



Deficits in emotional intelligence underlying adolescent sex offending

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The present study investigated whether a battery of tests designed to measure different levels of emotional intelligence could differentiate adolescent sex offenders from a non-offender control group. Fifteen male adolescent sex offenders ranging in age from 14 to 17 years were recruited through Health and Community Services (VIC, Australia) and 49 non-offender males, matched for age, completed the battery. The battery comprised the Trait Meta-Mood Scale (TMMS), Davis' Interpersonal Reactivity Index (IRI), the Inventory of Interpersonal Problems (IIP-32), the Revised Toronto Alexithymia Scale (TAS-20) and the Openness to Feelings facet of the NEO PI-R. Discriminant analyses using all five tests showed that 89.9 per cent of the sample were correctly allocated their respective groups. Overall the sex offenders were higher on aggression and attention to feelings, less clear about their feelings and less capable to repair unpleasant moods and prolong positive ones. It was concluded that these findings could be the focus of treatment approaches for adolescent sex offenders.

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Introduction

Until recently, there has been little research examining the causes of sexual offences committed by adolescents, perhaps because of the belief that few sexual offences of any serious consequences are perpetrated by adolescents and that they will “grow out” of such behaviours (Davis and Leitenberg, 1987). However, between 50 and 80 per cent of chronic adult sexual offenders committed their first sexual offence as adolescents and adolescents commit approximately 20 per cent of all sexual offences, although these indices may vary by up to 15 per cent (Fehrenback, Smith, Monastersky and Deisher, 1986; Davis and Leitenberg, 1987; Bremer, 1992; Criminal Justice Commission, 1999). Recent statistics also indicate that among male adolescent sex offenders between 50 and 70 per cent have committed a previous sexual offence (Fehrenback *et al.*, 1986). Early intervention and treatment programmes are therefore critical in reducing the number of life-long sex offenders in the community. In order to improve current treatment programmes for adolescent sex offenders, more research is required (Sapp and Vaughn, 1990) to build upon the general treatment strategies currently in use (Bremer, 1992).

The ability to understand one's emotional states or emotional problems is an important indicator of healthy mental functioning (Siegel, Platt and Peizer, 1976). Previous studies have shown that adolescent offenders have difficulty in labelling their own and the emotional states of others (Savitsky and Czyzewski, 1978), have difficulty in controlling their anger and establishing meaningful relationships with their peers and are in families that are emotionally disengaged (Bischof, Stith and Whitney, 1995). Savitsky and Czyzewski (1978)

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compared adolescent male offenders and non-offenders on two tasks designed to assess reactions to non-verbal expressions of others. They reported that when compared to the non-offenders, the offender group was less accurate in labelling the emotional states of others.

Many treatment programmes for adolescent sex offenders assess victim empathy and the offender's emotions prior to offences in the hope of allowing the adolescent sex offender to identify their pattern of behaviour prior to offending. Empathy has long been considered an important factor in sex offending. For example, Marshall, Hudson, Jones and Fernandez (1995) and Marshall, Anderson and Champagne (1997) have suggested that a lack of empathy specific to the victim acts as a self-serving bias which allows the sex offender to overcome any internal inhibitions or emotional disturbance he might otherwise feel. Although Marshall *et al.* (1995) found that empathy deficits were person-specific in sex offenders and that they were not necessarily unempathic towards everyone.

Previous research has demonstrated that adolescent sex offenders differ when compared to other adolescents in a range of personality traits, including social skill deficits (Valliant and Fehrenbach *et al.*, 1986; Bergeron, 1997), fear of intimacy (Marshall, 1989), feelings of powerlessness (Davis and Leitenberg, 1987), anger (Lewis, Shanok and Pincus, 1979), impulsivity and inability to understand and identify emotions in themselves and in others (Savitsky and Czyzewski, 1978). Although to date there is no published material available regarding emotional intelligence in adolescent sex offenders, there is some evidence to suggest that sex offenders have problems with the evaluation of their own emotions and the emotions of others. Given the growth of a theoretical framework for emotional intelligence the investigation of this construct in adolescent sex offenders may reveal the importance, or otherwise, of emotional intelligence for this population and in turn may provide useful information for the development and improvement of treatment programs.

