rosen, 2011). The significance of child neglect should be predictable since it is known that lack of parental care and nurture is one of the most substantial threats to the healthy growth and well-being of children (Rutter & Sroufe, 2000; Sameroff, 2000).

Neglect which appears early in the development of the child is particularly damaging to his or her subsequent development. Neglect is also associated with effects which differ from the results of physical abuse, especially in early childhood and in adolescence (Hildyard & Wolfe, 2002). While children who are exposed to violence or maltreatment, like neglected children, are evidently at risk for psychological issues, the route that leads from these issues to more serious misconduct is not as clear (Cicchetti & Manly, 2001; Cummings & Davies, 1994; Fantuzzo et al., 1991; McCabe, Lucchini, Hough, Yeh, & Hazen, 2005).

When neglected children grow up, they encounter various problems in their adult lives which include vulnerability to depression and anxiety, aggressive behaviour, deficit self-control, and the struggle to resolve conflicts (Bierman, Torres, & Schofield, 2010; Caballo & Irurtia, 2008; Campbell, Hansen, & Nangle, 2010; Dixon, 2008).

As a matter of fact, while Baumrind’s model of parenting styles had initially distinguished three basic child-rearing styles: authoritative, authoritarian and permissive, a fourth category was identified much later; rejecting/neglecting parents. This category was characterized by low levels of warmth, little structure in raising their child, and few or low expectations (Baumrind, 2005). This neglectful style, similar to the authoritarian and permissive parenting styles, was associated with various problems that children faced, including aggression, depression and low levels of social competence (Steinberg & Silk, 2002).

Neglected children face numerous risk factors which damage their normal development (Schumacher, Slep, & Heyman, 2001). These risk factors – which include chronic poverty, serious caregiving deficits and parental psychopathology – are all associated with neglect (Pelton, 1994) and have all been found to increase the possibility of children developing psychopathologies, especially when there is a lack of resources to compensate for the neglect (Brooks-Gunn & Duncan, 1997; McCall & Groark, 2000). Certain social risk factors serve as inhibitors of social competence, leading to maladjusted behaviour patterns (Clemente, Espinosa, & Vidal, 2009; Fariña, Arce, & Novo, 2008).

The ‘neglect of neglect’ has been acknowledged for years now (Wolock & Horowitz, 1984). However, child neglect is still much less researched than child maltreatment. Many individuals find it unexpected that neglect can have effects as severe as other types of maltreatment such as emotional maltreatment or physical and sexual abuse (Hart, Binggeli, & Brassard, 1998; Trickett & McBride-Chang, 1995).

Research on maltreatment has not looked particularly at the relationships between children’s knowledge of emotions and the family’s emotional environment, but some studies suggest that neglected children have inadequate opportunities to interact with adults in the environment they grow up in, and that children who are physically abused are exposed to environments with high interpersonal hostility and threat levels.

Awareness of the link between parents’ responsiveness and children’s emotional intelligence has grown in the past three decades (Gottman & DeClaire, 1997). The family environment in which one lives does not only allow experiencing emotion, it also teaches how to express emotions and when it is appropriate to express them. Moreover, this environment is responsible for defining social and moral norms which guide us about what we should feel during specific events and situations (Valiente & Eisenberg, 2006).

A new area of research which is becoming very active is the study of emotional intelligence and its relationship to psychological maladjustment in adolescents (Resurrección, Salguero, & Ruiz-Aranda, 2014). Emotional intelligence is known as a multifactorial group of interrelated emotional, personal, and social abilities which assist one in dealing with life’s demands (Ciarrochi, Forgas, & Mayer, 2001).

Emotional intelligence proposes that individuals who have the capability of perceiving and expressing emotions, in addition to the ability to regulate these emotions, exhibit fewer psychopathologies
that might develop to emotional disturbances (Brackett, Rivers, & Salovey, 2011; Mayer, Roberts, & Barsade, 2008).

Therefore, this study attempts to examine the psychological maltreatment and neglect, and its relationship to emotional intelligence specifically in the adolescent age group.

Aims of the study
This study aimed to reveal the differences in emotional intelligence in relation to two levels of maltreatment – high or low – in secondary school students in Jordan when studied in the light of variables such as gender and type of maltreatment (psychological maltreatment, neglect).

Specifically, the study attempted to answer the following questions:

Study questions

(1) What is the relationship between emotional intelligence and maltreatment?
(2) Are there statistically significant differences in the relationship between emotional intelligence (including its domains) and the level of maltreatment (high or low)?
(3) Are there statistically significant differences in emotional intelligence of maltreated students, which are caused by gender?
(4) Are there statistically significant differences in emotional intelligence which are due to the type of maltreatment (psychological maltreatment, neglect) which the students were exposed to?