The current conceptualization of emotional intelligence is that it is identified as a core aptitude related to the capacity to reason with emotions (Salovey and Mayer, 1996). It is separate from related concepts such as emotional achievement and emotional competence (Salovey and Mayer, 1996). The mental ability model of emotional intelligence focuses on emotions themselves and their interactions with thought (Mayer, Salovey and Caruso, in press). The model predicts that those who are emotionally intelligent are "more likely to have grown up in biosocially adaptive households (i.e. have had emotionally sensitive parenting); to be non-defensive; to be able to reframe emotions effectively (i.e. be realistically optimistic and appreciative); to choose good emotional role models; and to be able to communicate and discuss feelings and develop expert knowledge in a particular emotional area such as aesthetics, moral or ethical feeling, social problem solving, leadership, or spiritual feeling" (Mayer *et al.*, p. 11). Those who are good at connecting thoughts to feelings (i.e. are emotionally intelligent) may better "hear" the emotional implications of their own thoughts, as well as understand the feelings of others (Mayer and Geher, 1996).

Several models of emotional intelligence have been proposed in recent years. Some are labelled ability models and focus on the interplay of emotion and intelligence as traditionally defined, while mixed models include mental abilities, dispositions and traits and describe a compound conception of intelligence (Mayer *et al.*, in press). The mental ability model of emotional intelligence described by Salovey and Mayer will be used in this study, as research has shown increasing support for the existence of a mental ability model of emotional intelligence that is somewhat distinct from standard analytical intelligence (Mayer *et al.*, in press). Research works on the mixed models of emotional intelligence are more preliminary to-date (Mayer *et al.*, in press).

In view of the current state of the literature and the lack of previous research examining emotional intelligence in sex offenders, a general hypothesis is that male adolescent sex offenders will report deficits in emotional functioning compared to adolescent non-offenders. Although the introduction of a psychometric measure of emotional intelligence is most likely premature, investigation into the differences between different groups of adolescents may provide useful information regarding emotional development in adolescents, particularly those who engage in inappropriate sexual behaviour.

The present study uses a battery of tests to examine emotional intelligence in adolescent sex offenders, addressing branches 1, 3 and 4 of Mayer and Salovey's mental model of emotional intelligence. As the first branch includes the recognition of emotions in others, elements within Branch 1 may be measured psychometrically by the Toronto Alexithymia Scale Revised (Bagby, Parker and Taylor, 1994a). Alexithymia refers to a diminished ability to identify and/or communicate feelings (Kroner and Forth, 1995). Empathy is also relevant to Branch 1, as it has been previously regarded as a fundamental social skill which allows the individual to anticipate, understand and experience the point of view of others (Davis and Franzoi, 1991). Davis (1983) developed the Interpersonal Reactivity Index (IRI) which is a psychometric measure of empathy based on a multidimensional approach and is comprised of two key elements, cognitive empathy and emotional (or affective) empathy (Davis and Franzoi, 1991). Interpreting the meaning that emotions convey regarding interpersonal relationships is central to emotional intelligence and is incorporated in branch 3. The Inventory of Interpersonal problems (IIP-32) measures the difficulties people have in their interpersonal relationships (Barkham, Hardy and Startup, 1996). A high score on this may indicate the existence of interpersonal problems, reflective of poor understanding of the progression of feelings in relationships. The Trait Meta-Mood Scale (TMMS; Salovey, Mayer, Goldman, Turvey and Palfai, 1995) is used to measure the Branch 4 factors clarity of moods and ability to repair moods.

Method

Participants

Fifteen male adolescents sex offenders were recruited through the Health and Community Services (Victoria, Australia) and ranged in age from 14 to 17 years ($M=16.93$ years, $S.D.=1.79$ years). The offenders were outpatients on court orders to attend the Male Adolescent Programme for Positive Sexuality (MAPPS). Treatment time varied from a few weeks to a few years. The severity and nature of the crimes committed by these adolescents included rape, aggravated rape, attempted rape, sexual penetration of another individual under 17 years, indecent assault, attempted indecent assault and gross indecency. Forty-nine non-offending male adolescents ranging in age from 14 to 17 years ($M=15.24$ years, $S.D.=1.07$ years) a secondary school.

Tests

The Trait Meta Mood Scale (TMMS)

The TMMS (Salovey, Mayer, Goldman, Turvey and Palfai, 1995) was designed assess relatively stable individual differences in dealing with emotions. Heng (1996) modified the

scale to include 23 items with factor loadings >0.20 from the original 48 items. Ten items load on attention, seven on clarity, and six on mood repair. Subjects respond to each item with a rating of 1 to 5 (1="strongly disagree", 2="disagree", 3="neither agree nor disagree", 4="somewhat agree" and 5="strongly agree"). Possible scores ranged from 10 to 50 for attention, 7 to 35 for clarity and 6 to 30 for mood repair. The overall Cronbach's alpha for the 23 item version was $\alpha=0.84$ (Heng, 1996).

The Toronto Alexithymia Scale

Mayer and Salovey's mental model of emotional intelligence includes the recognition of emotions in others, which may be measured psychometrically by the Toronto Alexithymia Scale Revised (Bagby, Parker and Taylor, 1994a, b). Alexithymia refers to a diminished ability to identify and/or communicate feelings (Kroner and Forth, 1995). The Toronto Alexithymia Scale Revised, (TAS-R; Bagby *et al.*, 1994a, b) consists of 20 items and participants respond to each item on a 5-point scale ranging from 1 "strongly disagree" to 5 "strongly agree". Factor analysis has revealed three factors for the TAS-20. Factor 1 reflects the capacity to identify feelings and to distinguish between feelings and the bodily sensations of emotional arousal. Factor 2 measures inability to communicate feelings to other people, while factor 3 assesses externally oriented feelings (Bagby *et al.*, 1994a, b). An alexithymic is classified as scoring 60 or above on the 20-item scale. The TAS-20 has demonstrated acceptable internal consistency ($\alpha=0.81$), as have the three factors (Factor 1, $\alpha=0.78$; Factor 2, $\alpha=0.75$; and Factor 3, $\alpha=0.66$). The test-retest reliability of the TAS-20, with a testing period of 3 weeks has been reported to be 0.77 (Bagby *et al.*, 1994a, b).

The IIP-32

Interpreting the meaning that emotions convey regarding interpersonal relationships is central to emotional intelligence. The Inventory of Interpersonal problems (IIP-32) measures the difficulties people have in their interpersonal relationships (Barkham, Hardy and Startup, 1996). A high score on this may indicate the existence of interpersonal problems, reflective of poor understanding of the progression of feelings in relationships. Thirty-two items constituting the short form of the Inventory of Interpersonal Problems (IIP-32) (Barkham, Hardy and Startup, 1996) was employed. Responses for each of the items are made on a five-point scale ranging from 0 ("not at all") to 4 ("extremely"). The overall internal consistency of the inventory is high (0.86) (Barkham *et al.*, 1996). Items in the inventory load on eight areas of difficulty in which individuals experience difficulty in interpersonal relationships; hard to be sociable ($\alpha=0.89$); assertive ($\alpha=0.86$); supportive ($\alpha=0.75$); involved ($\alpha=0.75$); being too aggressive ($\alpha=0.85$); being too caring ($\alpha=0.72$); too dependent ($\alpha=0.71$) and too open ($\alpha=0.80$). The overall retest correlation (with a time lag of two months) for the IIP-32 was 0.70, and for each of the eight areas of difficulty retest correlations ranged from 0.56 to 0.81. High scores indicate a high degree of interpersonal problems.

Interpersonal Reactivity Index

Davis's Interpersonal Reactivity Index (IRI, 1983) is a multidimensional approach to individual differences in empathy. The 28-item instrument consists of four 7-item subscales, which assess perspective taking, fantasy, empathic concern, and personal distress. Responses are made on a five-point scale ranging from (0) "does not describe me well" to (4) "describes me well". The internal reliability coefficients (standardized alpha) for each of the subscales

range between 0.70 to 0.78. Test–retest reliabilities, measured from 60 to 75 days, revealed correlations ranging from 0.61 to 0.79 in males and 0.62 to 0.81 in females (Davis, 1983).