Theoretical framework and previous studies

Two meta-analyses exploring the relationship between emotional intelligence and health showed positive associations between emotional intelligence and mental, psychological, and psychosomatic health (Martins, Ramalho, & Morin, 2010; Schutte, Malouff, Thorsteinsson, Bhullar, & Rooke, 2007). They suggested that emotional intelligence is connected to lower psychological maladjustment and better well-being in adults, though it is still unclear whether the same applies to adolescents, as that topic has not been studied so extensively. Thus, there has been a lack of studying age-related differences and the relationship between emotional intelligence and adolescent-specific psychological maladjustment issues (Martins et al., 2010).

Some studies which have looked at the effects of neglect found that children who are physically abused find it difficult to recognize emotions like sadness and disgust. A study conducted by Pollak, Cicchetti, Hornung, and Reed (2000) with signal detection analysis showed that physically abused children selected angry faces abundantly, while neglected children showed bias in selecting sad faces. No selection bias was seen in non-maltreated children. Thus, physically and emotionally neglected preschoolers often exhibit serious problems in coping, personality development, and emotional regulation. Neglected children tend to be confused by the emotional displays of others and are worse in detecting emotions correctly when compared to non-maltreated children (Pollak et al., 2000; Waldinger, Toth, & Gerber, 2001).

A more recent study found similar results regarding the emotions to which abused children had increased attentional responses, as they showed increased amplitude in the Event-related Potential component associated with angry emotions. Therefore, the findings suggested that attentional systems in the brain are changed by negative social experiences (Shackman, Shackman, & Pollak, 2007).

Studies have also shown that when caretakers do not pay attention to an infant’s cues, the baby does not develop the ability to properly regulate emotions. Examples of this could include mothers who do not talk to their babies due to depression or fathers who play too hard with their babies due to anxiety. This not only causes a problem in developing emotional regulation activities but could also
lead children to become passive or socially disengaged since they would fail to learn that babbling gets attention (Gottman & DeClaire, 1997).

A recent study examined the relationship between parenting style and emotional intelligence levels in preschool children. The results showed that there was a significant relationship between the authoritarian parenting style and preschool-aged children's degree of negative temperament related to emotional intelligence (Farrell, 2015).

Another study which looked at the relationship between child and parents studied emotional intelligence and its relationship to the time mothers and children spent engaging in cooperative activities. The results revealed that the duration and quality of time mothers and daughters spent together positively affected children's emotional intelligence (Alegre, 2012).

Finally, Kim and Cicchetti (2009) conducted a study in which they examined the relationship between maltreatment and emotion dysregulation. Emotion dysregulation contributed to externalizing behaviour and consequently, peer rejection. The results showed that psychological/emotional maltreatment was directly related to peer rejection, while neglect was not (Kim & Cicchetti, 2009).

In conclusion, the reviewed studies mentioned above look at these relationships solely in younger children, while no studies seem to examine the secondary school stage. That is why this study is crucial as an addition to the existing literature on the topic.

**Methods and procedures**

**Participants**

Participants in this study consisted of students attending seventh grade in several public schools in Amman, Jordan. The study sample was randomly chosen.

The original sample on which the study tools were applied consisted of (800) students who were screened according to a cut-off score in the Maltreatment and Neglect Scale for Normal and Abnormal Children by Baza (Baza, 2005).

After eliminating students according to the scale, (163) students remained which made up the sample of the current study, where (81) were subjected to low levels of maltreatment, and (82) were subjected to high levels of maltreatment.

From the students who were subjected to low levels of maltreatment, (46) were female and (35) were male. As for the students subjected to high levels of maltreatment, (35) were female, and (47) were male.

**Measurements**

Two measurements were applied. The Maltreatment and Neglect Scale for Normal and Abnormal Children – MNSNAC – by Baza (2005), and the BarOn Quotient Inventory Youth Version – BarOn EQ-I YV – by BarOn (1997).

The MNSNAC is a self-report measurement for children aged (9–12) years. It consists of three scales, of which two were used: Psychological maltreatment and neglect. Every scale in the measurement consists of (22) items on parents.

The reliability of the measurement was calculated using the test–retest method on a pilot sample of (50) students, and the reliability coefficients between the first and second application ranged between (.76–.81). As for the internal consistency, which was calculated using Cronbach Alpha, the values ranged between (.74–.85).