Procedure

The juvenile sex offenders completed the tests during weekly group counselling sessions held by MAPPS. The tests were administered in groups, requiring approximately 45 min to complete the questionnaires. Offenders who were not receiving group counselling answered the questionnaires in individual sessions. The assessment of the non-offending male adolescents was conducted in several different class sessions and administered in groups. Each participant (MAPPS and non-offenders) were given an identification number and read an information sheet before written consent was obtained, both from the adolescents and from parents or guardians when the adolescents under 16 years of age.

Results

To examine the possible differences in emotional intelligence characteristics between adolescent sex offenders and non-offenders, a series of one-way analyses of variance (ANOVAs) were performed. The results are summarized in Table 1.

For the IIP-32 the adolescent sex offenders had a higher mean item total and in general found it harder to be sociable, assertive, and supportive, were more aggressive and open and less caring and dependent when compared to a control group of adolescents. Both groups scored similarly on the hard to be involved factor. However, the two groups only significantly differed on the too aggressive factor, with sex offenders reporting higher aggression than the control group of adolescents, $F(1,62)=4.57, p>0.05$.

The adolescent sex offenders scored lower compared to the control group on Davis' IRI overall scale score and on each of the four factors, although none of these differences were statistically significant. The adolescent sex offenders scored somewhat lower on the overall scale of the TMMS as well as on clarity of feelings and mood repair, although these differences were also non-significant. The sex offender group however scored significantly higher than the control group on the attention to feelings factor, $F(1,62)=6.07, p>0.05$. There were no significant differences between the control group and adolescent sex offenders on the total TAS or the three factors of the TAS.

Discriminant analysis

A discriminant analysis was performed to examine whether the battery of tests could be used as a measure to detect adolescents who had committed sex offences. The analysis, based on unequal group sizes, included the factor and total scores from each of the questionnaires administered. The analysis identified one discriminant function, with the largest contributor being the 'clarity of feelings' factor ($r=-0.41$), followed by the 'too aggressive' factor ($r=0.35$) and the 'difficulty in identifying feelings' factor ($r=0.32$). The relationships between the groups and predictors was not highly reliable, $\chi^2(21, N=64)=23.97, p>0.05$. However, the function was able to correctly classify 89.1 per cent of the adolescents, with 53.3 per cent of the adolescent sex offenders and 100 per cent of the non-offending control group being correctly classified.

Table 1 One-way ANOVAs comparing the traits of adolescent sex offenders and adolescent controls

Scale	Factor	Group				F-Ratio
		1. Sex Offenders		2. Control Group		
		M	S.D.	M	S.D.	
IIP-32	TOTAL	1.41	0.70	1.28	0.43	0.69
	Hard to be sociable	4.87	3.27	4.10	2.53	0.91
	Hard to be assertive	5.07	4.22	4.57	3.04	0.25
	Too aggressive	8.73	5.11	6.24	3.53	4.57*
	Too open	6.00	3.27	5.63	2.31	0.24
	Too caring	5.00	2.70	5.49	2.38	0.46
	Hard to be supportive	5.87	3.64	4.65	2.89	1.79
	Hard to be involved	4.67	4.37	4.80	3.03	0.11
	Too dependent	5.13	4.07	5.51	2.80	0.17
IRI	TOTAL	52.67	12.32	56.02	11.03	1.01
	Fantasy scale	12.80	4.51	13.80	4.22	0.62
	Perspective-taking Scale	13.87	4.58	15.02	3.57	1.41
	Empathic concern Scale	13.27	4.11	13.82	2.71	0.42
	Personal distress Scale	12.73	4.11	13.20	7.40	0.06
TMMS	TOTAL	76.40	16.02	79.63	12.63	0.11
	Attention to feelings	7.13	13.37	36.00	11.30	6.07*
	Clarity of feelings	20.73	5.12	23.49	3.30	1.85
	Mood repair	18.53	4.12	20.14	3.98	0.66
TAS-20	TOTAL	61.80	10.14	59.69	7.74	3.62
	Difficulty in identifying feelings	19.87	5.76	17.06	4.72	0.19
	Difficulty describing feelings	14.93	3.37	15.37	3.33	0.07
	Externally orientated thinking	24.20	4.11	23.94	3.04	0.73

Note: * $p < 0.05$; $df = 1,62$; $n = 15$ (Group 1), $n = 49$ (Group 2).