As for the validity of the measurement, the trustees-validity was checked. In addition, discriminant validity revealed a discrepancy between low, medium, and high levels, which is an indicator for construct validity (Baza, 2005).

The BarOn EQ-I YV scale which was used was also a self-report instrument which was designed to measure emotional intelligence in young people aged (7–18) years. The scale is based on the BarOn
model of emotional and social intelligence, and it consists of (60) items distributed across five scales; intrapersonal scale, interpersonal scale, stress management scale, adaptability scale and total EQ.

The reliability of the measurement was calculated using the test–retest method on a pilot sample of students, and the reliability coefficients between the first and second application ranged between (.69–.80) for the domains, and (.78) for the total score. As for the internal consistency, which was calculated using Cronbach Alpha, the values ranged between (.62–.79) for the domains, and (.80) for the total score.

As for the validity of the measurement, face validity was accomplished through translation steps for the scale, including initial translation and back translation. Moreover, construct validity was checked using the internal consistency of the translated version of the scale through calculating the correlation coefficient between the sub-scales forming the scale, and the total score of the scale (BarOn, 1997).

Results

The results indicated that there is a relationship between emotional intelligence and maltreatment. The relationship was calculated using the Pearson correlation and it was equal to (−.511**). This revealed a statistically significant inverse relationship between emotional intelligence and maltreatment, where emotional intelligence decreases when maltreatment increases and vice versa.

Furthermore, the results revealed a statistically significant difference in the relationship between the total score of emotional intelligence and its subscales, and the level of maltreatment at a significance level of (α = .05). Students who were subjected to high levels of maltreatment scored lower means in emotional intelligence (50.01), and students who were subjected to low levels of maltreatment scored higher means in emotional intelligence (55.87).

As for intrapersonal skills, the results indicated that students who were subjected to high levels of maltreatment scored lower means in intrapersonal skills (2.27), and students who were subjected to low levels of maltreatment scored higher means in intrapersonal skills (2.41).

The results also indicated that students who were subjected to high levels of maltreatment scored lower means in interpersonal skills (2.72), and students who were subjected to low levels of maltreatment scored higher means in interpersonal skills (3.20).

Regarding stress management, students who were subjected to high levels of maltreatment scored lower means in stress management skills (2.38), and students who were subjected to low levels of maltreatment scored higher means in stress management skills (2.55).

Finally, the results revealed that students who were subjected to high levels of maltreatment scored lower means in adaptability skills (2.63), and students who were subjected to low levels of maltreatment scored higher means in adaptability skills (3.02).

To find out if these differences were significant, a T-test of the means was conducted, which showed statistically significant differences for all the domains of emotional intelligence except the intrapersonal skills.

With regard to gender, the results revealed no statistically significant differences in emotional intelligence for maltreated students between females and males, as the females had emotional intelligence mean levels of (50.88), and males had mean levels of (49.35).

The results indicated that there is a relationship between emotional intelligence and psychological maltreatment, which was calculated using the Pearson correlation and was equal to (−.439**), which revealed a statistically significant inverse relationship between emotional intelligence and psychological maltreatment. As for neglect, the Pearson correlation was equal to (−.533**) which also revealed a statistically significant inverse relationship. This indicated that students who were exposed to neglect had lower emotional intelligence than those who were subjected to psychological maltreatment.
Discussion

The results indicated that there is a statistically significant inverse relationship between emotional intelligence and maltreatment. Students subjected to high maltreatment had lower emotional intelligence and those subjected to low levels of maltreatment had higher emotional intelligence. This is due to the fact that an essential factor in the way in which children respond to stress in its different forms (including being neglected) is the amount of support their caregivers provide them with in order to assist them in adapting or coping. Caregivers create models which children use to learn how to practice control even in stressful or confusing situations. Maltreated children face difficulty adapting to any form of stress as they are deprived of effective models of problem solving (Luthar, Cicchetti, & Becker, 2000).

The emotional environment for interactions between the parents and child is important to successfully employ emotion regulation strategies in social contexts and situations. Understanding emotion regulation is a component of self-regulation; and self-regulation is what directs one's adaptation both intrapersonally and interpersonally.

Furthermore, since maltreating parents have a tendency to isolate their families from other people, their children are not exposed to what could be positive non-parental models of emotional communication, which adds to their ineffective adaptability to conflict (Salzinger, Feldman, Hammer, & Rosario, 1993). Studies have revealed that parents who are coping with a lot of stress have the tendency to employ parental practices which are not positive, leading to their children having lower social and emotional competency (Anthony et al., 2005).