Discussion

Despite a general pattern of differences in emotional intelligence between the adolescent sex offenders and non-offending adolescents, there were few significant differences between the groups. Where significant differences did exist, the sex offenders were higher on aggression and attention to feelings than the control group, consistent with reports that adolescent sex offenders are aggressive (Goleman, 1996) and show deficits in emotional understanding (Bremer, 1992; Dolan, Holloway, Bailey and Kroll, 1996). The adolescent sex offenders tended to be non-significantly higher on the IIP-32 than the control group, indicating a tendency for the adolescent sex offenders to have more interpersonal problems. Although the general trend is consistent with past research that has indicated that adolescent sex

offenders are socially isolated (Fehrenbach *et al.*, 1986; Marshall, 1989; Valliant and Bergeron, 1997) and have a lack of empathy for their victims (Goleman, 1996), differences were not large enough as to provide sufficient support for the findings of past research.

There was no evidence that adolescent sex offenders display less empathy when compared to the control group. Previous research has demonstrated a lack of empathy in adolescent sex offenders (Kaplan and Arbuthnot, 1985; Kroner and Forth, 1995 e.g. Goleman, 1996). However, Marshall *et al.* (1995, 1997) have suggested that empathy deficits are person specific and not general deficits. Adolescent sex offenders were less able to reflect upon and manage emotions compared to non-offending adolescents by paying more attention to their feelings. There was a non-significant trend for them to be less clear about their feelings and less capable to repair unpleasant moods and prolong positive ones. These findings suggest that adolescent sex offenders may be confused about their feelings and devote time into analysing them. Furthermore, if they are unable to identify their feelings they would be unable to assess whether moods require repairing. Groth (1977) reported that adolescent sex offenders had a predominant mood state of depression and emptiness, which may suggest an inability to terminate negative mood states.

The present investigation also found that adolescent sex offenders were alexithymic, although the control group also recorded high scores on this scale. This finding suggests that deficits in experiencing and expressing emotions might be a characteristic of adolescents in general, although perhaps more pronounced in adolescents who commit sex offences. Although the sex offender group did not score higher on impulsiveness than the control group, both groups scored in the very high range, demonstrating a low capacity to control their impulses, which may be a general characteristic of male adolescents. Nevertheless, this impulsiveness teamed with other maladaptive traits may contribute to deviant sexual behaviour.

Based on the scores on the emotional intelligence battery the control group was correctly classified as such. However, accuracy in classifying the sex offender group was lower, with only half of the members of this group being correctly classified. This finding indicates that the adolescent sex offenders are a heterogeneous group, which may not comprise similar levels of emotional intelligence. This finding is also likely to be influenced by the various offences that the offender group committed, ranging from rape to gross indecency. Further research is required to examine potential differences in emotional intelligence between sex offenders using a larger sample that enables any differences between offence types to be statistically examined.

A number of methodological considerations in the present study limit the conclusions that can be afforded to significant findings. In particular the small sample size and variability between groups may have impeded the detection of any true differences between sex offender and non-offender adolescents. The control group was not matched on demographic variables such as socio-economic status, level of education or a number of other factors that may have increased the risk of engaging in criminal activities. Clearly further research is required to establish the uniqueness of these findings to adolescent sex offenders.

Despite the limitations, the present study indicated that adolescent sex offenders have difficulty identifying feelings and are more aggressive than non-offending male adolescents. These variables were important in discriminating between the offender and control groups in the discriminant analysis. The sex offenders also demonstrate a high degree of impulsiveness, which teamed with a tendency for aggressiveness and difficulty in identifying feelings, may contribute to the motivation to offend. To date there is very little research on adolescent sex

offending compared to adult sex offending and therefore programmes being initiated to provide treatment and intervention for adolescent sex offenders may benefit from the preliminary findings of this research. The discovery of some deficits in aspects of emotional intelligence is promising and further replication and development of measures may provide useful guides for the development of treatment programs that address emotion related deficits.

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