Abused and neglected preschoolers often have negative mental representations (i.e. internal working models) of the self and others. Since their parents expose them to unresponsive or traumatizing care, they formulate models of themselves as people who do not deserve love and caring and they view other people as unavailable or rejecting (Hildyard & Wolfe, 2002). Studies have indicated that physically abused children formulated high levels of negative self-representations, while neglected children showed low levels of positive self-representation (Toth, Cicchetti, Macfie, & Emde, 1997).

Therefore, maltreated children are less skilled at managing their emotions. They do not know how to evaluate the emotions of others and how to express their own, which in turn makes it difficult for them to identify and control such emotions. Moreover, maltreated adolescents tend to lack emotional consistency (López, Etxebarría, Fuentes, & Ortiz, 2003).

Neglectful parents have low expectation of their children and fail to define limits. They provide low levels of emotional support and often reject their children and ignore their responses. This behaviour leads to internal and external problems which affect their children and their emotional intelligence.

Moreover, neglect leads to children being incapable of internalizing their realization of parents' behaviours which teach them to adapt to and manage stress (Underwood & Rosen, 2011). Children who are exposed to neglect lack the ability to learn social and emotional competence at an early stage, which affects their ability to regulate their emotions and solve problems without impulsiveness, which creates a barrier between them and their ability in handling problems and being able to adapt (Goleman, 1995). Also, they develop low self-esteem which leads to less adaptability and a lower ability to face pressures.

Moreover, it has been shown that acts of emotional omission, like neglect, result in children having delayed and inaccurate recognition or understanding of emotional signals. On the other hand, children who have experienced acts of emotional omission like physical or psychological maltreatment, showed higher accuracy in detecting threat-related information and emotions like anger, which highlighted higher intrapersonal abilities, despite their poor performance in detecting and dealing with the interpersonal emotions of others (Pollak et al., 2000). This could explain why the intrapersonal skills were the only subdomain of emotional intelligence which did not have a statistically significant result.

The study results also revealed that there were no differences attributed to gender. One reason for this result could be related to the small sample of maltreated students in this study. Moreover, studies which looked at the difference between boys and girls have been limited and the studies which do exist have shown that boys and girls are equally likely to be reported as neglected or maltreated (Chan, 2011). Finally, the students in the sample all came from low income families and the maltreatment of both the...
father and the mother were represented as one through parental maltreatment. All these factors could have contributed to the lack of gender discrepancy which the results revealed.

Finally, neglect has a different psychological meaning for students than psychological maltreatment, as neglected students may feel a lack of worth and attention, while psychologically maltreated students may feel that they have a value even if others actions towards them are negative, which explains why neglect can have effects that are even more severe than psychological maltreatment.

Conclusion

The home can be looked upon as the first school that teaches emotional skills. The development of these skills begins with good parental interaction and with parents helping their children to identify and regulate emotions, and to place these skills in appropriate social context. These acquired skills might play a small or larger part in their development.

Parental interaction is a vital factor which shapes children’s emotional intelligence, and the influence of these interactions can be seen from the earliest days of infancy when a child’s immature nervous system is beginning to be formed. Children’s experience with emotion, at a point when their parasympathetic nervous systems are still being formed, may play a major role in the development of their vagal tone, which can contribute to their emotional well-being as they grow up.

Therefore, the root of serious problems that children may experience lies in their lack of emotional and social competence, as Goleman believes that neglecting to educate children in emotional intelligence skills might cause them to miss the chance to acquire these skills which accompany brain maturation and the building of a healthy emotional and mental repertoire (Goleman, 1995).

Finally, parental psychological maltreatment and neglect threaten the proper growth of children’s emotional and social competencies. They can have deeply negative impacts on children as they grow, and cause a deficiency in emotional intelligence skills, intrapersonal and interpersonal skills, stress management and adaptability.

Disclosure statement

No potential conflict of interest was reported by the author.

Notes on contributor

Jehan Wadiea Mattar, PhD, is an Associate Professor of Educational Psychology at the University of Jordan in Amman, Jordan. Mattar teaches topics in educational psychology, social and emotional development for graduate level students including PhD courses. She has served as the head of Educational Psychology department, and as the Assistant Dean of student affairs. She has also worked with the Arab League Education Scientific and Cultural Organization in Tunisia, and the National Council for Family Affairs in Amman, Jordan on establishing developmental norms for Jordanian and Arab children. Her research interests include emotional and social development and developing measurements.

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